Federal Subsistence Board

Wildlife Meeting Materials
May 18–21, 2010

Coast International Inn
Anchorage, AK

DRAFT
FEDERAL SUBSISTENCE BOARD
PUBLIC MEETING AGENDA

May 18 – 21, 2010*
8:30 a.m.– 5:00 p.m. Daily

Coast International Inn, 3450 Aviation Avenue
Anchorage, Alaska

1. **Call to Order and Introductions**
2. **Corrections/Additions to the Agenda**
3. **Information Sharing**
4. **Board Discussion of Council Topics with Regional Advisory Council Chairs or their Designees**
5. **Public Comment Period on Non-Agenda Items** *(This opportunity is also available at the beginning of each day)*
6. **Public Comment Period on Consensus Agenda Items** *(This opportunity is also available at the beginning of each day)*
7. **2010-2012 Subparts C&D Proposals** *(Wildlife Regulations)*
   a. Announcement of Consensus Agenda *(see detailed agenda that follows)*
   b. Board deliberation and action on Non-Consensus Agenda items *(see detailed agenda that follows)*
   c. Adoption of Consensus Agenda
8. **Other Business**
9. **Adjourn**

Note: *The meeting will be held daily from 8:30 a.m. to 5:00 p.m. or until the Board calls a recess for the day, or completes its work.*The Board may conclude its business before May 21st. Daily updates on Board progress through the agenda can be obtained by calling 1-800-478-1456, or in Anchorage at 786-3888.*

FEDERAL SUBSISTENCE BOARD
NON-CONSENSUS AGENDA PROPOSALS

Procedure for considering proposals:

1) Analysis *(Lead author)*
2) Summary of written public comments *(Regional Council Coordinator)*
3) Open floor to public testimony
4) Regional Council recommendation *(Chair or designee)*
5) Alaska Department of Fish and Game comments
6) Interagency Staff Committee comments (*ISC Chair*)
7) Board discussion with Council Chairs and State Liaison
8) Federal Subsistence Board action

Proposal	Unit / Species	Page
Statewide		
WP10-01	General Regulations	**27**
WP10-02	Brown Bear Handicrafts	**34**
WP10-03	General Regulations	**36**
WP10-04	Lynx	**46**
WP10-05	General Regulations	**63**
Region 1: Southeast Alaska		
WP10-22	Units 1–5 / Special Provisions	**276**
WP10-13	Unit 4 / Deer	**141**
WP10-21	Unit 4 Deer	**260**
WP10-07	Unit 3 / Marten (trapping)	**78**
WP10-11	Unit 1C / Moose	**120**
WP10-12	Units 1–5 / Wolverine (Trapping)	**134**
WP10-17	Units 5A / Moose	**196**
WP10-18a	Unit 1C / Moose	**203**
Region 2: Southcentral Alaska		
WP10-32a	Unit 7 / Caribou	**365**
WP10-32b	Unit 7 / Caribou	**378**
WP10-33	Unit 7 / Moose	**390**
WP10-34	Unit 7 / Wolverine (Trapping)	**401**
WP10-35	Unit 13E / Moose	**412**
Region 5: Yukon-Kuskokwim Delta		
Proposal	**Unit / Species**	
WP10-54	Unit 18 / Moose	**571**
WP10-56	Unit 18 / Moose	**603**
WP10-59	Unit 18 / Moose	**624**

Proposal	Unit / Species	Page
Region 6: Western Interior		
WP10-67**	Unit 24B / Moose	**696**
WP10-68**	Units 21D, 24C and 24D / Moose	**660**
Region 7: Seward Peninsula		
WP10-72	Unit 22 / Coyote (Hunting/ Trapping)	**748**
WP10-76	Unit 22 / General Regulations	**793**
WP10-78	Unit 22E / Moose/Muskox	**816**
WP10-80	Unit 22A / Moose	**837**
Region 8: Northwest Arctic		
Region 9: Eastern Interior Alaska		
WP10-86	Unit 25C / Moose	**880**
WP10-87	Units 12, 20, 25 General Regulations	**889**
WP10-88	Unit 25 / General Regulations	**906**
WP10-89	Units 20D and 20E / Caribou & Moose	**914**
WP10-91	Unit 25 / Brown Bear	**934**
WP10-92	Unit 25 / Black Bear	**945**
WP10-93	Unit 25D / Moose	**952**
WP10-95	Unit 20C / Wolf	**971**
Multi-Region Crossover		
SC/EI		
WP10-27	Unit 13 / Caribou	**306**
WP10-28	Unit 13B / Moose	**323**
WP10-104	Unit 12 / Caribou	**1036**
WI/YKD		
WP10-69	Unit 21E / Moose	**715**
WP10-65	Unit 21E / Moose	**677**

*** Action to be taken at the May 14, 2010 (telephonic) public meeting of the Western Interior Alaska Subsistence Regional Advisory Council may allow WP10-67 and/or -68 to move to the consensus agenda.*

FEDERAL SUBSISTENCE BOARD
CONSENSUS AGENDA PROPOSALS

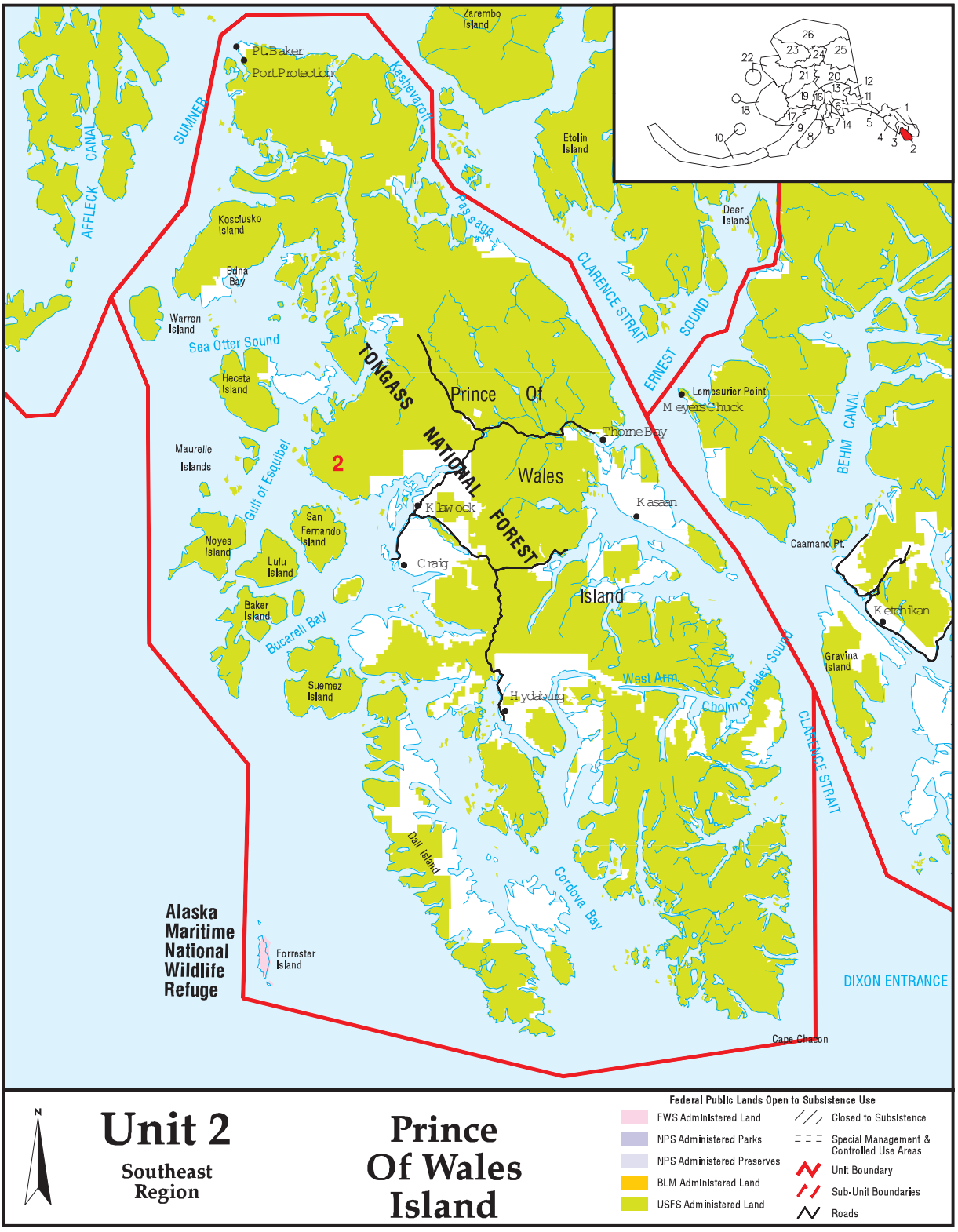
The following proposals have been included on the consensus agenda. These are proposals for which there is agreement among Federal Subsistence Regional Advisory Councils, the Federal Interagency Staff Committee, and the Alaska Department of Fish and Game concerning Board action. Anyone may request that the Board remove a proposal from the consensus agenda and place it on the regular agenda. The Board retains final authority for removal of proposals from the consensus agenda. The Board will take final action on the consensus agenda after deliberation and decisions on all other proposals.

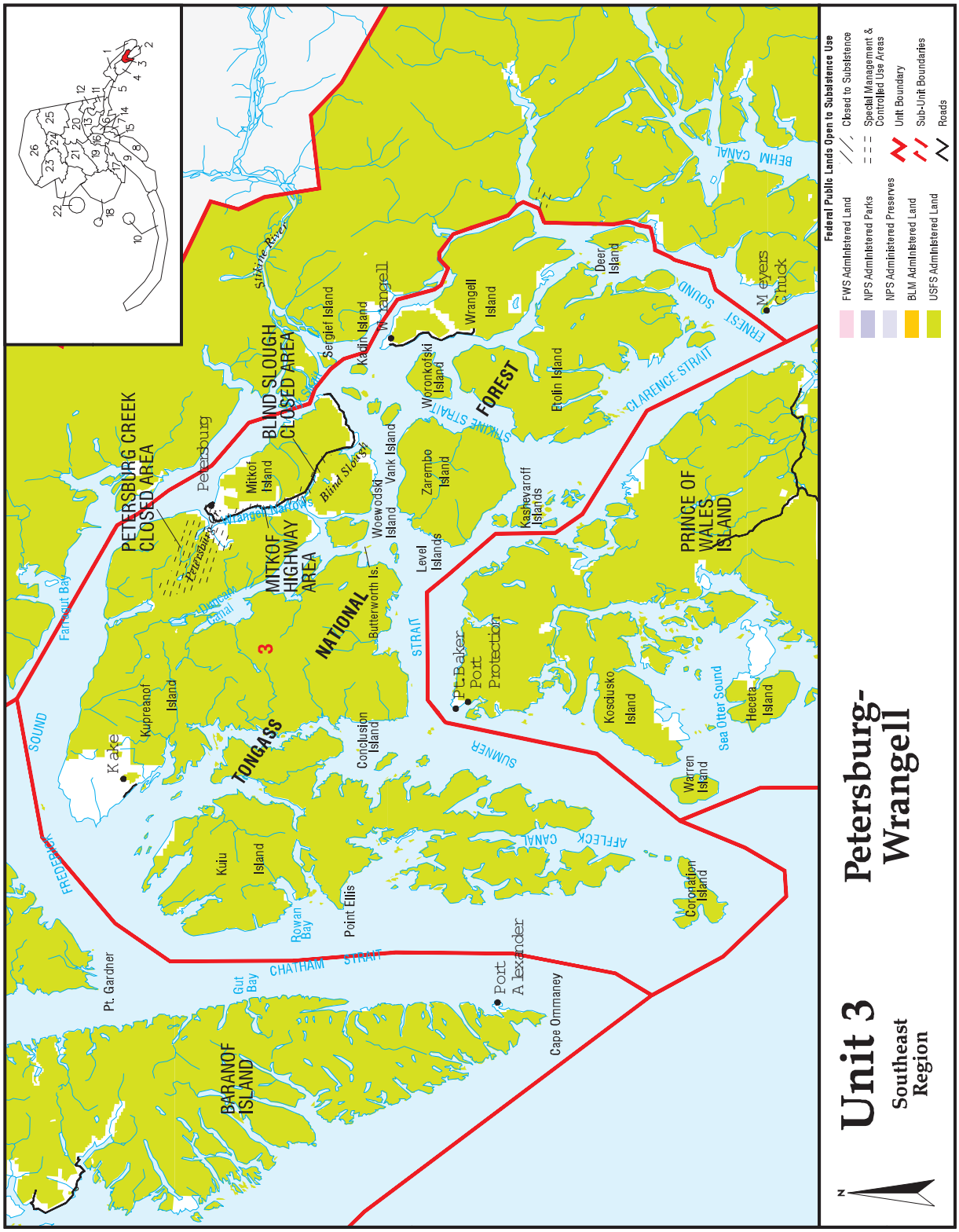
Proposal	Unit / Species	Recommendation	Page
Region 1: Southeast Alaska			
WP10-06	Units 1-5 / Deer	Support with modification	**72**
WP10-08	Unit 1A / Deer	Oppose / Oppose / Neutral	**91**
WP10-09	Units 1B, 1C, and 3 /Moose	Oppose	**101**
WP10-10	Units 1B, 1C, and 3 /Moose	Support	**108**
WP10-14	Unit 4 / Deer	Oppose	**149**
WP10-15	Unit 5A / Goat	Support	**169**
WP10-16	Unit 5A / Moose	Oppose	**185**
WP10-18b	Unit 1C / Moose	Oppose	**215**
WP10-19	Unit 2 / Deer	Oppose / Oppose / Neutral	**227**
WP10-20	Unit 2 / Deer	Oppose	**247**
WP10-23/24/25/26	Units 1, 3, and 4 / Wolf	Oppose	**294**
Region 2: Southcentral Alaska			
WP10-31	Unit 13E / Moose & Caribou	Support	**354**
WP10-36/37/41	Units 13D, 14C / Wolf	Oppose	**426**
WP10-40	Unit 14C / Wolverine	Support	**456**
Region 3: Kodiak / Aleutians			
WP10-42	Unit 10 / Caribou	Support	**462**
WP10-43/44	Unit 10 / Wolf	Neutral / Oppose / Oppose	**473**
Region 4: Bristol Bay			
WP10-45	Unit 9B / Moose	Defer / Tabled / Defer	**480**
WP10-46	Units 9B, 9C / Moose	Defer / Tabled / Defer	**491**
WP10-47	Unit 9C / Moose	Defer / Tabled / Defer	**504**
WP10-48	Unit 9C / Moose	Defer / Tabled / Defer	**517**
WP10-49/50	Unit 9E / Moose	Defer / Tabled / Defer	**528**
WP10-52	Unit 9E / Moose	Defer / Tabled / Defer	**560**
Region 5: Yukon-Kuskokwim Delta			
WP10-55	Unit 18 / Special Provision	Support with modification	**590**

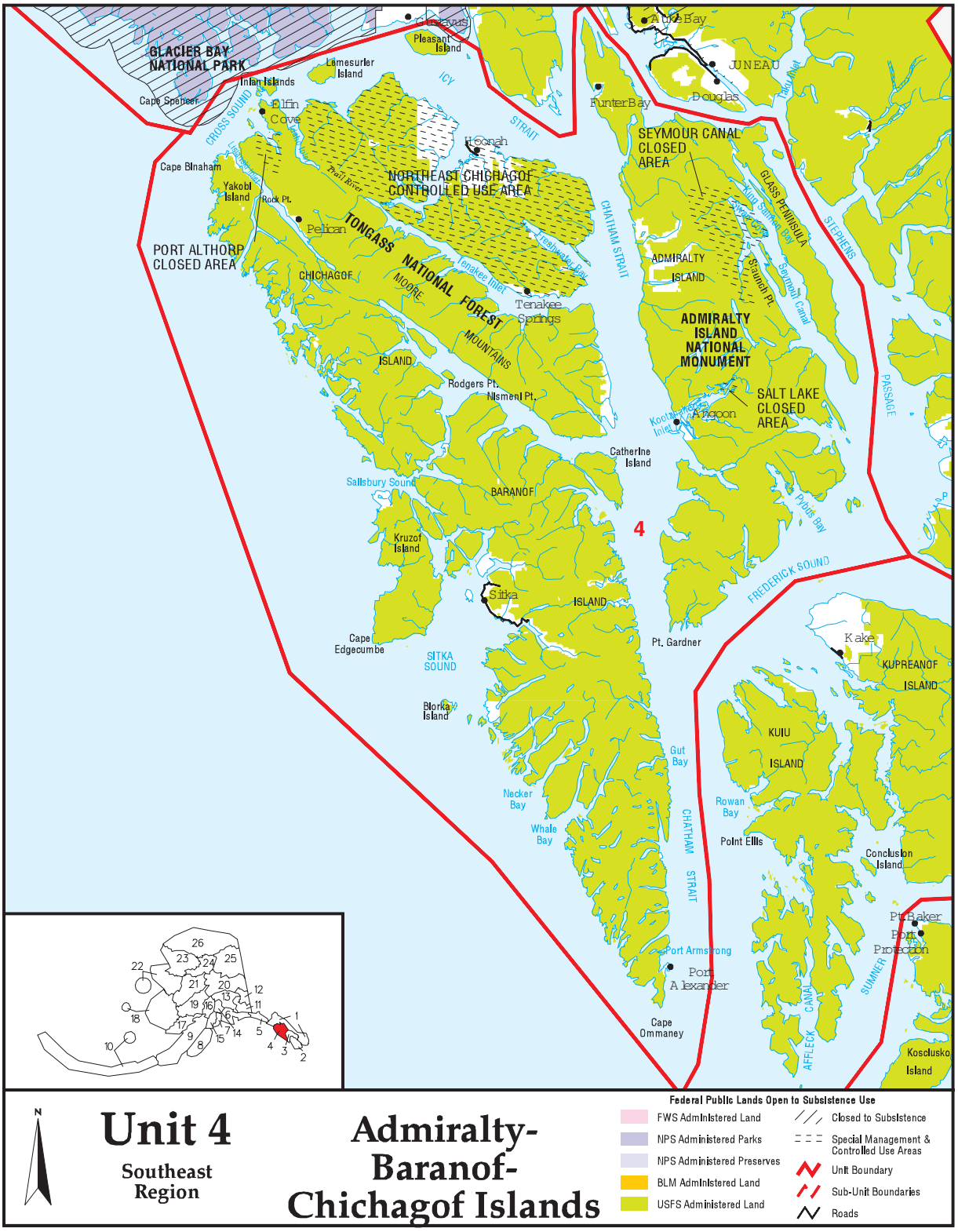
Proposal	Unit / Species	Recommendation	Page
WP10-57	Unit 18 / Moose	Support with modification	**616**
WP10-58/62	Unit 18 / Moose	Support with modification	**633**
WP10-60	Unit 18 / Caribou	Support with modification	**641**
WP10-61	Unit 18 / Moose	Oppose / Oppose	**650**
Region 6: Western Interior			
WP10-63	Units 21D, 24C, 24C / Moose	Support with modification	**660**
WP10-70/71	Units 19B, 19C / Wolf	Oppose	**739**
Region 7: Seward Peninsula			
WP10-73	Unit 22D / Muskox	Support with modification	**755**
WP10-74	Unit 22E / Muskox	Support	**772**
WP10-75	Unit 22E / Muskox	Support	**783**
WP10-77	Unit 22D / Muskox	Support with modification	**801**
WP10-79	Unit 22E / Moose	Support	**828**
WP10-108	Unit 22D / Muskox	Support	**1071**
Region 8: Northwest Arctic			
WP10-84	Unit 23 / Muskox	Support with modification	**864**
WP10-82/83/85	Special Provision	Support Proposal WP10-85 with modification Take no action on Proposals WP10-82 and WP10-83	**853**
Region 9: Eastern Interior Alaska			
WP10-90	Unit 13B and 13C / Caribou	Support	**922**
WP10-94	Unit 25 / Caribou	Support with modification	**963**
WP10-96	Unit 20 / Muskrat	Support with modification	**981**
WP10-101	Unit 20E / Moose	Support with modification	**1002**
WP10-102	Unit 12 / Caribou	Oppose	**1016**
WP10-103	Unit 12 / Caribou	Oppose, Oppose, Oppose, Neutral	**1028**
WP10-105	Units 20E, 25C (rem.) /Caribou	Support with modification	**1050**
Region 10: North Slope			
WP10-106/107	Unit 26 / Wolf	Oppose	**1061**
Multi-Region Crossover			
SC/EI			
WP10-29/30	Unit 11 / Brown Bear/Black Bear	Support	**337**
WP10-38	Units 11, 12 / Wolf	Oppose	**437**
WP10-39	Units 11, 12 / Dall Sheep	Take no action	**448**
WP10-97/98/99/100	Units 20A, 12, and 25A / Wolf	Oppose	**988**

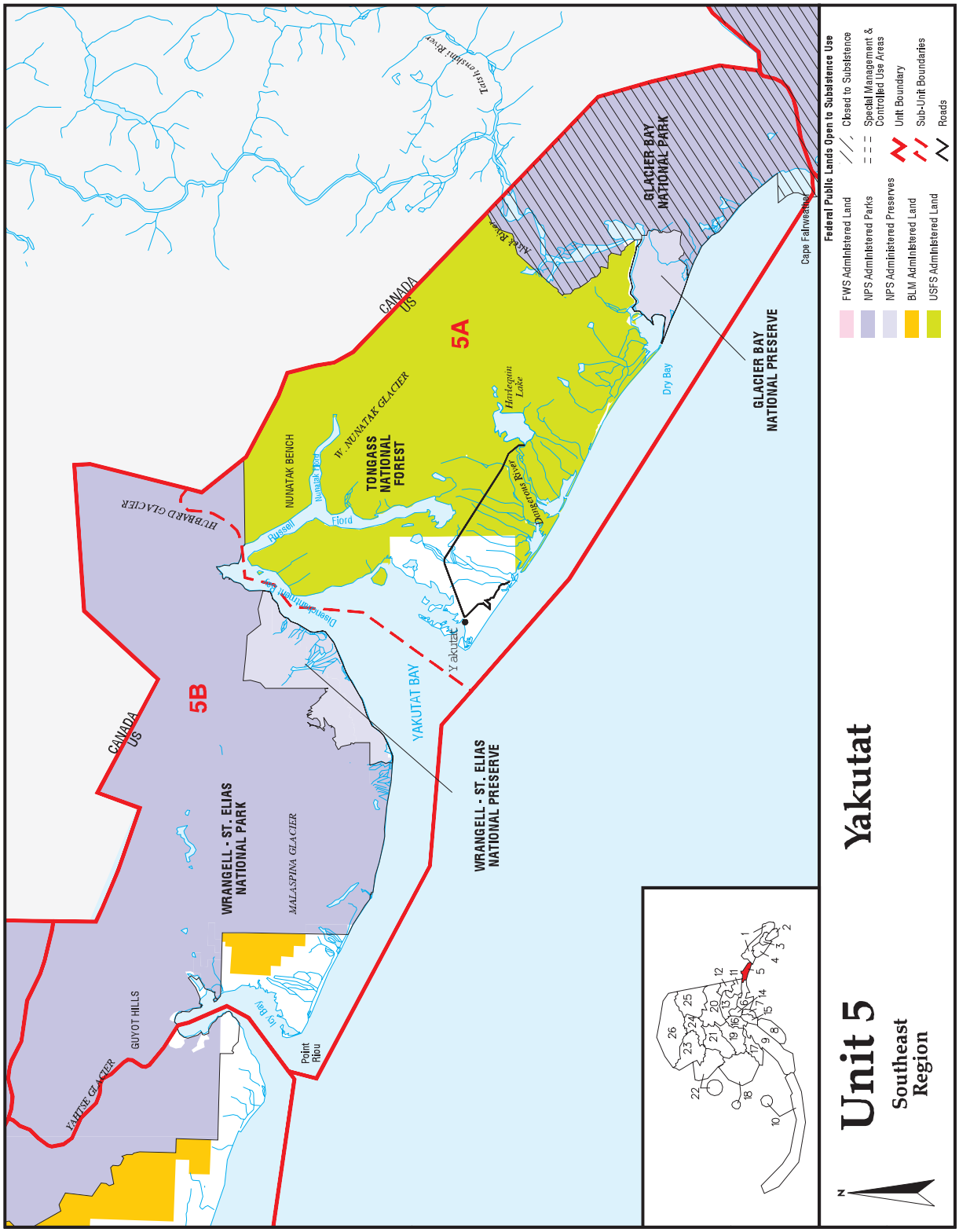
Proposal	Unit / Species	Recommendation	Page
BB/WI/YKD			
WP10-51/53	Units 9A, 9B, 9C, 17, 18 and 19 / Caribou	Support Proposals WP10-51 with modification Support Proposal WP10-53	**539**
WI/YKD			
WP10-66	Unit 21E / Moose	Support	**691**
SP/YKD			
WP10-81	Unit 22 / Wolf	Oppose	**845**

KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
1D
1C
1B
1A
CANADA
US
GLACIER BAY NATIONAL PARK
Cape Fairweather
Haines
Skagway
Klukwan
Gustavus
Lake Bay
Juneau
Elfin Cove
CHICHAGOF ISLAND
Hoonah
Pelican
Tenakee Springs
ADMIRALTY ISLAND NATIONAL MONUMENT
TONGASS
BARANOF
Angoon
Hood Bay
Sitka
Sitka Sound
Pt. Gardner
Kake
Kupreanof
Petersburg
Wrangell
Wrangell Island
Etolin Island
Pt. Baker
PRINCE OF WALES
Hydaburg
Kasaan
Craig
Klawock
Ketchikan
Saxman
Metlakatla
Annette Island
REVILLAGIGEDO ISLAND
ANAN CREEK DRAINAGE
SALMON RIVER DRAINAGE
Hyder
MISTY FJORDS NATIONAL MONUMENT
FOREST
Chatham Strait
Frederick Sound
Sumner Strait
Clarence Strait
Dixon Entrance
Stikine River
Glacier
Port Houghton
Port Hobart
Kupreanof Island
Kuiu Island
Kashevarof Passage
Duncan Canal
Behm Canal
Revillagigedo Channel
Cordova Bay
Dall Island
Glass Peninsula
Cleveland Peninsula
Lynn Canal
Taku Inlet
Eagle R.
Endicott R.
Katzehin R.
Chilkat Inlet
Chilkoot Inlet
Cross Sound
Icy Strait
Peril Strait
Sitkine River
LeConte Bay
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
Unit 1
Southeast Region
Southeast Mainland


Zarembo Island
Pt. Baker
Port Protection
Kashevaroff Passage
Etolin Island
SUMNER
AFFLECK CANAL
Kosciusko Island
Edna Bay
Warren Island
Sea Otter Sound
Heceta Island
Deer Island
CLARENCE STRAIT
ERNEST SOUND
Lemesurier Point
Meyers Chuck
BEHM CANAL
TONGASS
NATIONAL FOREST
Prince Of Wales Island
Thorne Bay
Maurelle Islands
Gulf of Esquibel
2
Klawock
Kasaan
San Fernando Island
Noyes Island
Lulu Island
Craig
Caamano Pt.
Ketchikan
Baker Island
Bucareli Bay
Gravina Island
Suemez Island
West Arm
Hydaburg
Cholmondeley Sound
CLARENCE STRAIT
Dall Island
Cordova Bay
Alaska Maritime National Wildlife Refuge
Forrester Island
DIXON ENTRANCE
Cape Chacon
N
Unit 2
Southeast Region
Prince Of Wales Island
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Unit 3
Southeast Region
Petersburg-Wrangell
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
PETERSBURG CREEK CLOSED AREA
BLIND SLOUGH CLOSED AREA
MITKOF HIGHWAY AREA
TONGASS NATIONAL FOREST
BARANOF ISLAND
PRINCE OF WALES ISLAND
Petersburg
Wrangell
Kake
Pt. Baker
Port Protection
Port Alexander
M. Myers Chuck
Pt. Gardner
Cape Ommaney
Sitkine River
Sergief Island
Kadin Island
Mitkof Island
Blind Slough
Woewodski Island
Vank Island
Zarembo Island
Wrangell Island
Woronkofski Island
Etolin Island
Deer Island
Kashevaroff Islands
Level Islands
Butterworth Is.
Conclusion Island
Kupreanof Island
Kuiu Island
Point Ellis
Rowan Bay
Gut Bay
Coronation Island
Kosciusko Island
Warren Island
Heceta Island
Sea Otter Sound
Farragut Bay
Frederick Sound
Sumner Strait
Stikine Strait
Clarence Strait
Ernest Sound
Chatham Strait
Affleck Canal
Behm Canal
Duncan Canal
Wrangell Narrows
3


GLACIER BAY NATIONAL PARK
Gustavus
Pleasant Island
Lemesurier Island
Inian Islands
Cape Spencer
Elfin Cove
CROSS SOUND
ICY STRAIT
Hoonah
Cape Bingham
Yakobi Island
Rock Pt.
Pelican
NORTHEAST CHICHAGOF CONTROLLED USE AREA
TONGASS NATIONAL FOREST
PORT ALTHORP CLOSED AREA
CHICHAGOF ISLAND
MOORE MOUNTAINS
Tenakee Inlet
Tenakee Springs
Rodgers Pt.
Nismeni Pt.
Sallsbury Sound
BARANOF ISLAND
Kruzof Island
Sitka
Cape Edgecumbe
SITKA SOUND
Biorka Island
Necker Bay
Whale Bay
Gut Bay
CHATHAM STRAIT
Port Armstrong
Port Alexander
Cape Ommaney
Hunter Bay
Auke Bay
JUNEAU
Douglas
SEYMOUR CANAL CLOSED AREA
GLASS PENINSULA
STEPHENS PASSAGE
ADMIRALTY ISLAND
Sitkoh Pt.
ADMIRALTY ISLAND NATIONAL MONUMENT
SALT LAKE CLOSED AREA
Angoon
Kootznahoo Inlet
Catherine Island
Pybus Bay
4
FREDERICK SOUND
Kake
KUPREANOF ISLAND
KUIU ISLAND
Rowan Bay
Point Ellis
Conclusion Island
Pt. Baker
Port Protection
SUMNER CANAL
AFFLECK CANAL
Kosciusko Island
Pt. Gardner
N
Unit 4
Southeast Region
Admiralty-Baranof-Chichagof Islands
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Unit 5
Southeast Region
Yakutat
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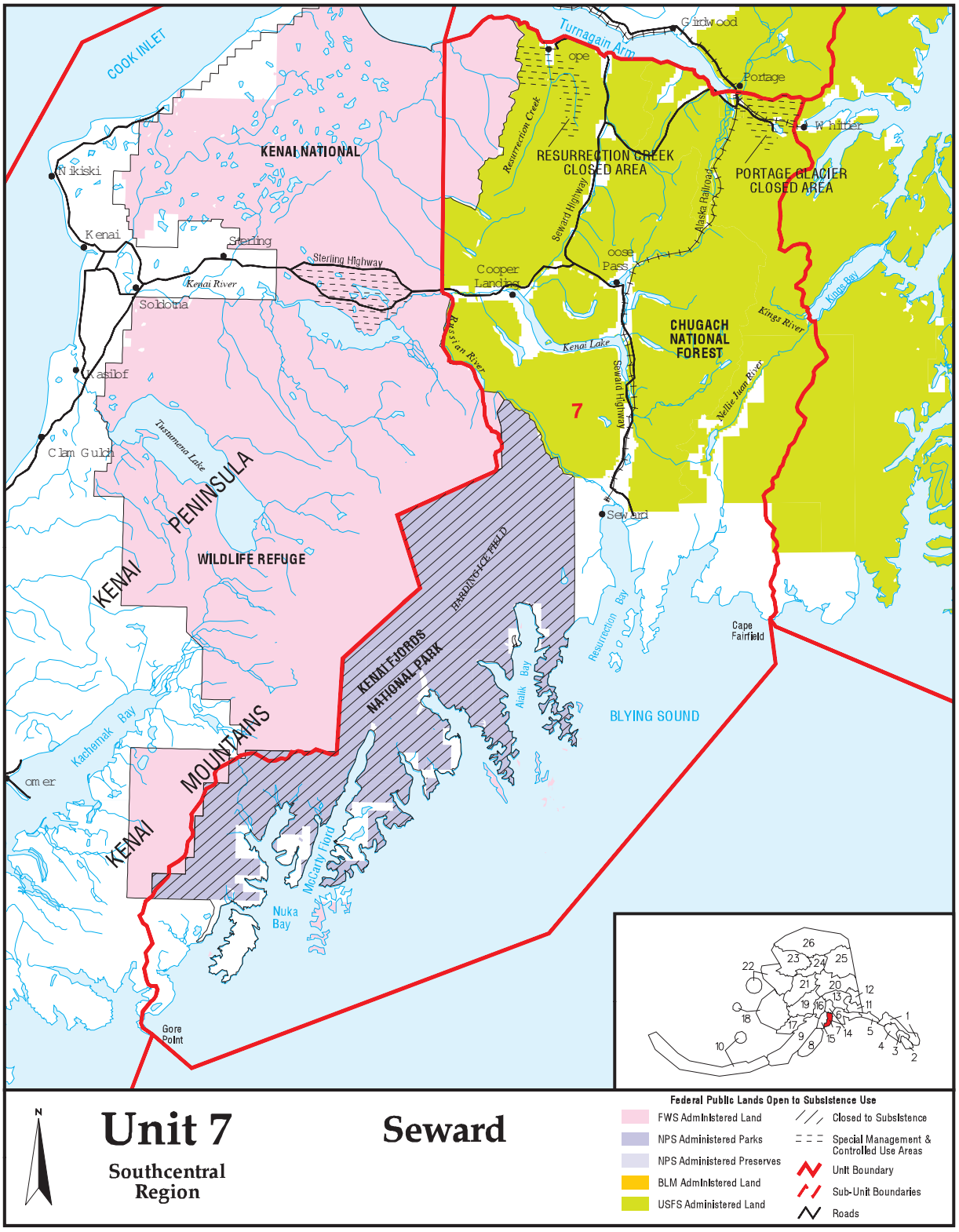
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
5A
5B
CANADA
US
TONGASS NATIONAL FOREST
GLACIER BAY NATIONAL PARK
GLACIER BAY NATIONAL PRESERVE
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
YAKUTAT BAY
Y akutat
Dry Bay
Cape Fairweather
Harlequin Lake
Dangerous River
Alsek River
Tatshenshini River
W. NUNATAK GLACIER
NUNATAK BENCH
Russell Fiord
Disenchantment Bay
HUBBARD GLACIER
MALASPINA GLACIER
YAHTSE GLACIER
GUYOT HILLS
Icy Bay
Point Riou


COOK INLET
Turnagain Arm
Girdwood
Portage
Whittier
KENAI NATIONAL
Nikiski
Kenai
Sterling
Sterling Highway
Kenai River
Soldotna
Cooper Landing
Resurrection Creek
RESURRECTION CREEK CLOSED AREA
Seward Highway
Alaska Railroad
PORTAGE GLACIER CLOSED AREA
Kenai Lake
Kings River
Kings Bay
CHUGACH NATIONAL FOREST
Nellie Juan River
7
Clam Gulch
Tustumena Lake
KENAI PENINSULA
WILDLIFE REFUGE
Seward
HARDING ICE FIELD
KENAI FJORDS NATIONAL PARK
Resurrection Bay
Cape Fairfield
Aialik Bay
BLYING SOUND
Kachemak Bay
KENAI MOUNTAINS
Nuka Bay
Gore Point
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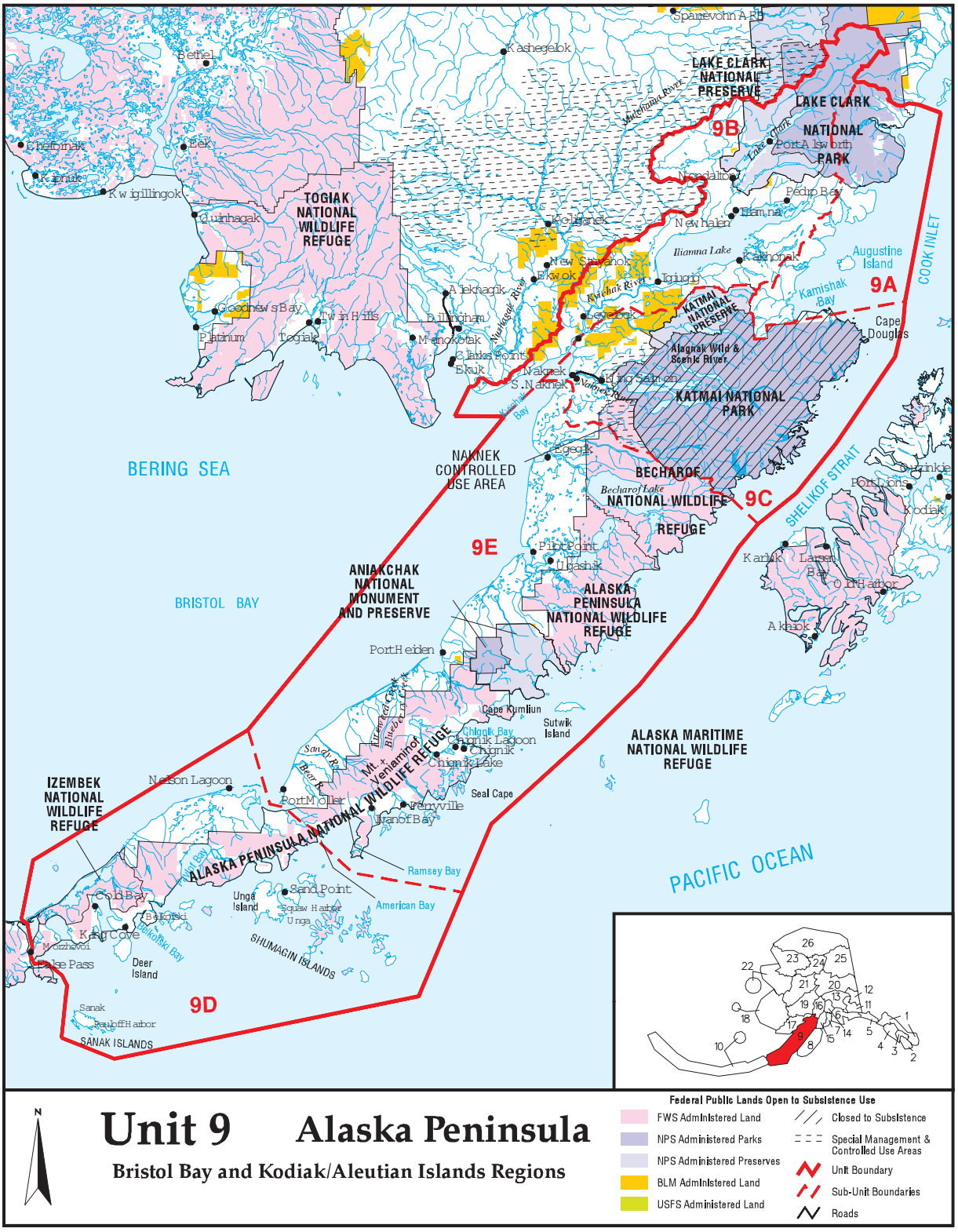
Unit 7
Southcentral Region
Seward
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Spanevohn AFB
Kashegelok
Bethel
LAKE CLARK NATIONAL PRESERVE
LAKE CLARK NATIONAL PARK
Port Alsworth
9B
Chefornak
Eek
Kwigillingok
Quinhagak
TOGIAK NATIONAL WILDLIFE REFUGE
Nondalton
Pedro Bay
Iliamna
Newhalen
Iliamna Lake
Kaltonak
Augustine Island
COOK INLET
9A
Kamishak Bay
Cape Douglas
Goodnews Bay
Twin Hills
Platinum
Togiak
Aleknagik
Dillingham
Manokotak
Clarks Point
Ekuk
Naknek
S. Naknek
King Salmon
KATMAI NATIONAL PRESERVE
Alagnak Wild & Scenic River
KATMAI NATIONAL PARK
BERING SEA
NAKNEK CONTROLLED USE AREA
Egegik
BECHAROF NATIONAL WILDLIFE REFUGE
9C
SHELIKOF STRAIT
Kodiak
9E
Pilot Point
Ugashik
ANIAKCHAK NATIONAL MONUMENT AND PRESERVE
ALASKA PENINSULA NATIONAL WILDLIFE REFUGE
Karluk
Larsen Bay
Old Harbor
Akhiok
BRISTOL BAY
Port Heiden
Cape Kumliun
Sutwik Island
Chignik Bay
Chignik Lagoon
Chignik Lake
Mt. Veniaminof
Seal Cape
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
IZEMBEK NATIONAL WILDLIFE REFUGE
Nelson Lagoon
Port Moller
Cold Bay
King Cove
Deer Island
Sand Point
Unga Island
Squaw Harbor
Unga
SHUMAGIN ISLANDS
American Bay
Ramsey Bay
ALASKA PENINSULA NATIONAL WILDLIFE REFUGE
PACIFIC OCEAN
9D
Sanak
SANAK ISLANDS
26
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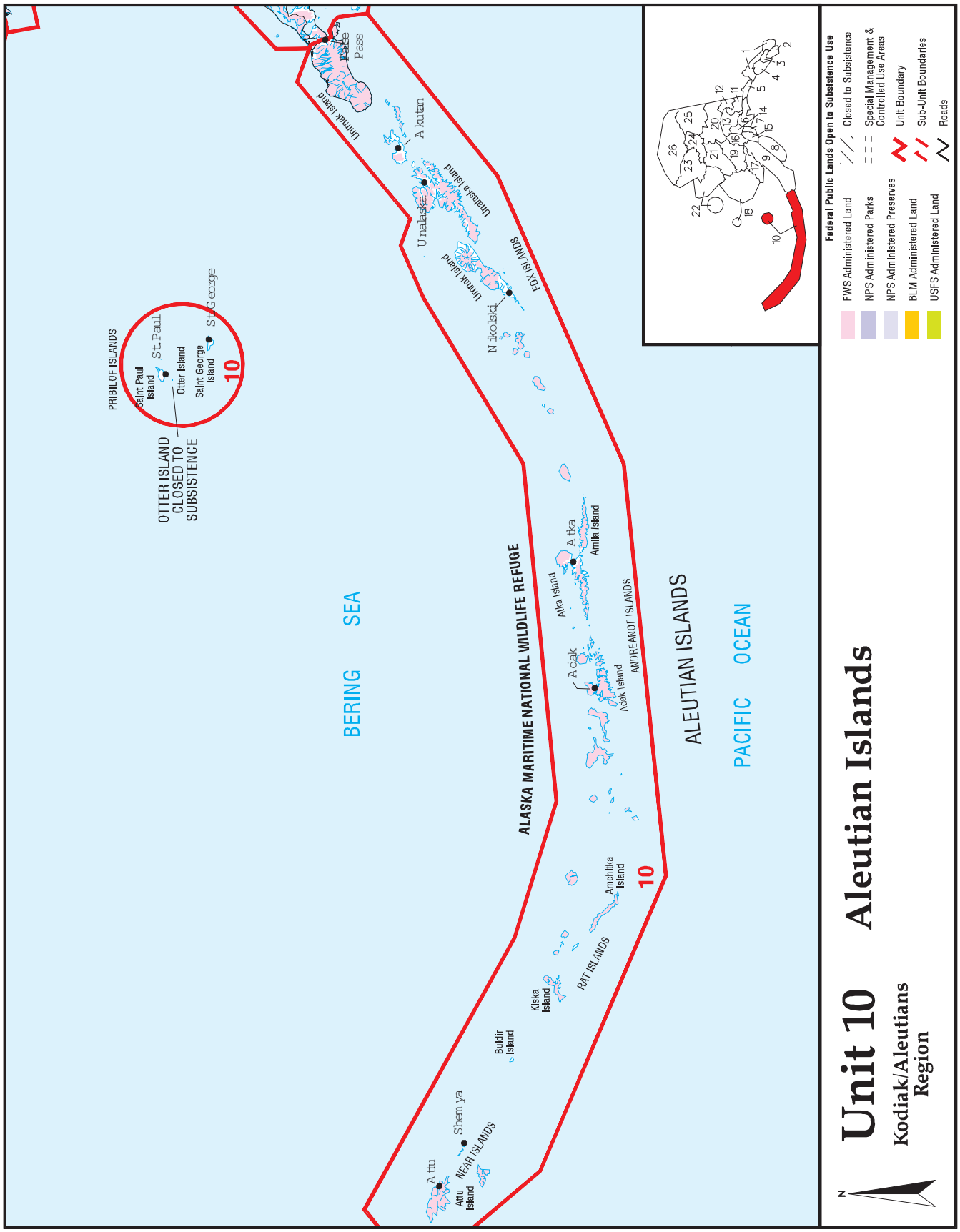
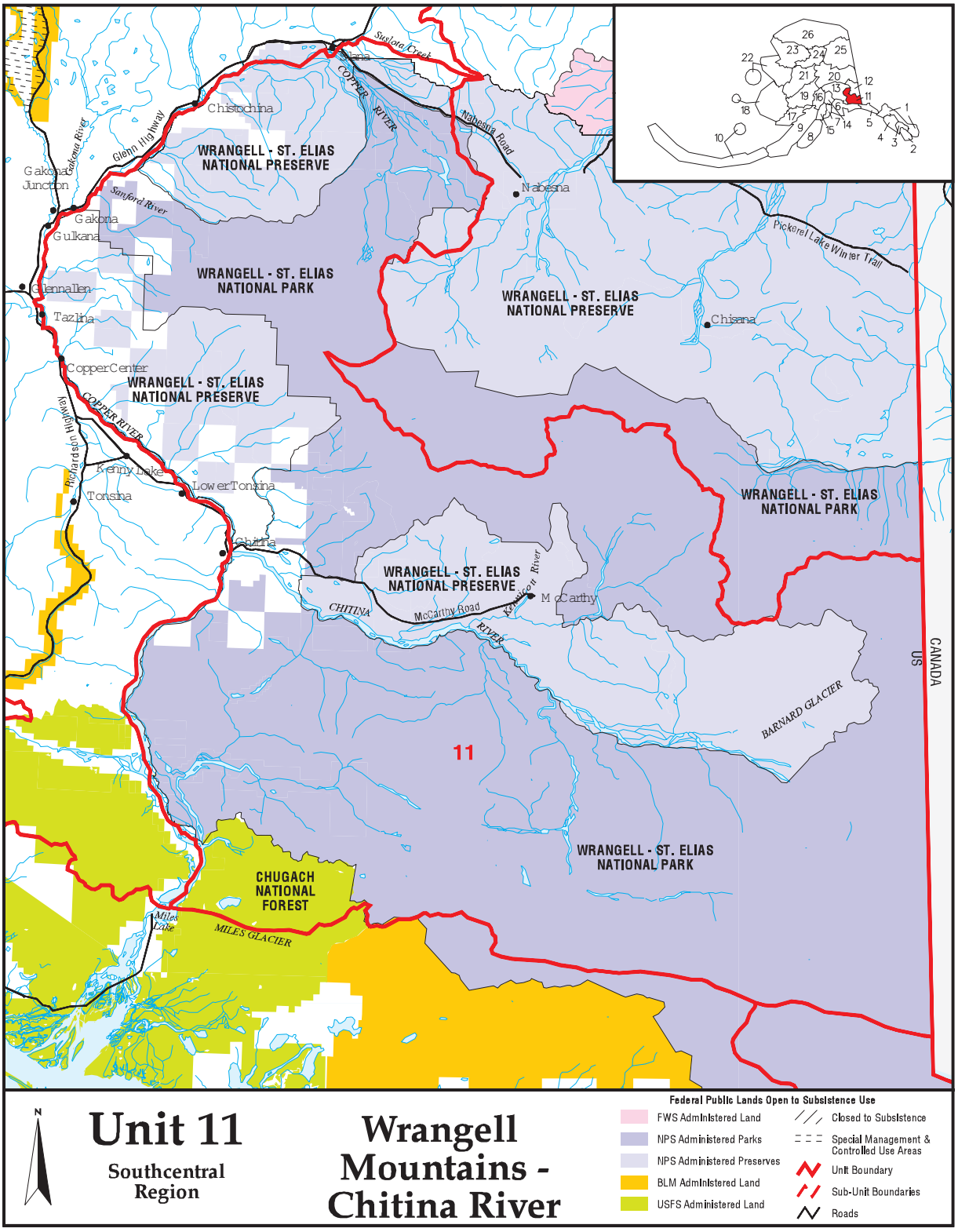
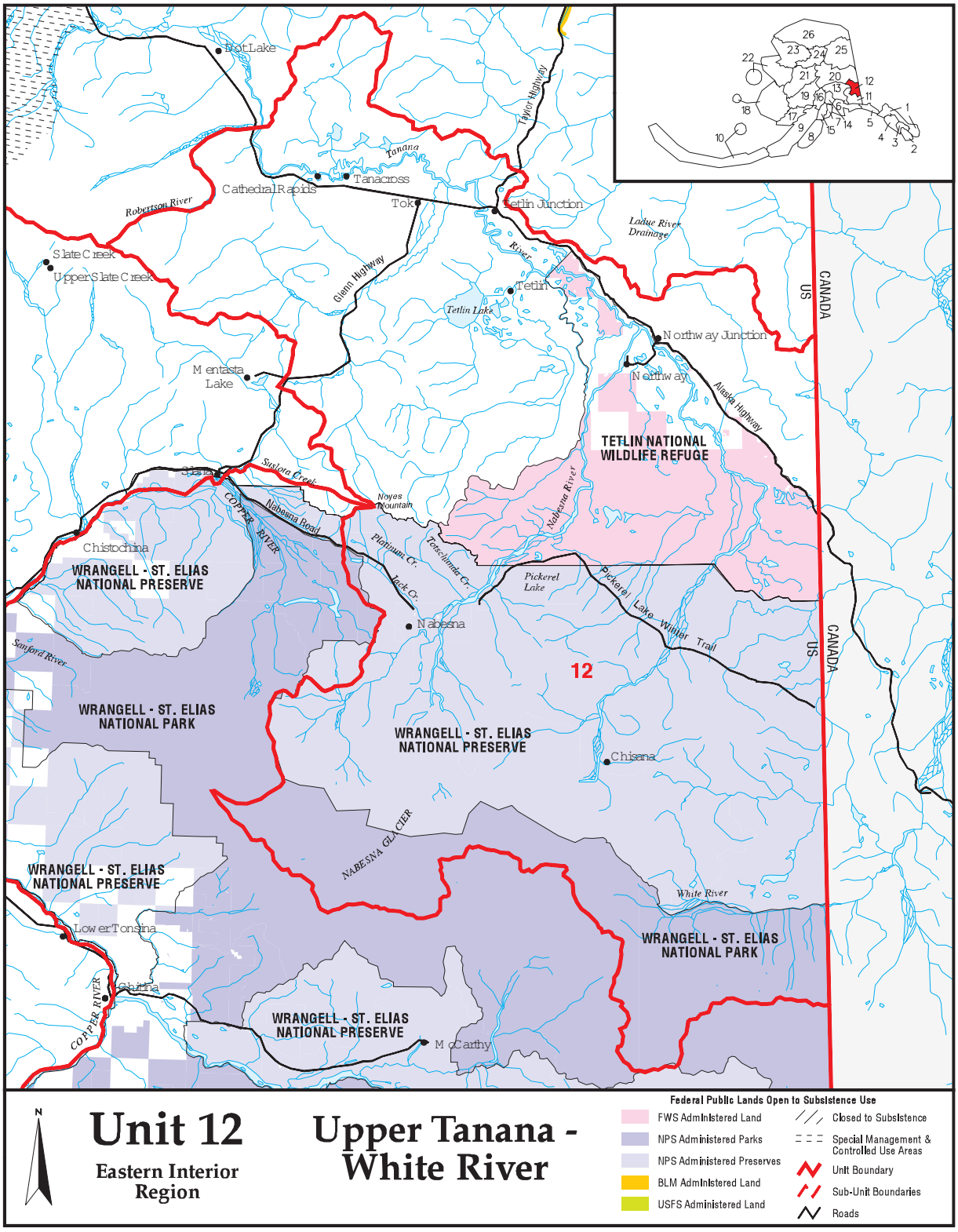
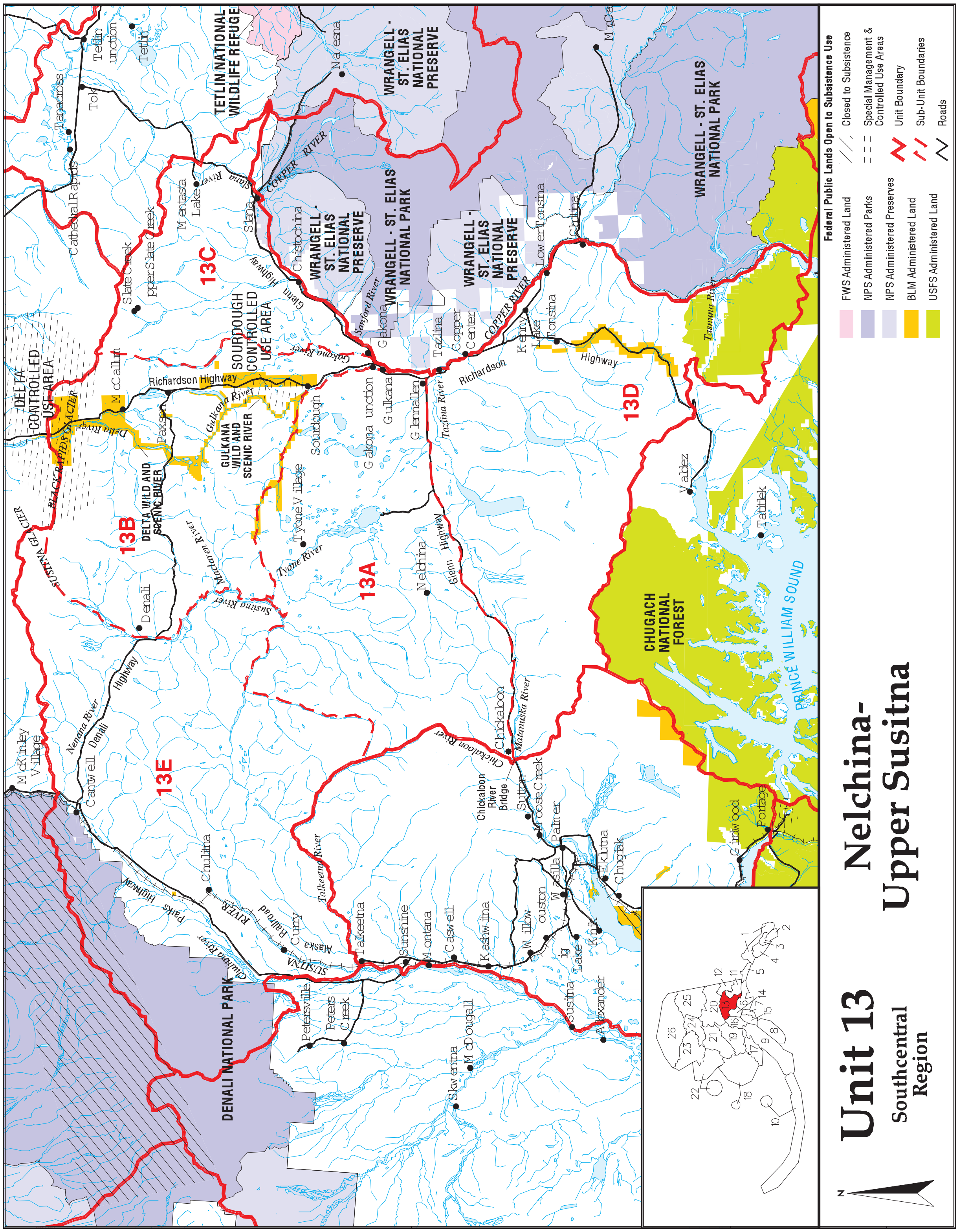
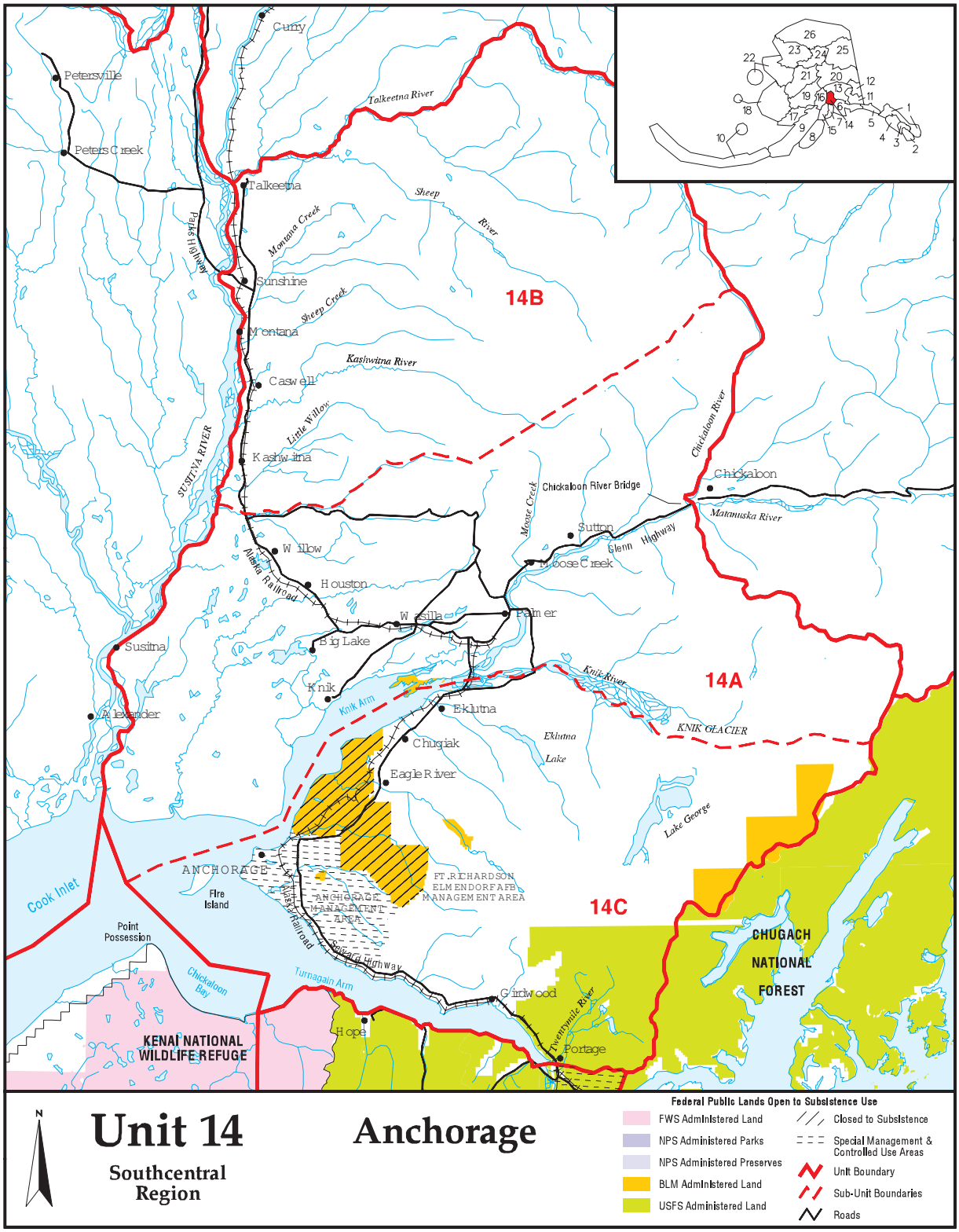
Unit 9 Alaska Peninsula
Bristol Bay and Kodiak/Aleutian Islands Regions
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

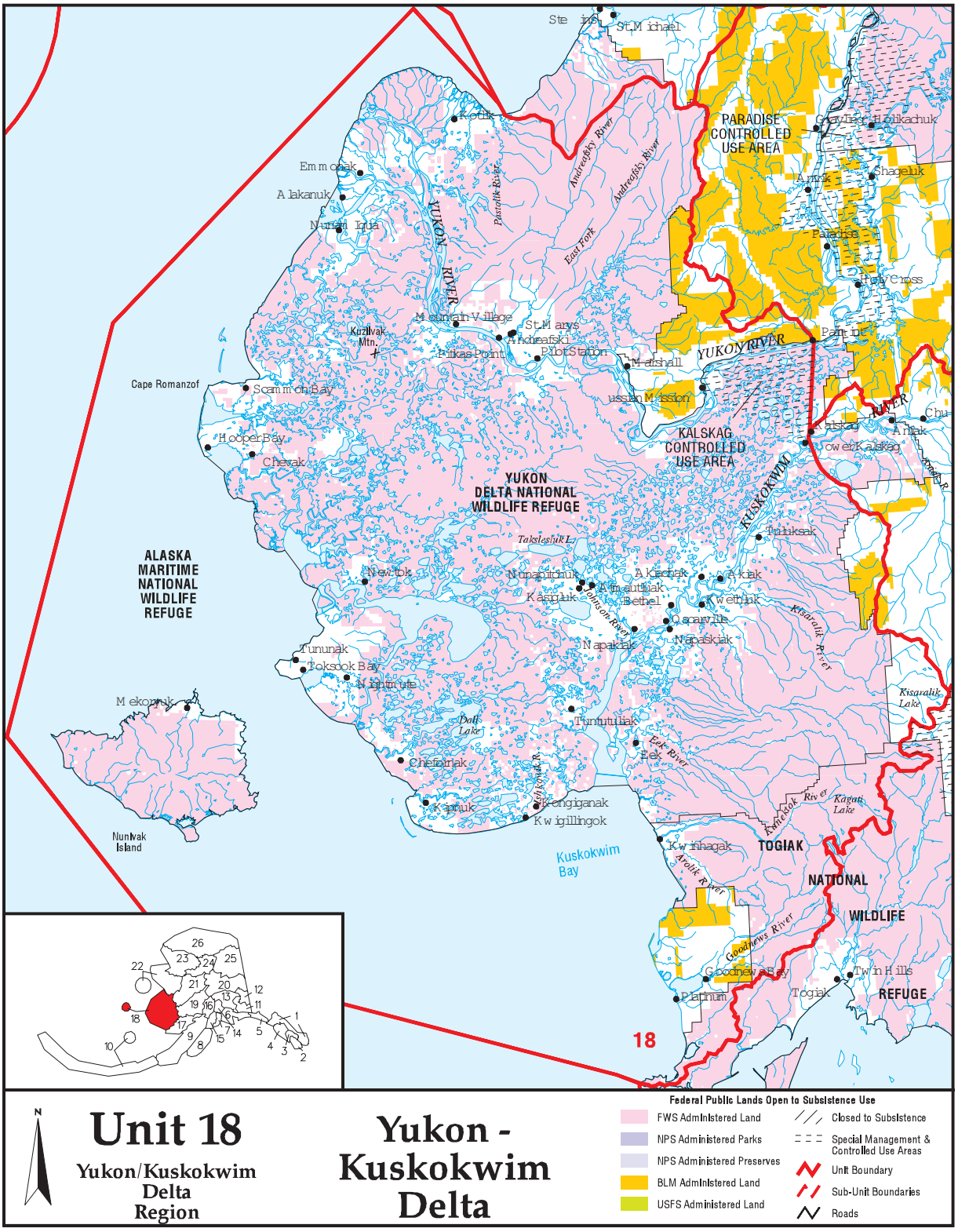

Unit 10
Aleutian Islands
Kodiak/Aleutians Region
N
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
BERING SEA
PACIFIC OCEAN
ALEUTIAN ISLANDS
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
FOX ISLANDS
Unimak Island
Pass
Akutan
Unalaska
Unalaska Island
Umnak Island
Nikolski
Atka Island
Atka
Amlia Island
Adak
Adak Island
ANDREANOF ISLANDS
Amchitka Island
RAT ISLANDS
Kiska Island
Buldir Island
Shemya
NEAR ISLANDS
Attu
Attu Island
PRIBILOF ISLANDS
Saint Paul Island
St. Paul
Otter Island
Saint George Island
St. George
10
OTTER ISLAND CLOSED TO SUBSISTENCE

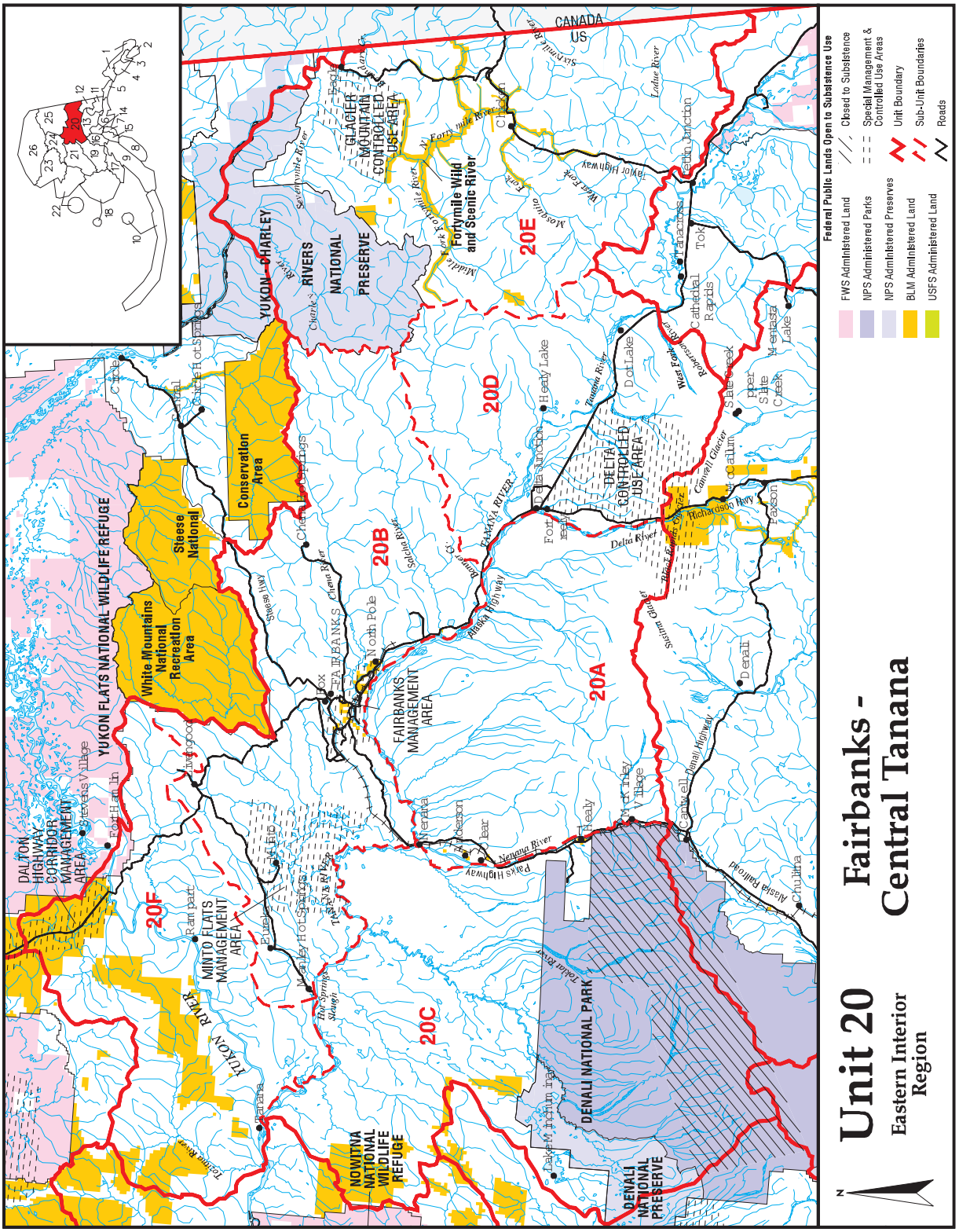

Unit 11
Southcentral Region
Wrangell Mountains - Chitina River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
WRANGELL - ST. ELIAS NATIONAL PRESERVE
WRANGELL - ST. ELIAS NATIONAL PARK
CHUGACH NATIONAL FOREST
Chistochina
Gakona Junction
Gakona
Gulkana
Glennallen
Tazlina
Copper Center
Kenny Lake
Lower Tonsina
Tonsina
Chitina
Nabesna
Chisana
McCarthy
Glenn Highway
Richardson Highway
Copper River
Sanford River
Gakona River
Tiekel River
Nabesna Road
Pickerel Lake Winter Trail
Chitina River
McCarthy Road
Kennicott River
Barnard Glacier
Miles Glacier
Miles Lake
11
CANADA
US

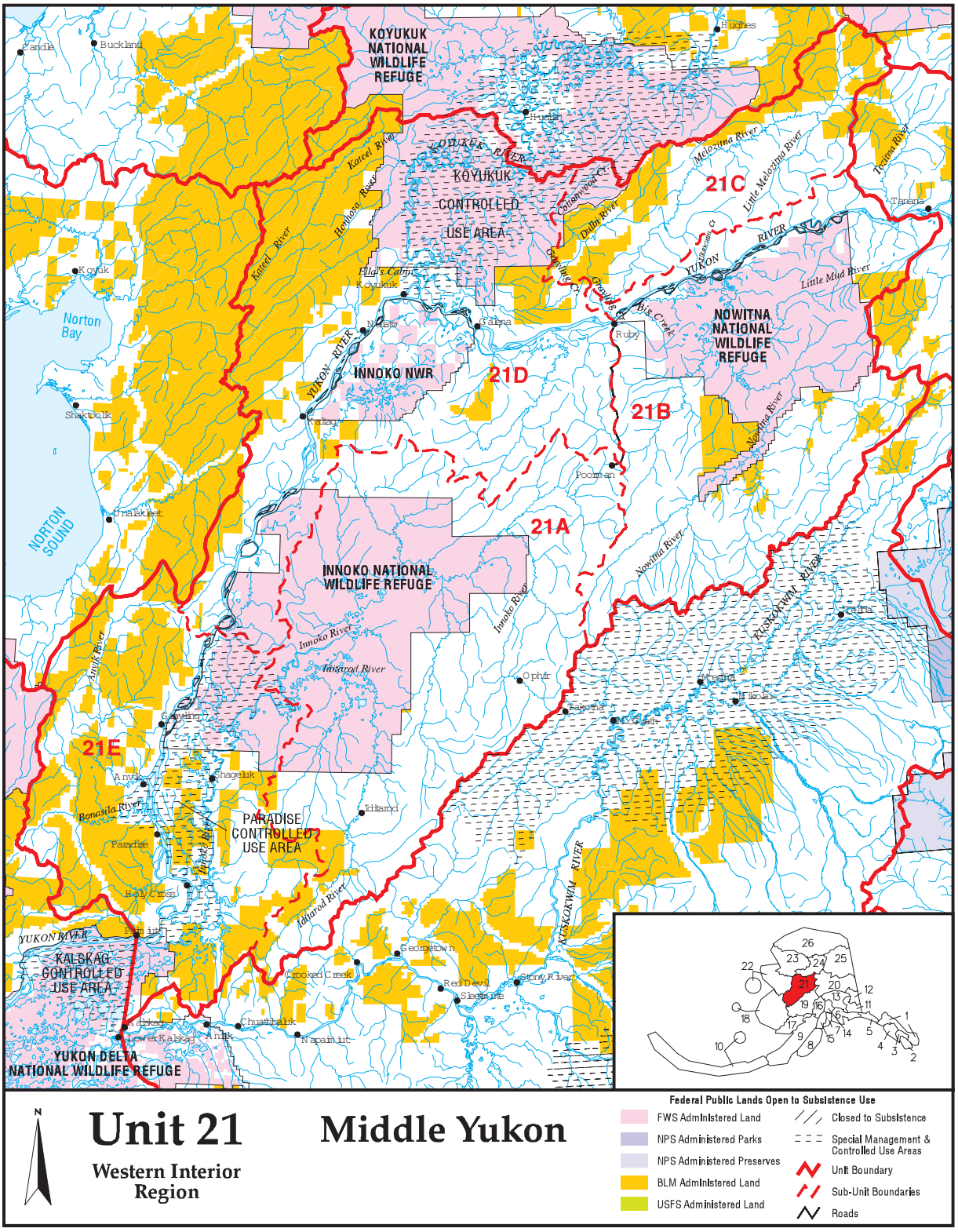

Unit 12
Eastern Interior Region
Upper Tanana - White River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
Bot Lake
Cathedral Rapids
Tanacross
Tok
Tetlin Junction
Tanana
Taylor Highway
Robertson River
Slate Creek
Upper Slate Creek
Glenn Highway
Tetlin
Tetlin Lake
Ladue River Drainage
Northway Junction
Northway
Alaska Highway
Mentasta Lake
TETLIN NATIONAL WILDLIFE REFUGE
Slana
Suslota Creek
Noyes Mountain
Nabesna Road
COPPER RIVER
Nabesna River
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Platinum Cr.
Tanacross Cr.
Jack Cr.
Pickerel Lake
Pickerel Lake Winter Trail
Nabesna
Sanford River
12
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Chisana
NABESNA GLACIER
White River
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Lower Tonsina
WRANGELL - ST. ELIAS NATIONAL PARK
Chitina
COPPER RIVER
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
US
CANADA
US
CANADA


Unit 13
Southcentral Region
Nelchina-Upper Susitna
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
13A
13B
13C
13D
13E
DENALI NATIONAL PARK
CHUGACH NATIONAL FOREST
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
TETLIN NATIONAL WILDLIFE REFUGE
DELTA CONTROLLED USE AREA
SOURDOUGH CONTROLLED USE AREA
GULKANA WILD AND SCENIC RIVER
DELTA WILD AND SCENIC RIVER
PRINCE WILLIAM SOUND


Curry
Petersville
Peters Creek
Talkeetna
Talkeetna River
Sheep River
Montana Creek
Parks Highway
Sunshine
Sheep Creek
Montana
Kashwitna River
Caswell
Little Willow
Kashwitna
SUSITNA RIVER
14B
Chickaloon River
Chickaloon
Chickaloon River Bridge
Moose Creek
Matanuska River
Sutton
Glenn Highway
Moose Creek
Willow
Alaska Railroad
Houston
Wasilla
Palmer
Big Lake
Susitna
Knik
Knik Arm
Knik River
14A
Alexander
Eklutna
KNIK GLACIER
Eklutna Lake
Chugiak
Eagle River
Lake George
ANCHORAGE
Fire Island
FT. RICHARDSON
ELMENDORF AFB
MANAGEMENT AREA
ANCHORAGE MANAGEMENT AREA
14C
Cook Inlet
Point Possession
Alaska Railroad
Seward Highway
Chickaloon Bay
Turnagain Arm
Girdwood
Twentymile River
CHUGACH NATIONAL FOREST
Hope
Portage
KENAI NATIONAL WILDLIFE REFUGE
N
Unit 14
Southcentral Region
Anchorage
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Unit 18
Yukon/Kuskokwim Delta Region
Yukon - Kuskokwim Delta
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
PARADISE CONTROLLED USE AREA
KALSKAG CONTROLLED USE AREA
YUKON DELTA NATIONAL WILDLIFE REFUGE
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
TOGIAK NATIONAL WILDLIFE REFUGE
YUKON RIVER
KUSKOKWIM RIVER
Kuskokwim Bay
Cape Romanzof
Hooper Bay
Chevak
Scammon Bay
Emmonak
Alakanuk
Nunam Iqua
Mountain Village
St. Mary's
Andreafski
Pilot Station
Marshall
Russian Mission
Kalskag
Lower Kalskag
Aniak
Chuathbaluk
Paimiut
Holy Cross
Shageluk
Anvik
Grayling
Holikachuk
Kotlik
Newtok
Nunapitchuk
Akiachak
Akiak
Bethel
Kwethluk
Oscarville
Napakiak
Napaskiak
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Platinum
Togiak
Twin Hills
Tuntutuliak
Tuluksak
Tununak
Toksook Bay
Nightmute
Mekoryuk
Nunivak Island
Kisaralik River
Kisaralik Lake
Kagati Lake
Eek River
Arolik River
Goodnews River
Kuskokwim R.
Johnson River
Takslesluk L.
Dall Lake
Andreafsky River
East Fork
Pastolik River
Kuzilvak Mtn.
Pilot Station
18


Unit 20
Eastern Interior Region
Fairbanks - Central Tanana
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
CANADA
US
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
GLACIER MOUNTAIN CONTROLLED USE AREA
Fortymile Wild and Scenic River
Steese National Conservation Area
White Mountains National Recreation Area
YUKON FLATS NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
MINTO FLATS MANAGEMENT AREA
FAIRBANKS MANAGEMENT AREA
DELTA CONTROLLED USE AREA
DENALI NATIONAL PARK
DENALI NATIONAL PRESERVE
NOWITNA NATIONAL WILDLIFE REFUGE
20A
20B
20C
20D
20E
20F
FAIRBANKS
North Pole
Delta Junction
Healy
Tok
Cantwell
Denali
Nenana
Ruby
Galena
Circle
Chicken
Eagle
Tanacross
Dot Lake
Slate Creek
Mentasta Lake
Chistochina
Gulkana
Glennallen
Paxson
Cantwell
Alaska Railroad
Alaska Highway
Richardson Hwy
Parks Highway
Taylor Highway
Denali Highway
Tanana River
Nenana River
Delta River
Tok River
Tanana River
Yukon River
Chena River
Salcha River
Goodpaster River
Tolovana River
Ladue River
Seventymile River
Fortymile River
Sixtymile River
Mosquito Fork
West Fork
Middle Fork
Robertson River
Susitna River
Canwell Glacier
Richardson Hwy
Black River
Ram part
Fairbanks Slough
Tanana Slough
Chena Hot Springs
Circle Hot Springs
Lake Minchumina
Chulitna



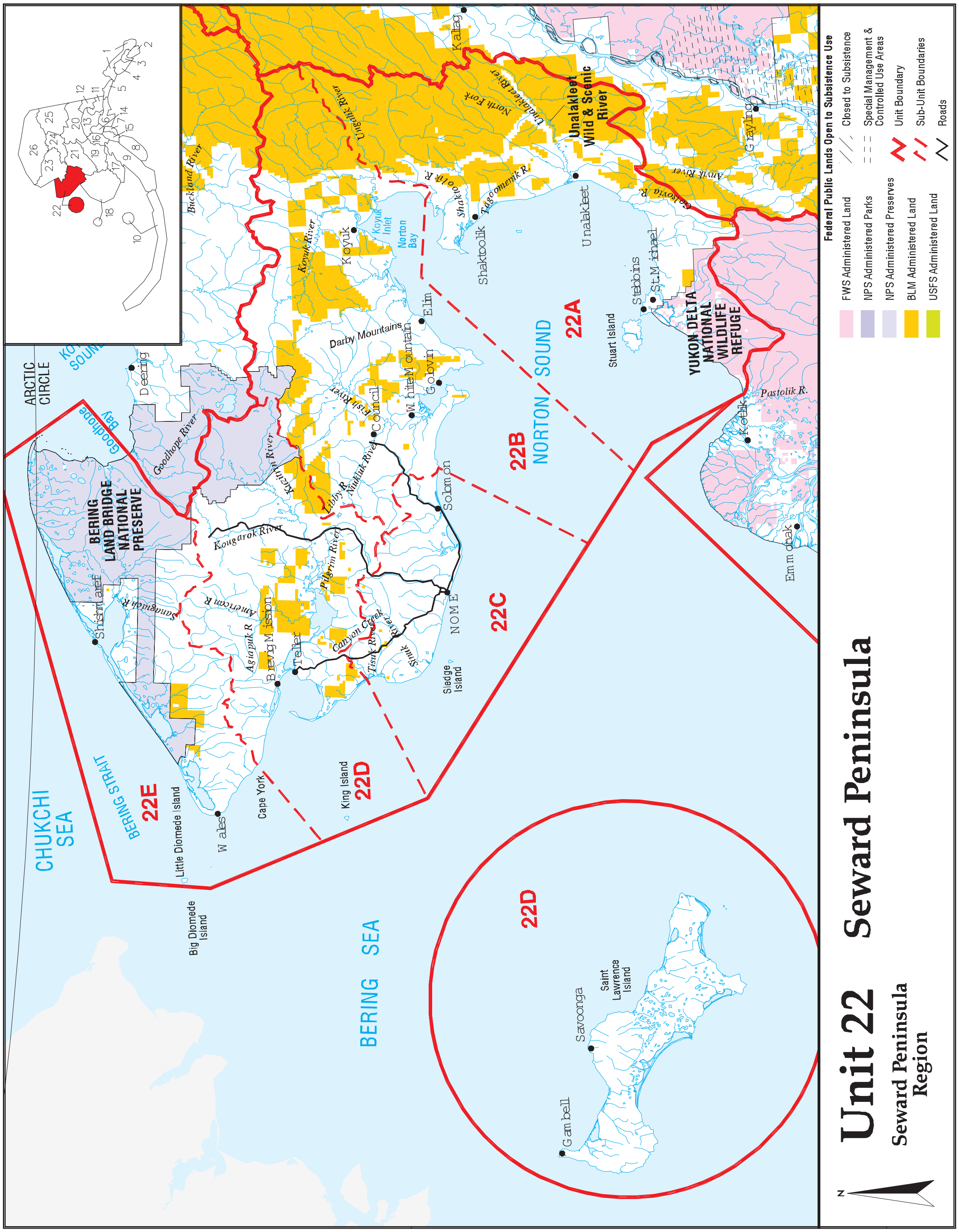
Unit 21

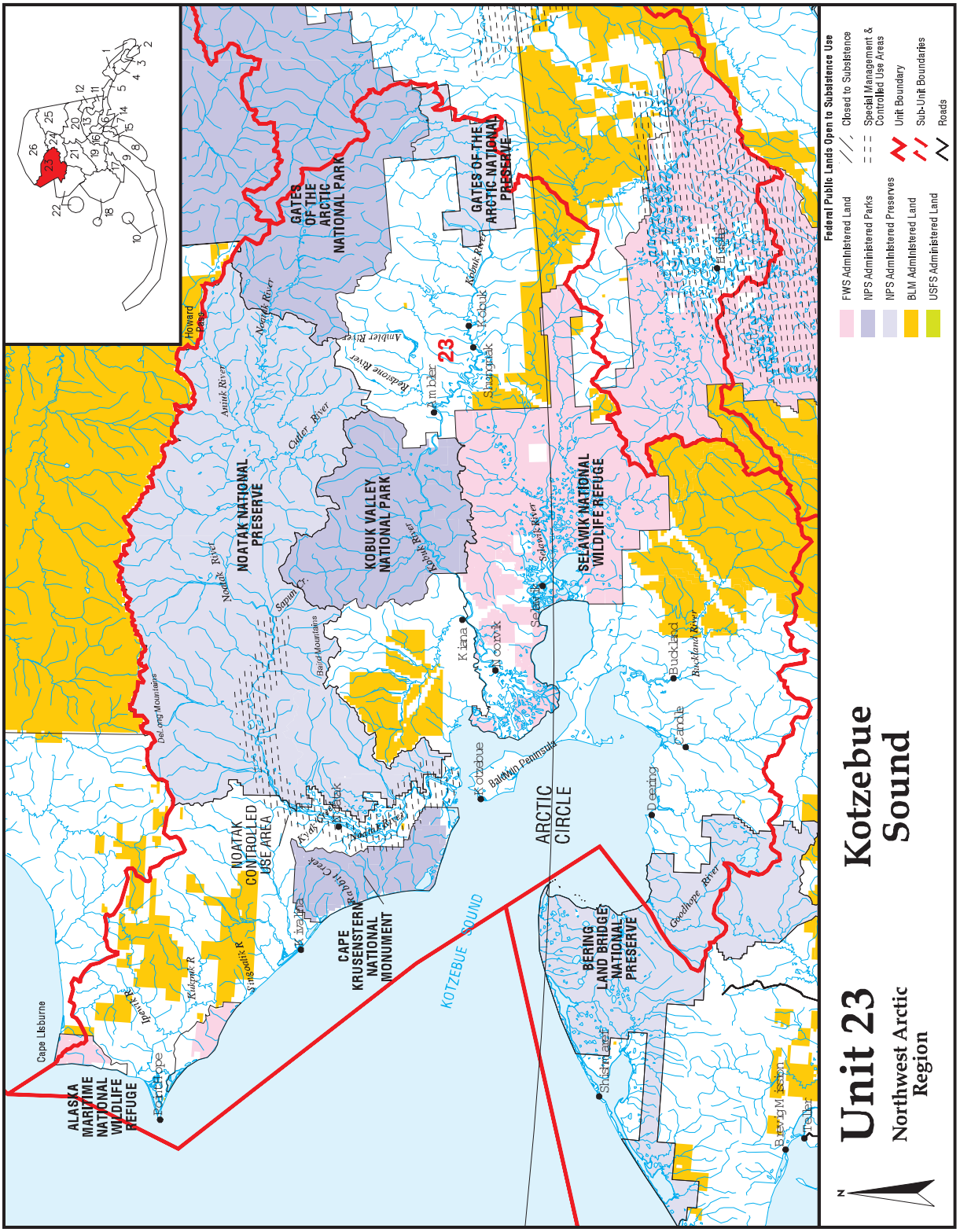
Western Interior Region

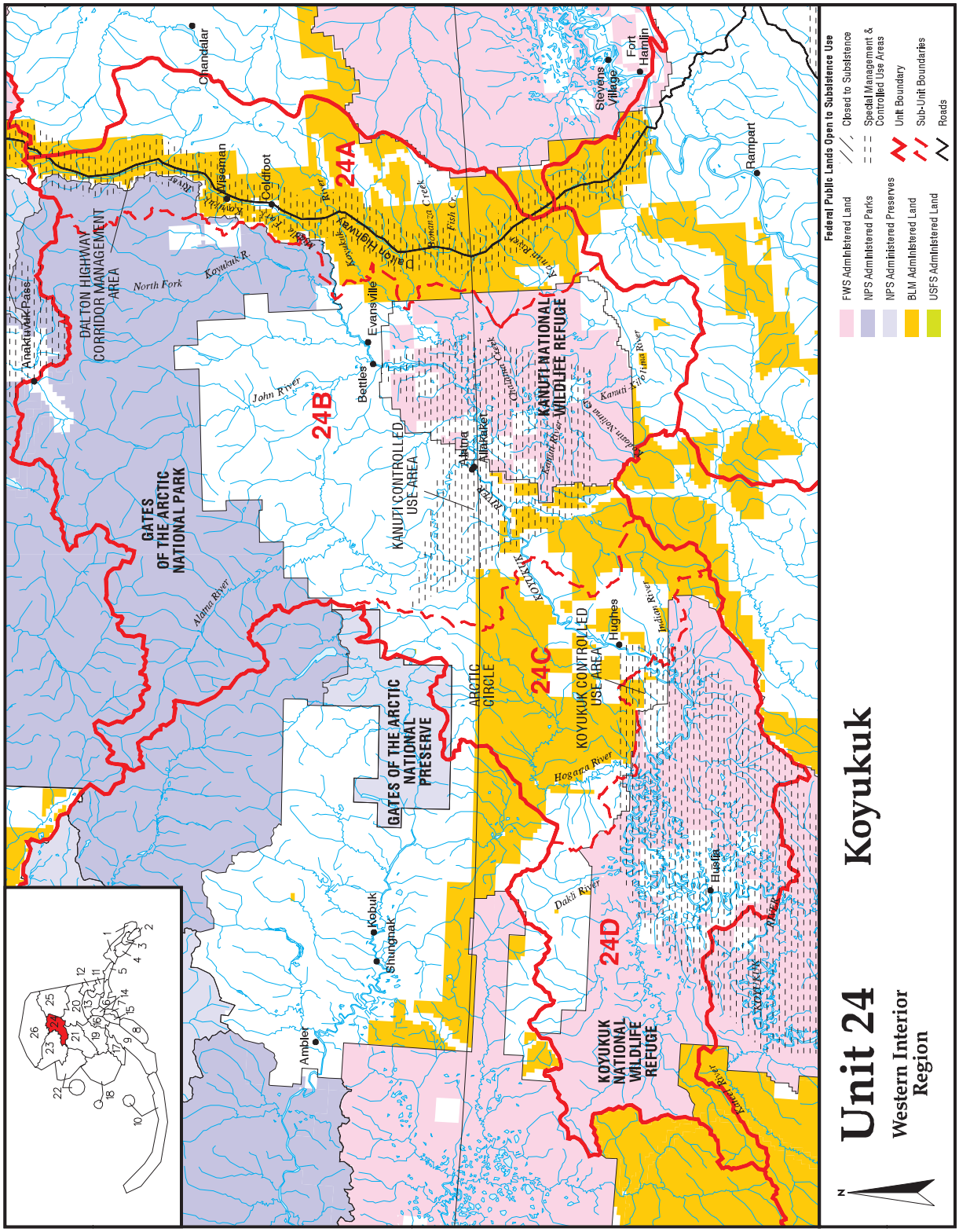
Middle Yukon

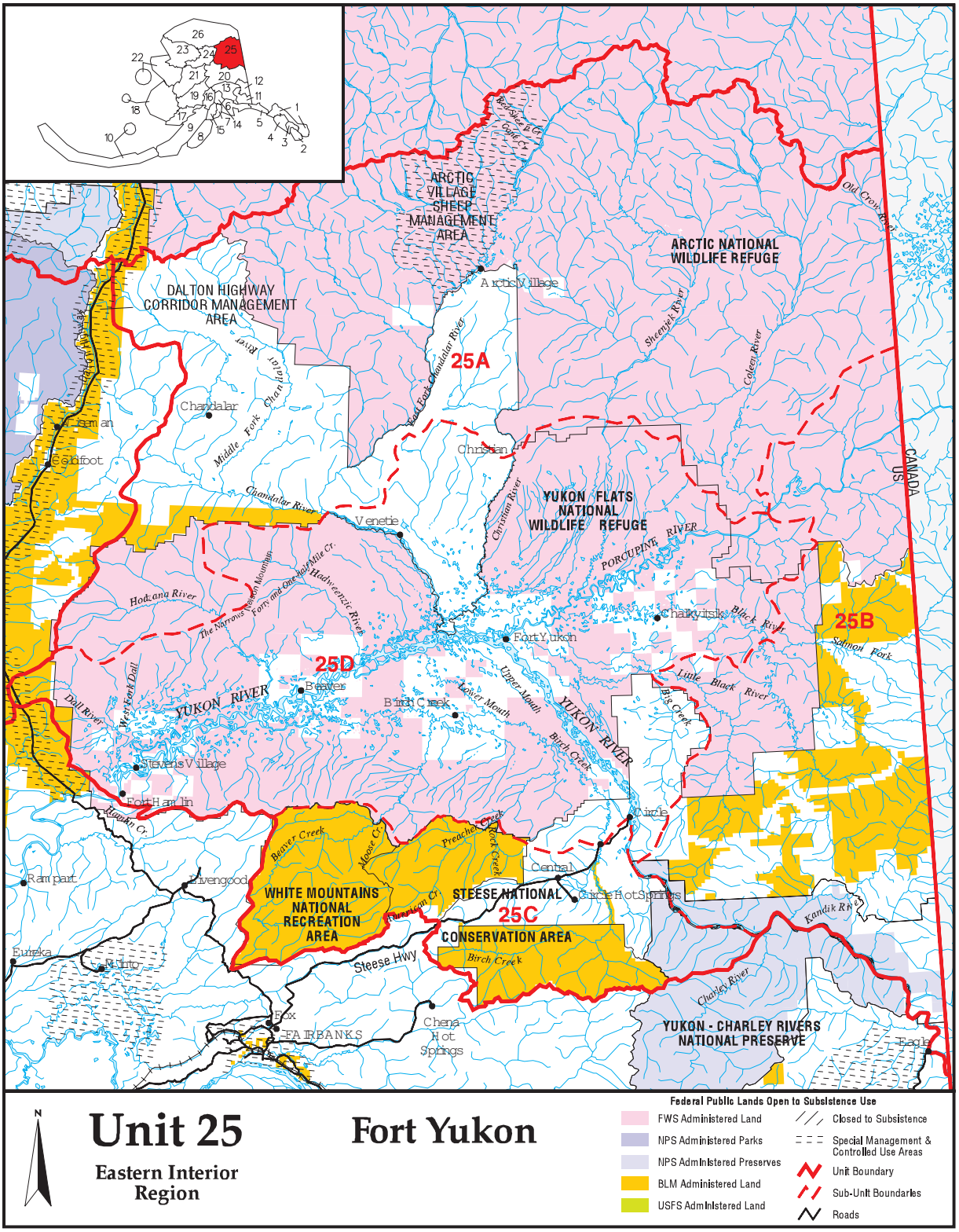
Federal Public Lands Open to Subsistence Use

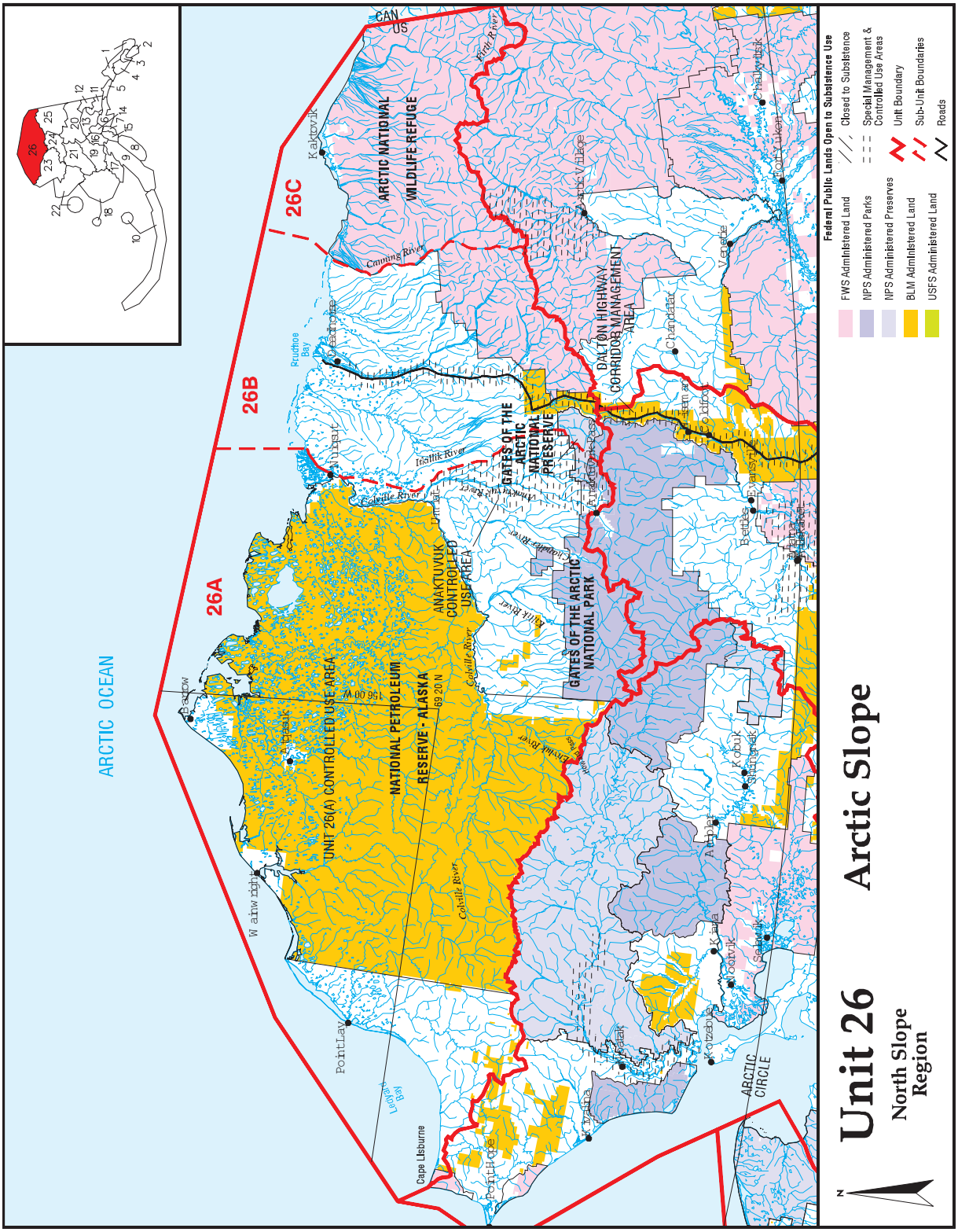
- FWS Administered Land
- NPS Administered Parks
- NPS Administered Preserves
- BLM Administered Land
- USFS Administered Land
- Closed to Subsistence
- Special Management & Controlled Use Areas
- Unit Boundary
- Sub-Unit Boundaries
- Roads


Unit 22
Seward Peninsula
Seward Peninsula Region
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
22A
22B
22C
22D
22E
NORTON SOUND
BERING SEA
CHUKCHI SEA
BERING STRAIT
ARCTIC CIRCLE
Goodhope Bay
BERING LAND BRIDGE NATIONAL PRESERVE
YUKON DELTA NATIONAL WILDLIFE REFUGE
Unalakleet Wild & Scenic River
Darby Mountains
Norton Bay
Koyuk Inlet
Stuart Island
Sledge Island
King Island
Cape York
Little Diomede Island
Big Diomede Island
Saint Lawrence Island
Gambell
Savoonga
Wales
Shishmaref
Brevig Mission
Teller
Nome
Solomon
Council
White Mountain
Golovin
Elim
Koyuk
Shaktoolik
Unalakleet
Stebbins
St. Michael
Kotlik
Emmonak
Grayling
Kaltag
Deering
Buckland River
Koyuk River
Ungalik River
Unalakleet River
North Fork
Shaktoolik R.
Tagoomenik R.
Golsovia R.
Anvik River
Pastolik R.
Goodhope River
Kuzitrin River
Fish River
Niukluk River
Casadepaga R.
Kougarok River
Pilgrim River
American R.
Agiapuk R.
Serpentine R.
Canyon Creek
Tisuk River
Sinuk


Unit 23
Northwest Arctic Region
Kotzebue Sound
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
NOATAK NATIONAL PRESERVE
KOBUK VALLEY NATIONAL PARK
SELAWIK NATIONAL WILDLIFE REFUGE
NOATAK CONTROLLED USE AREA
CAPE KRUSENSTERN NATIONAL MONUMENT
BERING LAND BRIDGE NATIONAL PRESERVE
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
KOTZEBUE SOUND
ARCTIC CIRCLE
Kotzebue
Kiana
Noorvik
Selawik
Buckland
Deering
Candle
Shishmaref
Wales
Teller
Ambler
Shungnak
Kobuk
Noatak
Kivalina
Point Hope
Cape Lisburne
Howard Pass
Noatak River
Anaktuvuk River
Ambler River
Kobuk River
Selawik River
Buckland River
Goodhope River
Baldwin Peninsula
Baird Mountains
DeLong Mountains
Sapun Cr.
Cutler River
Kivalitinik River
Kivalina River
Wulik River
Kugrua River
Tagoomik R
Kukpuk R
Ipewik R
23


Unit 24
Western Interior Region
Koyukuk
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
24A
24B
24C
24D
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
KANUTI CONTROLLED USE AREA
KANUTI NATIONAL WILDLIFE REFUGE
KOYUKUK CONTROLLED USE AREA
KOYUKUK NATIONAL WILDLIFE REFUGE
ARCTIC CIRCLE
Anaktuvuk Pass
Chandalar
Kiseman
Coldfoot
Evansville
Bettles
Allakaket
Alatna
Hughes
Huslia
Kobuk
Shungnak
Ambler
Stevens Village
Fort Hamlin
Rampart
North Fork
Koyukuk R.
John River
Alatna River
Kanuti River
Hogatza River
Dakli River
Koyukuk River
Dalton Highway
Kanuti Flats
Kanuti Lake
Indian River
Kanuti Flats River
Fish Cr.
Hogatza Creek
Chandler Creek
Kanuti Bottom
Alaska


ARCTIC VILLAGE SHEEP MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
25A
YUKON FLATS NATIONAL WILDLIFE REFUGE
25B
25C
25D
WHITE MOUNTAINS NATIONAL RECREATION AREA
STEESE NATIONAL CONSERVATION AREA
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
YUKON RIVER
PORCUPINE RIVER
CANADA
US
Arctic Village
Chandalar
Christian
Venetie
Fort Yukon
Beaver
Birch Creek
Stevens Village
Fort Hamlin
Circle
Central
Circle Hot Springs
Rampart
Livengood
Eureka
Pilot
Fox
FAIRBANKS
Chena Hot Springs
Eagle
Chalkyitsik
Steese Hwy
Dalton Hwy
Sheenjek River
Coleen River
Old Crow River
Christian River
Black River
Little Black River
Salmon Fork
Big Creek
Birch Creek
Kandik River
Charley River
Hodzana River
Hadwenzic River
Chandalar River
Middle Fork Chandalar
East Fork Chandalar River
Beaver Creek
Moose Cr.
Preachers Creek
Rock Creek
Dall River
Hawkin Cr.
Unit 25
Eastern Interior Region
Fort Yukon
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


Unit 26
North Slope Region
Arctic Slope
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
ARCTIC OCEAN
26A
26B
26C
UNIT 26(A) CONTROLLED USE AREA
NATIONAL PETROLEUM
RESERVE - ALASKA
AMAKTUVUK CONTROLLED USE AREA
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
CAN
US
Kaktovik
Prudhoe Bay
Deadhorse
Anaktuvuk Pass
Arctic Village
Chandalar
Venetie
Fort Yukon
Beaver
Bettles
Evansville
Allakaket
Alatna
Wiseman
Coldfoot
Kobuk
Shungnak
Ambler
Noorvik
Kiana
Selawik
Kotzebue
Noatak
Point Hope
Point Lay
Wainwright
Barrow
Atqasuk
Cape Lisburne
Lonely
Bay
ARCTIC CIRCLE
Canning River
Ikpikpuk River
Colville River
Itkillik River
Chandalar River
Koyukuk River
Alatna River
Hulahula River
Kobuk River
Noatak River
Kivalina
Hughes
Huslia
Shungnak
Ambler
Bettles
Evansville
Allakaket
Alatna
Wiseman
Coldfoot
Anaktuvuk Pass
Arctic Village
Chandalar
Venetie
Fort Yukon
Beaver
Kobuk
Shungnak
Ambler
Noorvik
Kiana
Selawik
Kotzebue
Noatak
Point Hope
Point Lay
Wainwright
Barrow
Atqasuk
Cape Lisburne
Kivalina
Hughes
Huslia
156 00 W
69 20 N

WP10-01 Executive Summary	
General Description	Proposal WP10-01 requests the addition of a definition for "drawing permit" to the Federal subsistence management regulations. *Submitted by the USFWS, Office of Subsistence Management*
Proposed Regulation	*Statewide-General Regulations* *§__.25(a) Definitions* ***Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a lottery held for all Federally qualified subsistence users submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt. Drawing permits are issued based on priorities determined by 36 CFR 242.17 and 50 CFR 100.17.***
OSM Conclusion	**Support** Proposal WP10-01 **with modification** to simplify and clarify the definition. The modified regulation would read: *Statewide-General Regulations* *§__.25(a) Definitions* ***Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a random drawing.***
Southeast Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Southcentral Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Kodiak/Aleutians Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Bristol Bay Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Seward Peninsula Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.
Northwest Arctic Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-01 **with modification** as described in the OSM Conclusion.

continued on next page

WP10-01 Executive Summary *(continued)*	
North Slope Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	
Written Public Comments	**1 Support** **1 Oppose**

STAFF ANALYSIS
WP10-01

ISSUES

Proposal WP10-01, submitted by the USFWS, Office of Subsistence Management, requests the addition of a definition for "drawing permit" to the Federal subsistence management regulations.

DISCUSSION

Existing Federal subsistence management regulations do not include a definition for "drawing permit"(§§__.4 and __.25(a)). However, because this term is used in the hunting regulations (§__.26(n)(19)), a definition should be provided.

Existing Federal Regulation

Statewide-General Regulations

§__.25(a) Definitions—No existing definition

Proposed Federal Regulation

Statewide-General Regulations

§__.25(a) Definitions
Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a lottery held for all Federally qualified subsistence users submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt. Drawing permits are issued based on priorities determined by 36 CFR 242.17 and 50 CFR 100.17.

Existing State Regulation

Definitions

Drawing permit—a permit issued to a limited number of people selected by means of a lottery held for all people submitting valid applications for such permits and who agree to abide by the conditions specified for each hunt.

Extent of Federal Public Lands/Waters

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% U.S. Fish and Wildlife Service, and 6% U.S. Department of Agriculture, U.S. Forest Service lands.

Effects of the Proposal

The addition of this definition does not affect fish and wildlife populations, subsistence uses or other uses (i.e., sport/recreational or commercial). The Federal Subsistence Management Program has used drawings as one way to distribute permits among residents of a community that are similarly situated relative to

customary and traditional uses of those wildlife populations. Current hunting regulations use the phrase "drawing permit" to describe the permit for the Unit 19A moose hunt, and there have been other situations where drawings have been used to distribute registration permits among qualified applicants. Proposal WP10-09, submitted by the Southeast Alaska Subsistence Regional Advisory Council, requests a drawing permit hunt. The addition of a definition for "drawing permit" to the Federal regulations would help provide clarity to regulations.

OSM CONCLUSION

Support Proposal WP10-01 **with modification** to simplify and clarify the definition.

The modified regulation would read:

> *Statewide-General Regulations*
>
> *§__.25(a) Definitions*
> ***Drawing permit—a permit issued to a limited number of Federally qualified subsistence users selected by means of a random drawing.***

Justification

The definition clarifies a term that is used in the Federal subsistence hunting regulations and does not affect fish and wildlife populations, subsistence uses or other uses. The modified wording simplifies the definition and makes it clear that drawing permits are based on a "random" drawing for all similarly situated Federally qualified subsistence users.

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01. Drawing Permit Definition requested for the addition of a "drawing permit" definition to the regulations. The Council supported the proposal because subsistence is a way of life. There are concerns about having to use a drawing permit.

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01. The Council supported the proposal because subsistence is a way of life. There are concerns about having to use a drawing permit.

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion. The Council determined that this proposal is housekeeping and would simplify and clarify regulations.

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion. The definition clarifies a term in the Federal subsistence hunting regulations and does not affect fish and wildlife populations, subsistence uses or other uses.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion. This proposal, if adopted by the Board, will not negatively affect subsistence users.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion. The Council agrees with clarifying definitions for "drawing permits".

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in OSM Conclusion. This is a housekeeping proposal to clarify random drawing.

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-01 **with modification** as described in the OSM Conclusion. The Council determined that this proposal was housekeeping and provides clarity in for a term under common use.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-01

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-01**.** Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal as modified in the OSM Conclusion with additional modification by the SRC. The SRC amended the proposal to make use of a drawing permit hunt contingent on approval by the affected region. Drawing permit hunts are a tool that can be used to distribute permits among federally qualified subsistence users, however, SRC members felt that individual regions should be able to decide whether they are appropriate to use in their region.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-01. We oppose WP10-01 to add drawing permit to the Federal definitions in the regulation booklet. Since Drawing Permits is possible only within 2 regions, it isn't necessary to have a statewide definition of a State concept and terminology.

An analysis of ANILCA Section 804 should be considered first, before consideration of a drawing permit. Each region and communities are different and it may be necessary to do a drawing permit, however, in most cases an analysis of Section 804 should be done first and foremost before adopting the State system of doing a drawing permit.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

STATUS OF WP10-02 *(DEFERRED WP08-05)*

Proposal WP10-02 (deferred proposal WP08-05), submitted by the Alaska Department of Fish and Game, requested clarification of the existing Federal Subsistence management regulation governing the use of brown bear claws in handicrafts for sale. The proposal specifically asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users.

Proposal WP10-02 was deferred by the Federal Subsistence Board (Board) at its May 2008 meeting at the suggestion of the Alaska Department of Fish and Game, pending formation of a workgroup to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. The Board voted unanimously to defer the proposal "to allow a work group to address this issue of sale and tracking, specifically whether or not it's even feasible" (FSB 2008:117). The Board directed that the working group include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008: 102-119).

An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed[1]. A briefing was provided to all Councils during the Winter 2009 meeting cycle on the status of the workgroup, and Councils selected representatives to participate in the workgroup. The workgroup, including representatives from nine Councils, and Federal and State staff met in June 2009. At that meeting, participants from the Councils posed a number of questions directed at whether or not bear claw tracking is a problem for subsistence users, and if regulations needed to be changed. These questions prompted Federal and State staff to conduct further research, and to meet as agency staff to compare notes and to follow up on research questions, which they did twice during summer 2009. The work group attempted to meet again during the summer of 2009, but this was not possible. In the interim, another briefing on the status of the workgroup was provided to the Councils at the Fall 2009 meetings.

FUTURE DIRECTION

The workgroup, including Council members, will meet during spring/summer 2010 to address the questions raised at its first meeting, and to begin working towards resolution of the issues. This will provide ample time for the workgroups' findings to be presented to each Council for their recommendations during the Fall 2010 meeting cycle, and for a full report to be provided to the Federal Subsistence Board for action at its January 2011 meeting. A report will also be provided to the Alaska Board of Game at an appropriate meeting. Proposal 10-02 (WP08-05) will be deferred until that time.

LITERATURE CITED

FSB. 2008. Transcripts of the Federal Subsistence Board proceedings, April 29, 2008. Office of Subsistence Management, FWS. Anchorage, AK.

[1] Draft charge for workgroup:
Develop a method(s) to recommend to the Federal Subsistence Board and Board of Game for tracking brown bear claws made into handicrafts that is enforceable and culturally sensitive, commensurate with the need to provide conservation of this wildlife resource.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-02

The status of WP10–02 (deferred proposal WP08 – 05) was presented to all Regional Advisory Councils for their information. The decision was made to further defer this proposal until the assigned State-Federal workgroup completes their work, with an anticipated presentation to the Board in January 2011. The Southeast Alaska Subsistence Regional Advisory Council was the only RAC that still chose to take action on the proposal. They voted to **Oppose** Proposal WP10-02.

The Southeast Regional Council reaffirmed their previous actions in support of use of brown bear parts for handicrafts. The Council felt that there is no evidence to indicate the need for a bear handicrafts workgroup or a need to limit or restrict the use of brown bear parts. The Council stated that there is no need to defer action.

WP10-03 Executive Summary	
General Description	Proposal WP10-03 requests the addition of a general provision in Federal subsistence management regulations to allow the harvest of fish and wildlife by participants in a cultural or educational program. *Submitted by the Office of Subsistence Management*
Proposed Regulation	*See the analysis for the proposed regulation language.*
OSM Conclusion	**Support** Proposal WP10-03 **with modification** to simplify the proposed regulation.
Southeast Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
Southcentral Regional Council Recommendation	**Support** Proposal WP10-01 **with modification.** See the Council's recommendation following the analysis for the proposed regulation language.
Kodiak/Aleutians Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
Bristol Bay Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-03 w**ith modification** as described in the OSM Conclusion.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-03 w**ith modification** as described in the OSM Conclusion.
Seward Peninsula Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
Northwest Arctic Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
North Slope Regional Council Recommendation	**Support** Proposal WP10-03 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	
Written Public Comments	**1 Modify** **1 Support** Proposal WP10-03 **with modification** **1 Oppose**

STAFF ANALYSIS
WP10-03

ISSUES

Proposal WP10-03, submitted by the Office of Subsistence Management, requests the addition of a general provision in Federal subsistence management regulations to allow the harvest of fish and wildlife by participants in a cultural or educational program.

DISCUSSION

This proposal is a housekeeping measure intended to provide clarity in the guidelines for issuing permits for the harvest of fish and wildlife by cultural and educational programs. Doing so will help to inform the public, fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board (Board) of the guidelines currently in use by Office of Subsistence Management staff with regard to permits to harvest wildlife and fish for cultural and educational programs. Since the Federal program began in 1990, the process for issuing permits has gone through a number of changes. Because some of these changes have not been well documented, there is some confusion over the process. The intent of this regulation then is to provide clarity in Federal subsistence management regulations.

Currently, there is no specific provision allowing for the harvest of wildlife for cultural and educational programs although there is a general allowance that provides for such a practice. A specific provision allows for the harvest of fish for a cultural and educational program.

Most requests speaking to the allowance of fish or wildlife harvests on behalf of a cultural or educational program are on behalf of culture camps sponsored by Native nonprofit organizations. Requests for permits also have been received from a substance abuse rehabilitation program and for college courses. The permits are typically requested both to teach cultural and educational activities associated with harvest, and to provide food for participants in the cultural and educational program. Once a program has been approved for a permit, follow-up requests (referred to as repeat requests in the regulation), may be made annually for up to five years by the same cultural or educational program to harvest the same animal species and amount.

Existing Federal Regulation

Program structure

§____.10(d)

(5) The Board may implement one or more of the following harvest and harvest reporting or permit systems:

(iii) The fish and wildlife is taken by individuals or community representatives permitted (via a Federal Subsistence Registration Permit) a one-time or annual harvest for special purposes including ceremonies and potlatches.

General regulations

No existing regulation

Fish regulations

§____.27(e)

(2) The U.S. Fish and Wildlife Service Office of Subsistence Management may issue a permit to harvest fish for a qualifying cultural/educational program to an organization that has been granted a Federal subsistence permit for a similar event within the previous 5 years. A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Permits will be issued for no more than 25 fish per culture/education camp. Appeal of a rejected request can be made to the Federal Subsistence Board. Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in this paragraph (e)(2), will be considered by the Federal Subsistence Board.

Proposed Federal Regulation

Program structure

§____.10(d)

(5) The Board may implement one or more of the following harvest and harvest reporting or permit systems:

(iii) The fish and wildlife is taken by individuals or community representatives permitted (via a Federal Subsistence Registration Permit) a one-time or annual harvest for special purposes including ceremonies and potlatches.

General regulations

§____.25(g) Cultural/educational program permits

(1) A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Federal Subsistence Board through the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Generally permits will be issued for no more than one large mammal per cultural/educational program, permits will be issued for no more than 25 fish per cultural/educational program, and permits for the harvest of shellfish will be addressed on a case by case basis. Any animals harvested will count against any established Federal harvest quota for the area in which harvested.

(2) Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in paragraph

(g)(1), will be considered by the Federal Subsistence Board. Appeal of a rejected request can be made to the Federal Subsistence Board.

(3) A permit to harvest fish, wildlife, or shellfish for a qualifying cultural/educational program which has been granted a Federal subsistence permit for a similar event within the previous 5 years may be issued by the Federal in-season manager (for fisheries) or the Federal local land manager (for wildlife). Requests for follow-up permits must be submitted to the in-season or local land manager 60 days prior to the earliest desired date of harvest.

(4) Federal in-season and local land managers will report the re-issue of any cultural/educational program permits and the harvest results to the U.S. Fish and Wildlife Service, Office of Subsistence Management.

Fish regulations

§____.27(e)

~~*(2) The U.S. Fish and Wildlife Service Office of Subsistence Management may issue a permit to harvest fish for a qualifying cultural/educational program to an organization that has been granted a Federal subsistence permit for a similar event within the previous 5 years. A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Office of Subsistence Management 60 days prior to the earliest desired date of harvest. Permits will be issued for no more than 25 fish per culture/education camp. Appeal of a rejected request can be made to the Federal Subsistence Board. Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that provided in this paragraph (e)(2), will be considered by the Federal Subsistence Board.*~~

State Regulations

5 AAC 92.034 Permit to take game for cultural purposes

The commissioner may issue a permit for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values, only under the terms of a permit issued by the department upon application. A permit may not be issued if the taking of the game can be reasonably accommodated under existing regulations. For purposes of this section, "game" includes (1) deer; (2) moose; (3) caribou; (4) black bear; (5) mountain goat; (6) small game; (7) furbearers; and (8) any migratory bird for which a federal permit has been issued[1].

Regulatory History

At the inception of the Federal Subsistence Management Program, all requests for permits to allow harvests for special purposes between regulatory cycles were treated as special actions that went directly

1 Beginning July 1, 2010, the regulation will change to: "The commissioner may issue a permit for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values, only under the terms of a permit issued by the department upon application. A permit may not be issued if the taking of the game can be reasonably accommodated under existing regulations" (Cunning, pers. comm., 2010).

to the Board. In 2000, the Board adopted a general provision in Federal regulations that delegated authority to Office of Subsistence Management to issue special harvest permits for repeated requests from cultural and educational camp operators (§____.25(c)(4) [2]; 66 FR 10148, February 13, 2001). Thus, the initial request went to the Board and any subsequent requests to the Office of Subsistence Management. This regulation included provisions for issuing permits to harvest up to 25 fish and one species of wildlife (deer, moose, caribou, black bear, or mountain goat only). These species were included in the regulation because permits had previously been distributed for these species. At the time of its adoption, the Board expressed the desire to evaluate the effectiveness of the regulation following its implementation (FWS 2004).

Concurrently, in 2000 the Board also adopted regulations to manage fisheries occurring in Federal public waters. As part of this activity, the Board adopted a regulation addressing the subsistence take of fish on behalf of cultural and educational programs (§____.27(e)(2); 66 FR 33745, June 25, 2001). The regulation adopted by the Board required that initial requests are considered by the Board and repeat requests are considered by Office of Subsistence Management. The Board gave the Office of Subsistence Management the authority to issue repeat permits for the harvest of up to 25 fish per program. It should be noted that this regulation was adopted even though a similar regulation (described in the previous paragraph) already existed in general provisions of Federal regulations, which was probably an oversight.

In November 2003 the Board rescinded the general provisions regulation that delegated authority to the Office of Subsistence Management to issue cultural and educational permits (§____.25(g) [§____.25(c)(4)]; 69 FR 40177, July 1, 2004). Instead of a regulation, the Board established guidelines for issuing permits for the harvest fish and wildlife for cultural and educational programs. Additionally, the Board delegated the authority to issue repeat permits to field managers.

When a permit to harvest wildlife by a cultural or educational program is issued, at the same time a letter containing guidelines for delegation is completed by the analyst at the Office of Subsistence Management and sent to the Federal field manager by the policy coordinator at the Office of Subsistence Management. The guidelines require that the field manager become familiar with the management history of the species and with the State and Federal regulations and management plan, and be up-to-date on population and harvest status information. Also, the guidelines direct the field manager to consult with the local ADF&G fish and wildlife managers.

Effects of the Proposal

If this proposal is adopted, the provision in fish regulations for issuing cultural and educational permits should be rescinded. The description of how to apply for a permit to harvest fish or wildlife as part of a cultural or educational program that is in the Federal subsistence regulation booklets published for the public will flow directly from the new regulation requested in this proposal.

If this proposal is not adopted, there will continue to be confusion among the public, fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board concerning the issuing of these permits.

OSM CONCLUSION

Support Proposal WP10-03 **with modification** to simplify the proposed regulation.

2 The regulation located at §____.25(c)(4) in Federal regulations was later moved to §____.25(g) during a reorganization of the Federal regulations (66 FR 33745–33746, June 25, 2001).

The modified regulation should read:

General regulations

§____.25(g) Cultural/educational program permits

(1) A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the Federal Subsistence Board through the Office of Subsistence Management and should be submitted 60 days prior to the earliest desired date of harvest. Harvests must be reported and any animals harvested will count against any established Federal harvest quota for the area in which it is harvested.

(2) Requests for follow-up permits must be submitted to the in-season or local manager and should be submitted 60 days prior to the earliest desired date of harvest.

Justification

The harvest of fish and wildlife by participants in cultural and educational programs is generally allowed in the Federal Subsistence Management Program regulations. Proposal WP10-03 will further clarify for fish and wildlife managers, Office of Subsistence Management staff, members of the Interagency Staff Committee, and members of the Federal Subsistence Board the cultural and educational permit regulations.

LITERATURE CITED

Cunning, T. 2010. Subsistence coordinator. Personal communication: in-person. ADF&G. Anchorage, AK.

FWS. 2004. Staff analysis for Proposal WP04-26. Pages 178–188 in Federal Subsistence Board Meeting Materials May 18–21, 2004. Office of Subsistence Management, FWS. Anchorage, AK. 622 pages.

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The Council believes that it is very important to provide opportunity for cultural/educational programs permits.

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The Council believes that it is very important to provide opportunity for cultural/educational programs permits.

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The Council determined that this proposal supports subsistence uses of wildlife and retains the ability to obtain permits with less than a 60 day notice. The Council suggested further simplification by asking the Federal program to work with the State to develop a joint Federal-State permit.

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The Council supported the proposal to simplify the current regulations to reduce confusion among the public and federal managers.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification**.

The modified proposed regulation should read:

> *~~§____.27(e)~~ §____.25(g)Cultural/educational program permits*
>
> *~~(2)~~* ***(1)*** *~~The U.S. Fish and Wildlife Service Office of Subsistence Management may issue a permit to harvest fish for a qualifying cultural/educational program to an organization that has been granted a Federal subsistence permit for a similar event within the previous 5 years.~~ A qualifying program must have instructors, enrolled students, minimum attendance requirements, and standards for successful completion of the course. Applications must be submitted to the* ***Federal Subsistence Board through the*** *Office of Subsistence Management* ***and should be submitted*** *60 days prior to the earliest desired date of harvest.* ***Generally permits*** *~~Permits~~ will be issued for no more than 25 fish per culture/education ~~camp~~* ***program, and permits for the harvest of shellfish will be addressed on a case by case basis****. ~~Appeal of a rejected request can be made to the Federal Subsistence Board. Application for an initial permit for a qualifying cultural/educational program, for a permit when the circumstances have changed significantly, when no permit has been issued within the previous 5 years, or when there is a request for harvest in excess of that~~*

~~*provided in this paragraph (e)(2), will be considered by the Federal Subsistence Board.*~~ ***Harvest must be reported and any animals harvested will be counted against any established Federal harvest quota for the area in which it is harvested.***

(2) A permit to harvest fish, wildlife, or shellfish for a qualifying cultural/educational program which has been granted a Federal subsistence permit for a similar event within the previous 5 years may be issued by the Federal in-season manager (for fisheries) or the Federal local land manager (for wildlife). Requests for follow-up permits must be submitted to the in-season or local land manager and should be submitted 60 days prior to the earliest desired date of harvest.

The Council supported the proposal with amendments. The Council felt that its amendments provided more clarity, especially with respect to harvest limits. The proposal will not affect existing cultural camps and is consistent with existing regulations.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support WP10-03 **with modification** as described in the OSM Conclusion. The Council agrees with clarifying the regulations for educational and cultural permits.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in OSM Conclusion. This is a housekeeping proposal. Adding general provisions in the regulations would clarify subsistence management regulations.

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The modified proposal is preferable to the proposed regulation and will simplify the process.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-03 **with modification** as described in the OSM Conclusion. The Council is in favor of removing confusing language regarding the ceremonial use of fish and wildlife. However, it is unclear to the Council how OSM would define an educational camp. The Council is in favor of simplified regulations that do not include hard timelines and provide flexibility in the number of animals that could be taken.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-03

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The Eastern Interior Regional Council suggested that the Federal program work with the State to develop a joint Federal-State permit. This idea may have merit, especially in areas with intermingled land

ownership, but would need to be considered as a new proposal for consideration by all of the regional advisory councils and the Board.

WRITTEN PUBLIC COMMENTS

Modify Proposal WP10-03**.** This proposal needs amending to deal with the small size of deer in the Southeast area. One deer in Sitka is not equivalent to one moose or other large mammal in other parts of the state. For example the Dog Point Fish camp takes deer for cultural and educational purposes. One deer, once hung and dried, is insufficient to feed the students at the Dog Point Fish Camp.

Sitka Fish and Game Advisory Committee

Support Proposal WP10-03 **with modification.** Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with modification. The SRC modified the proposal as follows: (1) the requirement that applications be submitted 60 days in advance is eliminated; (2) the permit would be issued to the camp organizer or village council and that person would be responsible for designating a legal hunter; and (3) the permit is a joint federal/state permit. With regard to the first modification, the SRC felt that the requirement to submit applications 60 days in advance was not appropriate. Sometimes the event plans do not come together until shortly before the event. The last modification is designed to eliminate the need to obtain two permits when hunting in areas with mixed land ownership.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-03. We oppose WP10-03, "to revise §__.25(g) to address cultural/education program permits; if this revision would be adopted §__.27(e)(2) would be deleted as being extraneous." We oppose WP10-03 as it is written. We oppose the 60 day culture/education application process review by the Federal Subsistence Board. It may be necessary for the first time to have a 60 day process, but after 5 years of an established culture/education camp in place, it is not necessary to have a 60 day waiting period.

We have existing regulations in place in Units 11, 12, and 13 for culture/education camp. It works well for us. We are not sure how this proposal and regulatory action will affect the existing culture/education camp regulations.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-04 Executive Summary	
General Description	This proposal would remove Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the areas for which the Assistant Regional Director for Subsistence Management has the delegated authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits. *Submitted by the Office of Subsistence Management*
Proposed Regulation	*§__.26 (f)(3)* *The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units ~~6,~~ 7, 11, ~~12~~, 13, 14, 15,* ***and*** *16, ~~20A, 20B, 20C east of the Teklanika River, 20D, and 20E,~~ with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*
OSM Conclusion	**Support** Proposal WP10-04 **with modification** to delete the regulatory language found in *§__.26 (f)(3),* and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only.
Southeast Regional Council Recommendation	
Southcentral Regional Council Recommendation	**Support** Proposal WP10-04 **with modification** as described in the OSM Conclusion.
Kodiak/Aleutians Regional Council Recommendation	**No action taken**
Bristol Bay Regional Council Recommendation	**Support** Proposal WP10-04 **with modification as** described in the OSM Conclusion.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-04 **with modification** as described in the OSM Conclusion.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-04 **with modification** as described in the OSM Conclusion.
Seward Peninsula Regional Council Recommendation	**No action taken**
Northwest Arctic Regional Council Recommendation	**Oppose**

continued on next page

WP10-04 Executive Summary (continued)	
Eastern Interior Regional Council Recommendation	**Support**
North Slope Regional Council Recommendation	**Support** Proposal WP10-04 **with modification** to delete the regulatory language found in *§__.26 (f)(3),* and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	
Written Public Comments	**1 Support** Proposal WP10-04 **with modification** as described in the OSM Conclusion.

STAFF ANALYSIS
WP10-04

ISSUE

This proposal , submitted by the Office of Subsistence Management, would remove Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the areas for which the Assistant Regional Director for Subsistence Management has the delegated authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits.

DISCUSSION

Lynx trapping seasons are adjusted annually based on recommendations determined using Alaska Department of Fish and Game (ADF&G) Tracking Harvest Strategy for managing lynx (FSB 2001). The Alaska Board of Game removed Units 6, 12, 20A, 20B, 20C east of the Teklanika River, 20D and 20E from the list of units that are managed using the lynx harvest strategy. Based on this action these units should also be eliminated from regulation.

Existing Federal Regulation

§__.26 (f)(3)

The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E, with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.

Proposed Federal Regulation

§__.26 (f)(3)

The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units ~~6,~~ 7, 11, ~~12~~, 13, 14, 15, ***and*** *16, ~~20A, 20B, 20C east of the Teklanika River, 20D, and 20E,~~ with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*

Regulatory History

In 1987, ADF&G adopted a Tracking Harvest Strategy for managing lynx (ADF&G 1987). This strategy calls for shortening or closing trapping seasons when lynx numbers are low, and lengthening or opening seasons when lynx are abundant. In the spring of 1992, the Alaska Board of Game adopted

maximum possible seasons for a number of management units within the State. Authority to make season adjustments within seasonal windows was delegated to ADF&G by the Alaska Board of Game. The decision to adjust the season is based upon the reported number of lynx harvested and the percentage of kittens within the total harvest.

The Federal Subsistence Board (Board) endorsed the State's strategy for setting seasons on lynx and has regularly made annual adjustments to the Federal seasons to align with the State seasons. In 2001 the Federal Subsistence Board (FSB 2001) added a statewide regulatory provision and issued a Delegation of Authority Letter (**Appendix I**) so that the Office of Subsistence Management could adjust lynx trapping regulations through the use of the ADF&G tracking harvest strategy. This delegated authority requires coordination with ADF&G, consultation with the appropriate Federal land management agencies, and development of a staff analysis to evaluate the effects of the changes to the season and harvest limit and Interagency Staff Committee concurrence.

In March 2008, the Alaska Board of Game eliminated the lynx tracking strategy in the interior game management units and established permanent seasons for Unit 20. Unit 12 was previously removed from the tracking strategy and in March 2009 the Alaska Board of Game eliminated the tracking strategy for Unit 6.

Effects of the Proposal

When the Board first delegated its authority to the Assistant Regional Director for Subsistence Management, Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E were managed by the State using the lynx strategy. Over time, however, the State has removed a number of units from its lynx tracking strategy. If this proposal is adopted it would align Federal and State regulations regarding lynx management.

There should be no impacts on wildlife populations as season and harvest limits can still be changed through the normal regulatory cycle or through special action if needed. There will be no adverse impacts to subsistence users as season and harvest limits may still be changed. This proposed change only addresses the authority delegated to the Assistant Regional Director for the Office of Subsistence Management.

OSM CONCLUSION

Support Proposal WP10-04 **with modification** to delete the regulatory language found in *§__.26 (f)(3),* and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only (**Appendix II**).

The regulation would be deleted:

> *§__.26 (f)(3) [Reserved]*
>
> ~~*The Assistant Regional Director for Subsistence Management, FWS, is authorized to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx in Units 6, 7, 11, 12, 13, 14, 15, 16, 20A, 20B, 20C east of the Teklanika River, 20D, and 20E, with a maximum season of November 1–February 28. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the ADF&G Lynx Harvest Management Strategy, and only after staff analysis of the potential action, consultation with the appropriate Regional Council Chairs, and Interagency Staff Committee concurrence.*~~

Justification

There should be no impacts on wildlife populations as season and harvest limits can still be changed via the normal regulatory cycle or via special action if needed. There will be no impacts to subsistence users as season and harvest limits may still be changed. This proposed change is only addressing the authority delegated to the Assistant Regional Director for the Office of Subsistence Management. The current delegation is already done through a letter and the regulatory language in §__.26 (f)(3) is redundant and not needed. The draft letter found in **Appendix II** would update the delegation of authority letter making it more consistent with other delegation letters issued throughout the state by the Board.

LITERATURE CITED

ADF&G, Division of Wildlife Conservation. 1987. Report to the Board of Game on lynx management. 30 pages.

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Federal Subsistence Board

3601 C Street, Suite 1030
Anchorage, Alaska 99503-6199

FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

FOREST SERVICE

JUN 15 2001

FWS/OSM/C:/LynxDelegation

Mr. Thomas H. Boyd
Assistant Regional Director, Subsistence Management
U.S. Fish and Wildlife Service
3601 C Street, Suite 1030
Anchorage, Alaska 99503

Dear Mr. Boyd:

This letter delegates regulatory authority from the Federal Subsistence Board to you as Project Leader of the Office of Subsistence Management to issue special actions when necessary to assure the conservation of healthy lynx populations and to provide for subsistence uses of lynx, consistent with the Alaska Department of Fish and Game Lynx Harvest Management Strategy, on Federal lands subject to ANILCA Title VIII.

Overview

It is the intent of the Federal Subsistence Board that lynx management by Federal officials be coordinated with the Alaska Department of Fish and Game and involve Regional Advisory Council representatives to conserve healthy lynx populations while providing for subsistence uses. Federal managers are expected to cooperate with State managers and minimize disruption to resource users and existing agency programs, as agreed to under the Interim Memorandum of Agreement for Coordinated Fisheries and Wildlife Management for Subsistence Uses on Federal Public lands in Alaska.

DELEGATION OF AUTHORITY

1. Delegation: The Project Leader of the Office of Subsistence Management is hereby delegated authority to approve special actions affecting lynx on Federal lands as outlined under **2. Scope of Delegation**.

2. Scope of Delegation: The regulatory authority hereby delegated is limited to authority to open, close, or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the Lynx Harvest Management Strategy, and only after staff analysis of the potential action and Staff Committee concurrence.

Mr. Thomas H. Boyd 2

All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to method or means of take, shall be directed to the Federal Subsistence Board.

The Federal lands subject to this delegated authority are those described in the Subsistence Management Regulations for Public Lands in Alaska. You will coordinate your decisions with all affected Federal land managers and the Alaska Department of Fish and Game.

3. Effective Period: This delegation of authority is effective from the date of this letter, and continues until revoked by the Federal Subsistence Board.

4. Guidelines for Delegation: You will review special action requests or situations that may require a special action and all supporting information to determine (1) if the request/situation falls within the scope of delegation, (2) if the action would be consistent with the conservation of healthy lynx populations, and (3) what the consequences of taking an action may be on potentially affected subsistence users and non-subsistence users. You will consider the management history of lynx in the affected region, current State and Federal lynx regulations and management plans, and lynx population and harvest status information. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will keep a record of all special action requests and their disposition.

You will immediately notify the Federal Subsistence Board and notify/consult with appropriate ADF&G managers, Regional Advisory Council members, and other affected Federal conservation unit managers concerning special actions being considered. You will issue timely decisions. Users, affected State and Federal managers, law enforcement personnel, and Regional Advisory Council representatives will be notified before the effective date/time of decisions.

5. Support Services: Administrative support for management activities will be provided by the Office of Subsistence Management, U.S. Fish and Wildlife Service, Department of the Interior.

6. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6).

This delegation of authority will assure conservation of lynx populations through sound management decisions in cooperation with State managers, thereby providing for the long-term needs of the subsistence user.

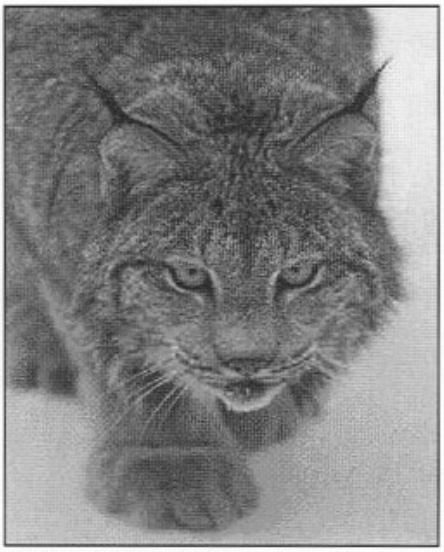
Sincerely,

Mitch Demientieff, Chair
Federal Subsistence Board

Attachment: Tracking Harvest Strategy for Lynx
cc: Members of the Federal Subsistence Board
Mr. Stanley Pruszenski, Assistant Regional Director - Law Enforcement
Mr. Walter Soroka, Deputy Assistant Regional Director - Law Enforcement
Mr. Frank Rue, Commissioner, Alaska Department of Fish and Game

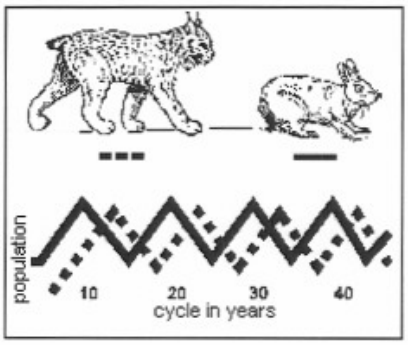
Tracking Harvest Strategy for Lynx

by Howard Golden
Furbearer Biologist, Southcentral Region



Lynx (*Lynx canadensis*) populations in Alaska and much of Canada fluctuate greatly over a 9-11-year period, responding mainly to the abundance of snowshoe hares (*Lepus americanus*). Lynx population trends are closely tied with those of snowshoe hares even when other prey is available. Lynx respond directly to changes in hare abundance through the number of kittens that are produced and the survival of kittens and adults. This response by lynx follows the hare population cycles, which are remarkably synchronous in northern latitudes.

Managers of lynx harvest in these areas must be able to respond with appropriate harvest regulations to ensure sustainable harvests are maintained. A tracking harvest strategy is one method for managing the harvest of populations in a fluctuating environment. Under a tracking harvest strategy, harvest is increased while a population is growing and is decreased during a population decline. In 1987, the Alaska Department of Fish and Game (ADF&G) and the Board of Game (BOG), which authorizes seasons and bag limits in Alaska, adopted a tracking harvest strategy to allow the dynamic management of lynx based on the ability of populations to support harvest. This was in response to concerns by lynx managers that high lynx-pelt prices would encourage excessive harvest during the declining phase of the lynx cycle.



The tracking harvest strategy applies to the road-connected areas of Interior and Southcentral Alaska that have high trapper use. Several criteria are used to determine if lynx seasons should be changed, including:

1. Percent kittens in the harvest
2. Evidence of increasing or decreasing populations of both lynx and hares
3. Period of pelt primeness
4. Potential negative effects of early seasons' orphaning kittens too young to survive
5. Possible effects of late seasons on higher harvests due to increased movement and greater vulnerability of lynx

The tracking harvest strategy for lynx was implemented in 1988. The strategy resulted in season closures in some units when lynx populations seemed to be at low levels but later allowed seasons in those units to reopen once lynx populations began to increase. The tracking harvest strategy became difficult to use because of the need to issue emergency orders to change seasons outside the usual regulatory schedule established by the BOG. This problem was resolved in 1992 when the BOG authorized ADF&G to

change season lengths within the broad seasons of 1 November-28 February in Interior game management units and 10 November-28 February in Southcentral units. ADF&G is not authorized to modify bag limits under this plan because that is a BOG allocation prerogative. There is a no-limit bag for lynx trapping throughout most of the state.

Every spring ADF&G biologists analyze data collected over winter during the trapping season to determine the most appropriate lynx seasons for the next winter. Biologists use a variety of tools to make their decisions. These tools include:

Tracking harvest strategy area (shaded) and Game Management Unit boundaries in Alaska.

1. Track counts in snow to monitor the relative abundance of lynx and snowshoe hares
2. Pelt measurements to estimate the proportion of kittens in the harvest
3. Biological measurements from lynx carcasses purchased from trappers
4. Harvest data to determine where and how many lynx were trapped
5. Reports from trappers to get their on-the-ground observations
6. Other things like weather and snow conditions and pelt prices

The new seasons may be long during the high years in a population cycle, closed during a low period, or somewhere in between during the middle years.

LynxTrak: A Tool for Lynx Harvest Managers

Wildlife Conservation Home | Furbearers & Trapping | Top of Document

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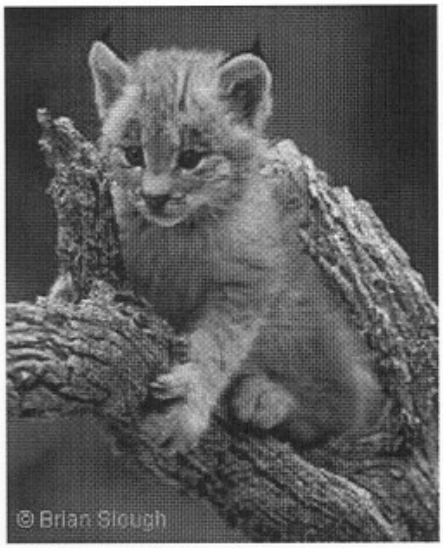
Last Modified 08/10/2001 14:02:00

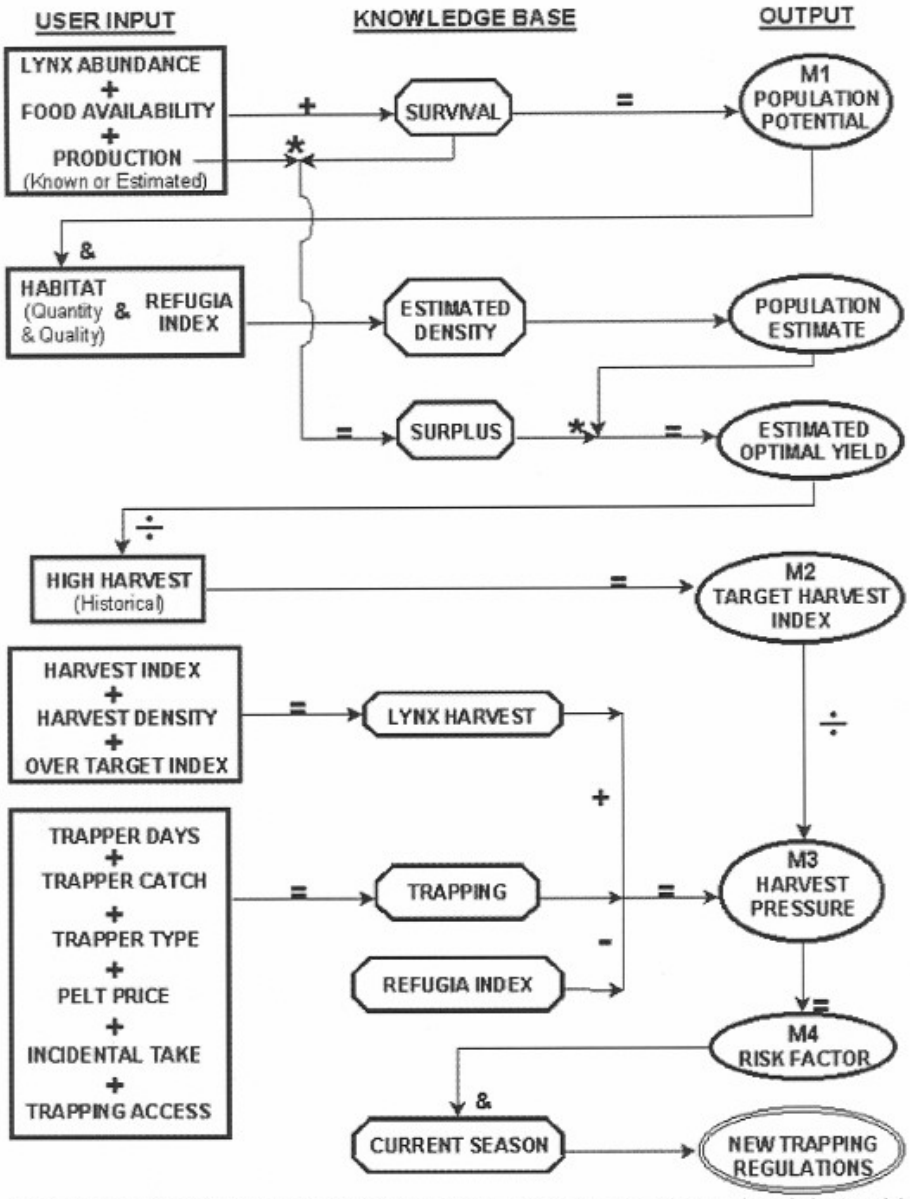
LynxTrak: A Tool for Lynx Harvest Managers

by Howard Golden
Furbearer Biologist, Southcentral Region



To aid lynx managers achieve sustainable harvest objectives under the tracking harvest strategy, I developed a rule-based model, called **LynxTrak**, as a decision-making tool. The advantage of the rule-based model is that it provides a documented, logical structure to the decision-making process that is both intuitive and experiential. Such models can process quantitative data but are most useful when coping with qualitative information to reach decisions. Rule-based models build on what is known using available literature, in-house databases, and the collective knowledge of experts. These types of models have become known as knowledge-based systems or expert systems. Expert systems are now widely used to address many situations in natural resource management, such as management of rangelands and lake systems, prescribed burning, and population modeling. The knowledge base for **LynxTrak** incorporates material from pertinent literature, lynx researchers, managers, and trappers in Alaska and Canada, and from Alaskan lynx harvest data gathered through pelt sealing.

Expert systems are used with a computer program shell to incorporate the user's experience and available information into a decision tree, which is the foundation of the rule-based model. Designers of a model first establish all potential decisions or goals that could reasonably be made regarding a particular situation. Next, questions using qualitative variables are formulated about the specific conditions or situations that may exist. Finally, a set of rules is devised as if-then scenarios that direct the user toward an informed, logical, and consistent decision. This modeling approach can provide the user with a protocol that, because it is fully documented, ensures accountability. Lynx harvest managers in southcentral Alaska have been using the model for the last few years.



Summary flow diagram of LynxTrak depicted as user input, knowledge base, and output through the 4 modules: population potential (M1), target harvest index (M2), harvest pressure (M3), and risk factor (M4). The user input (rectangles) is the response given to questions (or occasionally variables) which **LynxTrak** asks as questions. The responses are then used to calculate numerical variables that become the knowledge base (octagons). The output (ovals) consists of the knowledge base variables used in combination to calculate other numerical variables and, finally, the goal of new trapping regulations.

LynxTrak is available in a runtime version that may be downloaded from this web site. The user guide (*PDF* version – 33K) for the model should be printed to aid installation and running the model. The model is in a self-extracting zip file (668K) that includes all the files needed to run **LynxTrak**.

Full documentation and technical support for **LynxTrak** is available from Howard Golden (mailto:%20howard_golden@fishgame.state.ak.us).

Wildlife Conservation Home | Furbearers & Trapping | Top of Document

Contact: Howard Golden (mailto:%20howard_golden@fishgame.state.ak.us)
Division Webmaster: mailto:%20wcweb@fishgame.state.ak.us
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Last Modified 08/10/2001 14:02:14

Mr. Peter J. Probasco
Assistant Regional Director, Subsistence Management
U.S. Fish and Wildlife Service
1011 East Tudor Road
Anchorage, Alaska 99503

Dear Mr. Probasco:

This letter delegates regulatory authority from the Federal Subsistence Board to you as Project Leader of the Office of Subsistence Management to take action when necessary to assure the conservation of healthy lynx populations and to provide for subsistence uses of lynx, consistent with the Alaska Department of Fish and Game Lynx Harvest Management Strategy, on Federal lands subject to ANILCA Title VIII. This supersedes and replaces the original delegation letter dated June 15, 2001.

Overview

It is the intent of the Federal Subsistence Board that lynx management by Federal officials be coordinated with the Alaska Department of Fish and Game and involve Regional Advisory Council representatives to conserve healthy populations while providing for subsistence uses. Federal managers are expected to cooperate with State managers and minimize disruption to resource users and existing agency programs, as agreed to under the Memorandum of Understanding for Coordinated Fisheries and Wildlife Management for Subsistence Uses on Federal Public lands in Alaska (December 18, 2008).

DELEGATION OF AUTHORITY

1. Delegation: The Project Leader of the Office of Subsistence Management is hereby delegated authority to issue special action regulations affecting lynx on Federal lands as outlined under **2. Scope of Delegation**.

2. Scope of Delegation: The regulatory authority hereby delegated is limited to authority to open, close or adjust Federal subsistence lynx seasons and to set harvest and possession limits for lynx. This delegation may be exercised only when it is necessary to conserve lynx populations or to continue subsistence uses, only within guidelines listed within the Lynx Harvest Management Strategy.

All other proposed changes to codified regulations, such as customary and traditional use determinations or adjustments to method or means of take, shall be directed to the Federal Subsistence Board.

The Federal lands subject to this delegated authority are those described in the Subsistence Management Regulations for Public Lands in Alaska. You will coordinate your decisions with all affected Federal land managers and the Alaska Department of Fish and Game.

3. Effective Period: This delegation of authority is effective from the date of this letter, and continues until revoked by the Federal Subsistence Board.

4. Guidelines for Delegation: You will become familiar with the management history of lynx in the region, with the current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review situations that may require action and all supporting information to determine (1) if the request/situation falls within the scope of authority, (2) if significant conservation problems or subsistence harvest concerns are indicated, and (3) what the consequences of taking an action may be on potentially affected subsistence users and non-subsistence users. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will keep a record of all special action requests and their disposition.

You will immediately notify the Federal Subsistence Board and notify/consult with local ADF&G managers, Regional Advisory Council members, and other affected Federal conservation unit managers concerning actions being considered. You will issue timely decisions. Users, affected State and Federal managers, law enforcement personnel, and Regional Advisory Council representatives will be notified before the effective date/time of decisions.

5. Support Services: Administrative support for management activities will be provided by the Office of Subsistence Management, U.S. Fish & Wildlife Service, Department of the Interior.

6. Authority: This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6).

This delegation of authority will assure conservation of lynx populations through sound management decisions in cooperation with State managers, thereby providing for the long-term needs of the subsistence user.

Sincerely,

Michael R. Fleagle, Chair
Federal Subsistence Board

cc:

Members of the Federal Subsistence Board
Interagency Staff Committee
Tina Cunning, ADF&G

DRAFT

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04 **with modification** to delete the regulatory language found in *§__.26 (f)(3),* and delegate the authority to open, close, or adjust Federal lynx seasons and to set harvest and possession limits for lynx via a delegation of authority letter only.

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-04.

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04. The Council determined that this proposal could be considered housekeeping in that the ability to adjust seasons is still possible and this change would simplify regulations.

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04 **with modification** as described in the OSM Conclusion.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04 **with modification** as described in the OSM Conclusion. The Council supports State and Federal alignment of regulations that enhance the management of the resources, reduce confusion for the public, and allow for subsistence uses to continue.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04 **with modification** as described in the OSM Conclusion. The proposal will not impact subsistence users and no conservation concerns exist for the lynx population.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

No action taken on Proposal WP10-04. The Council took no action since this proposal would not affect the Seward Peninsula Region.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-04 **with modification** as described in the OSM Conclusion. This is a housekeeping proposal. This proposal has no impacts on Unit 18 region for this species.

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

No action taken on Proposal WP10-04. The Council did not want to take action on a proposal that would affect another region.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-04

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The ISC notes that the draft letter provided in the appendix to the analysis will need to be modified without changing the intent of the delegated authority.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-04 **with modification** as described in the OSM Conclusion. There are no conservation concerns associated with approving this proposal, and it will not adversely affect subsistence users or others.

Wrangell-St. Elias National Park Subsistence Resource Commission

WP10-05 Executive Summary	
General Description	Proposal WP10-05 seeks to update, clarify, and simplify the regulations regarding accumulation of harvest limits for both fish and wildlife. *Submitted by the Office of Subsistence Management*
Proposed Regulation	*§__.25(c) Harvest Limits.* *(1) Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated,* ***unless specified otherwise in §§__.26 or __ .27 or __.28****.* *(2)***** *(3) A harvest limit* ***may*** *~~applies~~ apply* ***to the number of fish, wildlife, or shellfish that can be taken*** *daily, seasonally and/or* ***during a regulatory year*** *or held in possession.~~; however, harvest limits for grouse (in some Units), ptarmigan, and caribou (in some Units)~~~~, are regulated by the number that may be taken per day. Harvest limits of~~~~, grouse, and ptarmigan are also regulated and the number that can be held in possession.~~*
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Southcentral Regional Council Recommendation	**Support**
Kodiak/Aleutians Regional Council Recommendation	**Support**
Bristol Bay Regional Council Recommendation	**Support**
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support**
Western Interior Regional Council Recommendation	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Northwest Arctic Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Support**
North Slope Regional Council Recommendation	**Support**

continued on next page

WP10-05 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP10-05

ISSUES

Proposal WP10-05, submitted by the Office of Subsistence Management, seeks to update, clarify, and simplify the regulations regarding accumulation of harvest limits for both fish and wildlife.

DISCUSSION

A prohibition against accumulating Federal and State harvest limits has been included in the statewide general Federal subsistence regulations since 1990 (§__.25(c)(1)). Wording in Section__.25(c)(3) dates back to 1994; this section identifies the species for which harvest limits apply. There is a need to update both Sections__.25(c)(1) and (3). While the Board has addressed a number of area specific proposals concerning the accumulation of harvest limits over the years, these two sections of the general regulations have not been updated to reflect changes to the unit and area specific regulations; the current proposal addresses those inconsistencies.

Existing Federal Regulations

Statewide – Subsistence taking of fish, wildlife, and shellfish: general regulations

> §__*.25(c) Harvest Limits.*
>
> *(1) Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated.*
>
> *(2)*****
>
> *(3) A harvest limit applies to the number of fish, wildlife, or shellfish that can be taken during a regulatory year; however, harvest limits for grouse, ptarmigan, and caribou (in some Units) are regulated by the number that may be taken per day. Harvest limits of grouse and ptarmigan are also regulated by the number that can be held in possession.*

Proposed Federal Regulations

Statewide – Subsistence taking of fish, wildlife, and shellfish: general regulations

> *§__.25(c) Harvest Limits.*
>
> *(1) Harvest limits authorized by this section and harvest limits established in State regulations may not be accumulated,* ***unless specified otherwise in §§__.26 or __ .27 or __.28****.*
>
> *(2)*****
>
> *(3) A harvest limit* ***may*** *~~applies~~* ***apply*** *to the number of fish, wildlife, or shellfish that can be taken* ***daily, seasonally and/or*** *during a regulatory year* ***or held in possession.*** *~~; however, harvest limits for grouse (in some Units), ptarmigan, and caribou (in some Units~~**~~),~~** ~~are regulated by the number~~*

~~*that may be taken per day. Harvest limits of, grouse, and ptarmigan are also regulated and the number that can be held in possession.*~~

Existing State Regulations

In State hunting regulations a harvest (bag) limit applies to a regulatory year unless otherwise specified, and includes animals taken for any purpose, including for subsistence. State hunting regulations provide daily limits for wolves (all or part of Units 9, 10, 13, 17 and 19); caribou (all or part of Units 21, 22, 23, 24 and 26); coyote (Units 6–17, 19 and 20); grouse (1–7, 9, 11–26); hare (all or part of Units 1–5 and 14) and ptarmigan (Units 1–26).

State regulations do not prohibit the accumulation of harvest limits taken in State sport, personal use, and subsistence fisheries across most of Alaska (Kotzebue, Norton Sound-Port Clarence, Yukon-Northern, Kuskokwim, Bristol Bay, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet and Prince William Sound areas). In the Southeast Area, the State prohibits fishers from possessing salmon taken in the sport fishery on the same day as salmon taken in either subsistence or personal use fisheries (5 AAC 01.745(b); 5 AAC 77.682(e)). In the Yakutat Area, the State prohibits possession of personal use-taken and sport-taken salmon on the same day (5 AAC 77.628(f)).

In State subsistence fish regulations, ten areas (Norton Sound-Port Clarence, Yukon-Northern, Bristol Bay, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet, Prince William Sound and Southeast (5 AAC 01)) have annual harvest limits for some species of freshwater fish. The annual subsistence harvest limits specified in the Aleutian Islands, Chignik and Kodiak areas are the same as those in Federal subsistence regulations and the subsistence fisheries in these three areas are administered using State permits. There is no State subsistence daily, possession or annual harvest limit regulations for freshwater fisheries in two areas (Kotzebue and Yakutat). Only one area (Southeast Alaska) has a specific State subsistence regulatory daily and possession limit (for one species at one location; 5 AAC 01.760). Most State sport fish harvest regulations are based on daily and possession limits (5 AAC 47-75).

Extent of Federal Public Lands and Waters

This proposal would apply to the entire state. Federal public lands comprise approximately 65% of Alaska and consist of 23% Bureau of Land Management, 15% National Park Service, 21% U.S. Fish and Wildlife Service, and 6% U.S. Department of Agriculture, U.S. Forest Service lands.

Regulatory History

Accumulating Federal and State harvest limits

The current wording in Section __.25(c)(1) that addresses the prohibition against accumulating Federal and State harvest limits dates back to 1990. Based on requests from subsistence users, ADF&G, and the review and recommendations of the Southcentral Alaska and Southeast Alaska Subsistence Regional Advisory Councils, the Federal Subsistence Board (Board) supported several exemptions to and clarification of the general prohibition against accumulation of harvest limits in Section__.25(c)(1).

In 2004, the Board authorized accumulation of subsistence harvest limits for salmon in the Copper River drainage upstream from Haley Creek with harvest limits for salmon authorized under State of Alaska sport fishing regulations (27(i)(11)(B)). In 2005, the Board also authorized the accumulation of Federal subsistence fish annual harvest limits with State sport fishing limits for the Southeast Alaska area (27(i)(13)(vii)).

In 2006, the Board allowed accumulation of Federal subsistence fishing harvest limits with State of Alaska sport fishing harvest limits within the Chugach National Forest and in the Copper River drainage downstream from Haley Creek provided that the accumulation of fishing harvest limits would not occur in the same day (27(i)(11)(A)).

In 2009, the Board clarified regulations by stipulating that a subsistence fisher may not accumulate Federal subsistence harvest limits authorized for Southeast Alaska Area with any harvest limits authorized under any State of Alaska fishery with the following exceptions: annual and seasonal Federal subsistence harvest limits may be accumulated with State sport fishing harvest limits provided that accumulation of harvest limits does not occur during the same day (27(i)(13)(vii)). That year, the Board further clarified that fishers may not possess subsistence taken and sport taken fish of a given species on the same day in the Yakutat (27(i)(12)(viii)) and Southeast Alaska (27(i)(13)(xi)) Areas.

Current Federal subsistence management regulations that address applicability for subsistence take of wildlife (§__.26) provide the following clarification concerning accumulation of harvest limits (§__.26(e)(1)):

> *Except as specified in paragraphs (e)(2) or (f)(1) of this section, or as otherwise provided, you may not take a species of wildlife in any unit, or portion of a unit, if your total take of that species already obtained anywhere in the State under Federal and State regulations equals or exceeds the harvest limit in that unit.*

Sections__.26(e)(2) and (f)(1) address established community harvest limit allowances and an allowance for accumulating hunting and trapping harvest limits.

The regulations that address applicability for subsistence taking of fish (§__.27) provides the following clarification concerning accumulation of harvest limits:

> *(§__.27(a)(2)) The harvest limit specified in this section for a subsistence season for a species and the State harvest limit set for a State season for the same species are not cumulative, except as modified by regulations in §__.27(i). This means that if you have taken the harvest limit for a particular species under a subsistence season specified in this section, you may not, after that, take any additional fish of that species under any other harvest limit specified for a State season.*

The regulations that address applicability for subsistence taking of shellfish (§__.28) provides the following clarification concerning accumulation of harvest limits:

> *(§__.28(d)(1)) The harvest limit specified in this section for a subsistence season for a species and the State harvest limit set for a State season for the same species are not cumulative. This means that if you have taken the harvest limit for a particular species under a subsistence season specified in this section, you may not, after that, take any additional shellfish of that species under any other harvest limit specified for a State season.*

Application of harvest limits

The current wording in Section__.25(c)(3) dates back to 1994 and specifies that harvest limits apply to "regulatory year", with the exception of ptarmigan, and in some units for grouse and caribou.

Current Federal hunting regulations (§__.26) include daily limits for beaver (Unit 9 and 17), caribou (all or part of Units 21–24 and 26); hare (all or part of Units 1–5 and 14); and wolf (part of Unit 19). There

are daily and possession limits for grouse (all or part of Units 1–7, 9 and 11–25); ptarmigan (Units 1–26); and beaver (all or part of Units 7, 11, 13 and 25).

When Federal subsistence management regulations for fish (§__.27) were first implemented on October 1, 1999, there were no specified daily or possession limits for fish in Federal regulations except on the Kenai Peninsula. Since that time, the Federal Subsistence Board has established daily and/or possession limits for specific fish species and locations in 5 of 13 fishery management areas. Federal regulatory provisions for daily harvest and/or possession limits for specific species of fish were first established in the Southeast Area in 2001, the Yukon-Northern and Cook Inlet areas in 2002, the Bristol Bay Area in 2003, and the Yakutat Area in 2006.

Current Federal subsistence management regulations include daily and/or possession limits for sockeye and coho salmon, steelhead trout, brook trout, grayling, Dolly Varden, cutthroat trout, and rainbow trout in all or parts of the Southeast Area. Yakutat Area regulations include a daily harvest and possession limit for Dolly Varden and address a daily limit for steelhead trout.

In parts of the Cook Inlet Area there are specific daily harvest and possession limits in Federal regulations for Chinook, sockeye, coho and pink salmon; Dolly Varden/Arctic char; lake trout and rainbow/steelhead trout. In other parts of the Cook Inlet Area, Federal subsistence regulations specify that the daily harvest and possession limits for fish are the same as those in Alaska sport fishing regulations. In a November 24, 2008 letter to OSM, Federal Subsistence Board Chairman Fleagle clarified that the Board's intent was that Federal subsistence and State sport harvest limit for fish not be accumulated for the Kasilof and Kenai river drainages and vicinity.

Federal subsistence management regulations also specify daily and possession limits for rainbow trout in the Bristol Bay Area and daily and possession limits for grayling in a part of the Yukon-Northern Area. There are no Federal daily or possession limits for fish in the Kotzebue, Norton Sound-Port Clarence, Kuskokwim, Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, or Prince William Sound areas. Federal subsistence management regulations specify annual harvest limits for fish species and locations in seven areas (Aleutian Islands, Alaska Peninsula, Chignik, Kodiak, Cook Inlet, Prince William Sound, and Southeast). There are no daily, possession or annual limits for fish under Federal subsistence management regulations in three areas (Kotzebue, Norton Sound-Port Clarence, and Kuskokwim).

Shellfish regulations (§__.28) include daily and possession limits as well. There are daily limits for shellfish in Bering Sea Area. There are daily and/or possession limits for shellfish in the Cook Inlet, Kodiak, and Alaska Peninsula-Aleutian Islands Areas.

Effects of the Proposal

Proposal WP10-05 does not affect fish and wildlife populations, subsistence uses or other uses (i.e., sport/recreational or commercial). Rather, the proposal seeks to update, clarify, and simplify Sections __.25(c)(1) and (3), all of which reference accumulation of harvest limits. Section__.25(c)(1) dates back to 1990 and Section __.25(c)(3) dates back to 1994. The proposed wording changes retain the general prohibition of accumulation of Federal and State harvest limits, and points to unit and area specific regulations for details and exceptions. Unit and area specific regulations currently provide daily, daily and possession, or possession limits for ptarmigan, grouse, caribou, wolf, hare, beaver, fish and shellfish. This proposal does not change any unit or area specific Federal subsistence regulations concerning accumulation of harvest limits or the timeframe (daily, seasonal or regulatory year) for harvest limits.

OSM CONCLUSION

Support Proposal WP10-05.

Justification

The general regulations concerning accumulation of harvest limits need to be updated to reflect Board action over the years. The Board has addressed a number of proposals concerning accumulation of harvest limits; the approved exceptions are reflected within the Federal hunting and trapping (§__.26), fishing (§__.27), and shellfish (§__.28) regulations. The changes to the general regulations proposed herein recognize all of the previously approved exceptions. This proposal does not affect fish and wildlife populations, subsistence users or other users. Given the number of species, areas and units affected, and the changes that may occur in the future, it is appropriate to use more general wording in these general regulations.

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. This proposal does not change North Slope Area Federal Subsistence regulations concerning accumulation of harvest limits or the time frame for harvest limits. The proposed updates clarify and simplify the regulations.

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-05. The Council expressed concerns about the State management program in relation to the Federal program.

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. The Council determined that this proposal was housekeeping and would clarify current regulations.

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. The Council supported the proposal to simplify the regulations and clarify the regulatory language so that the public may understand regulations regarding accumulation of harvest limits for fish and wildlife. The proposal will not impact subsistence users and will not affect fish and wildlife populations.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. This proposal is a housekeeping proposal that will not affect fish and wildlife populations and subsistence users.

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. The Council agrees with simplifying and clarifying wording for accumulations of harvest limits. This proposal does not affect the Seward Peninsula Region.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. This is a housekeeping proposal. Clarifying and simplifying the management regulations on harvest limits would benefit subsistence users.

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-05. The Council determined that this proposal was housekeeping and necessary to accommodate previous changes to Federal regulations.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-05

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-05. This is a housekeeping proposal, which is supported by substantial data, will not result in conservation concerns, and will not adversely impact subsistence users or others.

Wrangell-St. Elias National Park Subsistence Resource Commission

Support Proposal WP10-05. We support WP10-05 to clarify harvest limit regulation, in the fish and wildlife section of the regulations, to make it easier for Federally qualified subsistence users to understand Federal regulations. This is only a house keeping proposal.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-06 Executive Summary	
General Description	Proposal WP10-06 requests the Federal Subsistence Board standardize the use of terms that describe female deer in Federal regulations in the Southeast and Yakutat Regions by changing all references for antlerless deer or doe deer to female deer. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	The definition of antlerless would remain the same. The term, "*female deer*" would be substituted for the word "antlerless," when used under the Harvest Limits section for deer in Units 1–5.
OSM Conclusion	**Support** Proposal WP10-06 **with modification**. Replace antlerless deer with female deer in Harvest Limits sections of the Federal subsistence regulations in Units 1–5.
Southeast Regional Council Recommendation	**Support** Proposal WP10-06 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** (The department also would support with modification to change "antlered" and "bucks" to "male" deer).
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-06

ISSUES

Proposal WP10-06, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests the Federal Subsistence Board (Board) standardize the use of terms that describe female deer in Federal regulations in the Southeast and Yakutat Regions by changing all references for antlerless deer or doe deer to female deer.

DISCUSSION

The Council identified the inconsistent use of the terms to describe female deer in the Federal subsistence regulations and recommended that the terms be standardized, so that all references to antlerless or doe deer be replaced with female deer. The Council endorsed this action, as necessary, to allow the harvest of male (buck) deer once they have dropped their antlers during a late season hunt. The Council believes that this change will benefit subsistence hunters by clearly identifying the intended sex of the animal referenced in the Federal subsistence regulations. The Council believes this regulatory change would not affect sport, commercial, or recreational users.

There has been considerable confusion regarding the definition of antlerless deer by hunters and law enforcement officers. The Federal regulations define "antlerless" as any caribou, deer, elk, or moose not having visible antlers attached to the skull. This definition of "antlerless" may be interpreted to include female deer of all age classes, all male deer less than one year old – commonly referred to as button bucks, buck fawns, or nubbin bucks, a small percentage of male deer that are over one year old, but have very small, stunted, non-visible antler projections, and any male deer shedding their antlers during December or January, which changes their status from antlered bucks to antlerless deer.

Federal subsistence regulations do not require a minimum antler size restriction for harvesting a buck deer. A buck is defined as any male deer. An illustration of the issue identified by the Council can be found in Unit 2, where current Federal subsistence regulations allow for the harvest of five deer, of which one of these deer may be "antlerless" after October 15th. If after October 15th, a Federally qualified subsistence user harvests a male yearling buck, male fawn, or adult buck once his antlers have been shed, this deer is considered "antlerless" and fulfills the opportunity to harvest one "antlerless" deer. However, the level of opportunity for "antlerless" deer in each Unit was established to allow limited harvest or the opportunity to harvest female deer (does) within sustainable populations. In this scenario, a subsistence hunter would benefit by tagging any "antlerless" male deer with a "buck" tag, therefore, retaining the opportunity to harvest one female deer (antlerless deer), if desired.

Harvest limits may include female deer and are primarily based on biological considerations with the first concern to maintain healthy, viable wildlife populations in balance with their habitat. The Board provides a key link in the regulation process, by providing a balance between the biological needs of the resources and the opportunity for subsistence users and public use of these resources. When deer numbers are low and management objectives are to increase their numbers, biology may dictate a hunting season for bucks only. However, if deer population numbers are stable or increasing, or the habitat is reaching carrying capacity for deer, subsistence users may be provided the option to harvest a limited number of female deer, depending upon unit.

Existing Federal Regulation

> *"Antlerless" means any caribou, deer, elk, or moose not having visible antlers attached to the skull (OSM 2009).*

Proposed Federal Regulation

The definition of antlerless would remain the same. The term, "*female deer*" would be substituted for the word "antlerless," when used under the Harvest Limits section for deer in Units 1–5.

Existing State Regulation

> *"Antlerless" – the absence of antlers (ADF&G 2009).*

Extent of Federal Public Lands

The Southeast Region is composed of Units 1–5, and includes all of the Tongass National Forest, all of the Glacier Bay National Park and Preserve and the southeast portion of the Wrangell-St. Elias National Park and Preserve. Approximately 95% of the lands are Federal public lands although there is no subsistence use allowed within the Glacier Bay National Park.

Customary and Traditional Use Determinations

Customary and traditional use determinations for deer in Units 1 – 5 are as follows:

Unit—Deer	Customary and Traditional Use Determinations
Unit 1A	*Rural residents of Units 1A and 2*
Unit 1B	*Rural residents of Units 1A, 1B, 2, and 3*
Unit 1C	*Rural residents of Units 1C, 1D, Hoonah, Kake, and Petersburg*
Unit 1D	*No Federal subsistence priority*
Unit 2	*Rural residents of Units 1A, 2, and 3*
Unit 3	*Rural residents of Unit 3, Port Alexander, Port Protection, Pt. Baker and Meyers Chuck*
Unit 4	*Rural residents of Unit 4, Kake, Gustavus, Haines, Petersburg, Pt. Baker, Klukwan, Port Protection, Wrangell, and Yakutat*
Unit 5	*Rural residents of Yakutat*

Effects of the Proposal

If adopted, this proposal would decrease ambiguities, therefore reduce inconsistencies in Federal subsistence regulation interpretation by hunters and law enforcement personnel. By replacing the terms *antlerless deer* to *female deer*, Federally qualified subsistence hunters would be allowed to legally tag harvested male deer as bucks, and retain the option to harvest one or more female deer, when identified under unit specific harvest limits. This would include all male deer commonly referred to as button bucks, buck fawns, or nubbin bucks, and any male deer which has shed its antlers during the late hunting season.

The definition of antlerless would remain as currently defined in the Federal regulations.

OSM CONCLUSION

Support Proposal WP10-06 **with modification**. Replace antlerless deer with female deer in Harvest Limits sections of the Federal subsistence regulations in Units 1–5.

Justification

The modified proposal would benefit Federally qualified subsistence users by clearly identifying the intended sex of animals to be harvested. This modification allows for any male deer harvested to be tagged as a buck deer and will allow qualified hunters the option to harvest one or more female deer, if identified under Harvest Limits. This modification decreases Federal subsistence regulation interpretation variables by hunters and law enforcement personnel. Deer harvest reporting requires the hunter to report information regarding the number of bucks and does harvested and not "antlerless" harvest.

Adoption of this proposal modification would not affect sport, commercial, or recreational users of deer.

LITERATURE CITED

ADF&G. 2009. 2009– 2010 Alaska Hunting Regulations. ADF&G. No. 47. 128pp.

Office of Subsistence Management. 2009. Subsistence Management Regulations for the Harvest of Wildlife on Federal Public Lands in Alaska. Office of Subsistence Management, Anchorage, AK. 138pp.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-06 **with modification** as described in the OSM Conclusion. The Council determined that this proposal would clarify intent of Federal regulations that "antlerless" means "female."

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-06

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-06
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-06: This proposal would standardize the use of terms to describe a female deer in federal regulations by changing all references for antlerless or doe deer to female deer.

Introduction: Deer seasons for federally qualified subsistence hunters in portions of Southeast Alaska extend through January. Because bucks lose their antlers in late December, both bucks and does appear as "antlerless" deer late in the hunting season. State and Federal managers closed the "antlerless" season during parts of the 2007–2009 seasons to protect female deer, which unintentionally also made a buck without antlers illegal. Therefore, the legal description of a doe deer should be changed to "female deer" rather than "antlerless deer" to protect does while allowing harvest of bucks without antlers.

Impact on Subsistence Users: This change would allow federal subsistence hunters to harvest bucks during the late season that have lost their antlers, while protecting female deer as intended. Adoption of this proposal will also reduce risk of enforcement.

Opportunity Provided by State: The State deer hunts in Units 1-5 in Southeast Alaska allow for the harvest of doe deer under the definition of "any deer" in portions of Units 1C and 4 from September 15 through December 31.

Conservation Issues: The harvest of female deer has been prohibited in portions of Southeast Alaska in recent years due to high winter kills which negatively impacted deer populations by varying degrees depending upon location.

Enforcement Issues: Federal subsistence hunters will be required to pay closer attention to deer without antlers later in the season to ensure female deer are not accidentally harvested in areas or dates where such is prohibited by regulation.

Recommendation: Support. (The department also would support with modification to change "antlered" and "bucks" to "male" deer.)

WRITTEN PUBLIC COMMENTS

Oppose. The Sitka Advisory Committee opposes this proposal because the time of year makes sex distinction difficult and the regulation as written would encourage wastage of does shot inadvertently during the last season (winter). If too many does are being taken the time to deal with this is earlier in the hunting season.

Sitka Fish and Game Advisory Committee

WP10-07 Executive Summary	
General Description	Proposal WP10-07 requests closure of the Federal subsistence marten trapping season on Kuiu Island in Unit 3. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Units 1, 2, 3 (except Kuiu Island), and 4— Marten (Trapping)** *No limit* *Dec. 1–Feb. 15* **Kuiu Island portion of Unit 3** ***No open season***
OSM Conclusion	**Support** Proposal WP10-07 **with modification**. Reopen marten trapping in this portion of Unit 3 for Federally qualified subsistence users beginning the regulatory year of July 1, 2012.
Southeast Regional Council Recommendation	**Support** Proposal WP10-07 **with modification** as described in the OSM Conclusion. The Council determined that this proposal was necessary to provide for conservation of marten on Kuiu Island. The modification provides a mechanism to reopen the Federal harvest season after marten populations have a chance to recover.
Interagency Staff Committee Comments	The Interagency Staff Committee notes that the precautionary action of the Regional Council in halting trapping for a short period of time is in keeping with sound principles of wildlife management and can be revisited in two years if another proposal is submitted.
ADF&G Comments	**Support** the original proposal. **Oppose** the amendment to automatically reopen the trapping season in 2012. Such action would not be consistent with sound principles of wildlife management.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-07

ISSUES

Proposal WP10-07, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests closure of the Federal subsistence marten trapping season on Kuiu Island in Unit 3. The content of this proposal, and much of the analysis, has recently been addressed by the Federal Subsistence Board through Special Action WSA 09-03.

DISCUSSION

The Alaska Department of Fish and Game (ADF&G) and University of New Mexico conducted marten research on Kuiu Island over a seven year period (2001–2007). These studies indicate that marten populations on Kuiu Island are currently at extremely low levels. ADF&G radio telemetry studies conducted in 2007 and 2008 indicate that Kuiu Island marten experienced a high degree of natural mortality and low annual survival. Fur sealing records and reports from trappers indicate marten harvest on Kuiu Island has declined during the past 10 years. The Kuiu Island marten population is isolated from other marten populations with little immigration and may include one of the two endemic populations of the subspecies Pacific marten in Southeast Alaska. Because marten population numbers are currently at low levels on Kuiu Island, managers and biologists are concerned that trapping mortality may be additive to an already existing high natural mortality rate, especially when combined with three consecutive years of heavy snowfall which may have reduced prey populations or made prey food resources unavailable to marten due to snow cover. Port Alexander, on southern Baranof Island (west of Kuiu Island), for example, received 112.80 and 62.90 inches of snow during 2006-2007 and 2007-2008, respectively, as compared to the previous ten-year average of 39.16 inches (Western Regional Climate Center 2008a). Similarly, Petersburg, east of Kuiu Island, received 230.60 and 149.60 inches of snow during 2006-2007 and 2007-2008, respectively, compared to the previous ten-year average of 43.41 inches (Western Regional Climate Center 2008b). Based on available information the proponent believes there are conservation concerns in regards to marten on Kuiu Island and that the trapping season should be closed.

Existing Federal Regulation

Units 1, 2, 3, and 4—Marten (Trapping)

No limit	*Dec. 1–Feb. 15*

Proposed Federal Regulation

Units 1, 2, 3 (except Kuiu Island), and 4— Marten (Trapping)

No limit	*Dec. 1–Feb. 15*
Kuiu Island portion of Unit 3	***No open season***

Existing State Regulation

Units 1- 3 (except Kuiu Island)—Marten (Trapping)

No limit	*Dec. 1–Feb. 15*
Unit 3, Kuiu Island	*No open season*

Extent of Federal Public Lands

Federal public lands comprise over 95% of the Kuiu Island portion of Unit 3 and are managed by the United States Forest Service (USFS).

Customary and Traditional Use Determinations

There has been no customary and traditional use determination made for marten in Unit 3, therefore, all Federally qualified rural residents are eligible to harvest marten under Federal subsistence trapping regulations in Unit 3, including Kuiu Island.

Regulatory History

Historically, marten trapping seasons and harvest limits in Unit 3 have been liberal and State and Federal regulations have been aligned. Season dates were from December 1–February 15, with no harvest limits during the past 10 years. However, because of conservation concerns, the Alaska Board of Game passed a proposal submitted by ADF&G to permanently close marten trapping on Kuiu Island during its November 2008 meeting.[1] While the closure took effect for the regulatory year, July 1, 2009 through June 30, 2010, the State closure is not scheduled to be lifted and it is not known what conditions or research will warrant ADF&G to re-open the marten trapping season on Kuiu Island. In advance of the effective date of the change made by the Alaska Board of Game, ADF&G issued Emergency Order 01-11-08, effective November 30, 2008, to close marten trapping on Kuiu Island. A Special Action Request (WSA08-11) was presented and discussed at the Council meeting in Petersburg, AK on February 25, 2009, and reviewed and revalidated by Council at the October 6, 2009 meeting in Yakutat, AK. Following discussion, the Council recommended to support the Special Action Request (WSA09-03) for the 2009-2010 seasons, which proposed to close the subsistence marten trapping season on Kuiu Island during the 2009–2010 seasons.

Current Events

ADF&G issued Emergency Order 01-11-08 on November 30, 2008, closing the marten trapping season in the Kuiu Island portion of Unit 3. ADF&G followed this action by submitting a Special Acton Request (WSA08 –11) to the Federal Subsistence Board, which resulted in a closure of the Federal subsistence marten trapping season on Kuiu Island from December 11, 2008 through February 9, 2009. Per Federal regulation, Emergency Special Actions are only effective a maximum duration of 60 days in duration; therefore, the Federal marten trapping season was "open" six days at the end of the trapping season on Kuiu Island (February 10–15, 2009). No marten were trapped during this brief period.

On August 12, 2009, a public meeting was held in Kake for the purpose of obtaining information from potential affected local subsistence users on the proposed Special Action to close Kuiu Island to marten trapping during the 2009–2010 season. The meeting was presided over by a representative of the Organized Village of Kake and two USFS employees representing Federal Staff. Two persons attended,

[1] ADF&G's original proposal was to shorten the trapping season, institute a controlled-use area where no motorized land vehicles would be allowed for trapping, and close the area to nonresident trapping. Subsequently, at the Board meeting, ADF&G recommended entirely eliminating the trapping season on Kuiu Island.

however, neither provided public testimony. A summary of this subsistence meeting was provided to the Council and during their October 6, 2009 meeting in Yakutat, Special Action Request WSA09-03 was reviewed and revalidated.

Biological Background

In North America, martens range from Alaska to the southern Sierra Nevada and to New Mexico (Powell et al. 2003). Both sexes reach sexual maturity by age one, although effective breeding may not occur before age 2. Alaska marten give birth in April or early May (Shepherd and Melchior 1994). Breeding occurs shortly after parturition; however, implantation is delayed. Males are polygynous, and females may be both polyandrous and selective (Powell et al. 2003). Average litter size is three in Alaska (Shepherd and Melchior 1994).

Although only one species of marten is formally recognized in Southeast Alaska, two distinct lineages exist, including the coastal form *caurina* and the continental form *americana*. Based on recent molecular analyses, it appears there are very different evolutionary histories (Carr and Hicks 1997, Cook et al. 2006, Dawson 2008). A 2002 genetic study by the University of Alaska Fairbanks documented that both lineages occur in Southeast Alaska, and that the *caurina* form inhabits only two islands within the Archipelago, Admirality and Kuiu Islands, and should be considered endemic (Dawson 2008). Hybridization between the two forms has been documented on Kuiu Island (Cook et al. 2006). Martens on Kuiu Island are likely genetically isolated from other marten populations.

Marten populations fluctuate greatly in response to food availability, habitat conditions, and trapping pressure (Powell 1994 *in* Powell et al. 2003, Sheperd and Melchior 1994, USFS 2008). In Southeast Alaska, based on recent studies, marten abundance and densities are largely determined by the abundance and biomass of their mammalian prey (ADF&G unpublished data; Flynn et al. *in review*, Flynn and Schumacher *in prep*).

Voles are the dominant prey of marten across their range (Powell et al. 2003), including Southeast Alaska (Flynn and Schumacher 1999, Shepherd and Melchior 1994). Other small mammals, berries, small birds, eggs, salmon, carrion and vegetation are also food sources for martens in Alaska (Flynn and Schumacher 1999, Sheperd and Melchior 1994). The role of ungulate carrion in the ecology of Southeast Alaska marten populations is unclear. Flynn et al. (2004) documented that ungulate density was a significant predictor of marten catch rate, but did not document ungulates in the diet. Ungulates may be a more important component of marten diets in the later winter and early spring when winter-killed carcasses become available. Kuiu Island has among the lowest deer density in Southeast Alaska (Lowell 2008); therefore, deer carcass availability may be limited.

Based on diversity in individual diets, marten are opportunistic predators, influenced by the type and quantity of local prey species (Ben-David et al. 1997). Ben-David et al. (1997) suggested that preference for small mammals as prey appears to increase when marten are least abundant. Flynn et al. (2004) documented seasonal variation in marten diet on Kuiu Island between 2001 and 2002. Although the composition of food sources was the same between years and included salmon, long-tailed voles, deer mice, red squirrels, and berries, the proportion of each food in the marten diet differed between the two years. Based on recent studies on Northern Kuiu Island, small mammal abundance was lower in 2007 than during previous studies in 2002 and 2003 (Flynn et al. 2004, Flynn and Dawson 2008). Similar low abundance of small mammals was documented in other Southeast Alaska locations in 2007, which was predicted to result in a decline in the marten population (Ben-David 2007).

Habitat requirements reflect interactions between food, cover, climate, and predation, with forest cover particularly important for travel, dens and resting sites, hunting, and avoiding predation and inclement weather (Flynn and Schumacher 1999, 2001). In Southeast Alaska, large contiguous stands of old-growth forest provide valuable habitat for marten (USFS 2008). Low elevation areas, including riparian areas and beach fringe, which accumulate less snow than other areas, provide important wintering habitat for marten (USFS 2008).

Marten are subject to high natural mortality rates, predation in particular (Hodgman et al. 1997, and Bull and Heater 2001). Bull and Heater (2001) reported that the probability of survival of marten >9 months old was 56% for 1 year, 38% for 2 years, 22% for 3 years, and 16% for 4 years, which equates to an average survival rate of approximately 65% per year over 4 years. Of 18 marten captured and radiocollared on northern Kuiu Island in the fall of 2007 and later radio-relocated, 10 animals (5 males and 5 females) died within one year (Flynn and Dawson 2008). The overall survival rate for the study period was estimated at 44%, with most mortalities occurring between January and March. On Chichagof Island, average survival rates for radiocollared martens were estimated at about 75% considering only natural mortality, and 66% with trapping mortality included (ADF&G unpublished data).

Marten are easily trapped, which can lead to overharvest (Powell et al. 2003, USFS 2008). In the early 1990s, overharvesting led, at least in part, to range reductions of marten (Powell et al. 2003). Trapping mortality may be additive to natural mortality in industrial forests (Payer 1999 *in* Powell et al. 2003). In some areas, even very low levels of trapping may limit marten populations (Schneider 1997 in Powell et al. 2003). Habitat quality must be considered when managing marten harvests. Refugia are one option to maintain viable populations of marten to act as a source for adjacent trapped areas, although in areas with high road densities and high trapping pressure, a refuge system alone may not be sufficient (Hodgman et al. 1997, Powell et al. 2003).

Habitat Conditions and Trends

Martens are wide ranging and require large tracts of contiguous habitat to move across the landscape, as well as habitats capable of supporting an adequate prey-base of small mammals. Marten are strongly associated with late-seral and old-growth forests below 1,500 feet in elevation. One of the most important factors related to viability of the marten populations on the Tongass National Forest is the large amount of habitat in Old Growth Reserves (OGRs) and non-development Land Use Designations (LUDs) (USFS 2008). Since the early 1950s, timber harvest on Federal lands has reduced the amount of old-growth forest habitat available on Kuiu Island by approximately 9% (Brainard 1992).

The ADF&G (2007) noted that the apparent low population densities and issues related to sub-speciation and endemism have given rise to concerns about marten populations, along with the loss of habitat and increasing road densities on Kuiu Island. Based on recent radio-telemetry data collected by ADF&G, Kuiu Island marten tend to concentrate near the beaches during winter (Flynn and Dawson 2008). This may increase their vulnerability to trapping. Since the radio- telemetry data was only collected during the recent severe winter of 2007 - 2008, it is unclear whether the winter concentration of marten on beaches occurs during all winters or during severe winters, coinciding with winter killed deer carrion availability, or to what level the prey species become unavailable due to variable snow conditions or the extent prey densities are altered.

Recent Population Indices

Based on previous research, marten numbers on Kuiu Island were among the lowest in Southeast Alaska (Flynn et al. 2004). Replicate marten live capture surveys along the Kuiu Island road system

between Rowan Bay and Three-mile Arm in 2001, 2002, and 2007 yielded marten capture rates of 1.1 captures/100 trap-nights, 0.6 captures /100 trap-nights, and 1.6 captures/100 trap-nights, respectively (Flynn et al. 2004, Flynn and Dawson 2008). In 2005, University of New Mexico personnel logged 1,057 trap nights for marten on Kuiu Island, including the relatively-poor-habitat southern portion of the Island. They documented an overall marten capture rate of 0.3 captures/100 trap-nights (Dawson 2005). Comparatively, a total of 936 trap nights on Admiralty Island during that same year yielded a capture rate of 4.0 captures/100 trap-nights. Most recently, overall capture rate of marten on Kuiu Island in fall 2008 averaged 1.1 captures/100 trap-nights, compared to an overall capture of 1.8 captures /100 trap-nights on the same traplines in fall 2007 (Flynn and Dawson 2008).

Similarly, based on recent studies on Admiralty Island, there was a decline in marten hair-snaring success from 2007 to 2008; however, the decline was lower than expected (Thomas and Ben-David 2008). These results may be confounded by a higher attraction of marten to hair snares when small mammal abundance is low; mark-recapture modeling would more adequately assess marten abundance. Furthermore, only the *caurina* form is present on Admiralty Island, which may have a broader dietary niche than the *americana* form and thus be less sensitive to declines in the abundance of small mammals.

Harvest History

Generally, marten harvest levels are directly related to fur prices and winter weather conditions during the trapping season (Lowell 2007). According to Alaska fur buyer Bob Green (2009, pers. comm), Southeast martens vary widely in quality and color and bring lower prices than Interior Alaska martens. Fluctuations in the number of marten taken annually may be related to variations in the number of successful trappers or local trappers may have avoided trapping marten on Kuiu Island in recent years, due to reports of low marten population densities. The number of marten taken by fur trappers on Kuiu Island has ranged from 0 to 51 since 1993, averaging 20 animals annually between 1993 and 2000 (**Figure 1**). Comparatively, the annual harvest on northern Prince of Wales Island was 224 marten per year from 1991-2002 (Flynn et al. 2004). However, during the past eight years (since 2001) the marten harvest has declined significantly, with an average annual harvest of five martens (this information includes four years when no marten were reported harvested). The number of individuals trapping marten on Kuiu Island ranged from 0-3 during 1993-2007 (**Figure 2**). Between 1993 and 2007, the majority of the marten harvest has occurred during December (42%) and February (41%), whereas only 17% of the harvest has occurred in January (Lowell 2008). No trapping for marten occurred on Kuiu Island during the 2008/2009 season, as both the State and Federal seasons were closed by Emergency Order and Special Action (except for the six days at the end of the Federal season, during which no marten were trapped).

Other Alternatives Considered

Administrative controls over trapping such as varying the season length or timing of season, and setting quotas to limit harvest are common management methods that have been used to enhance or control marten harvest.

Both Yeager (1950) and Quick (1956) found that early season catches had a preponderance of males and younger age classes. Therefore, limiting trapping to December, may select for young non-breeding animals and a higher percentage of male harvest. A shortened marten trapping season on Kuiu Island may also potentially reduce the total harvest. A marten trapping closure starting January 1st and extending through February 15th (the end of the season), would decrease the season from 77 days to 31 days. This would provide for marten conservation while still allowing subsistence harvest.

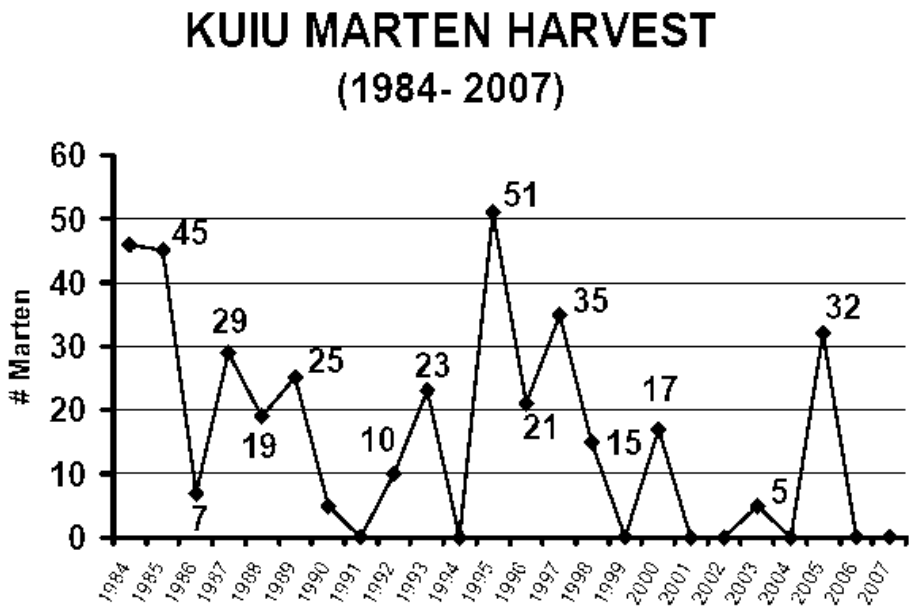

Figure 1. Annual total harvest of martens on Kuiu Island 1984-2007 (Lowell 2008).

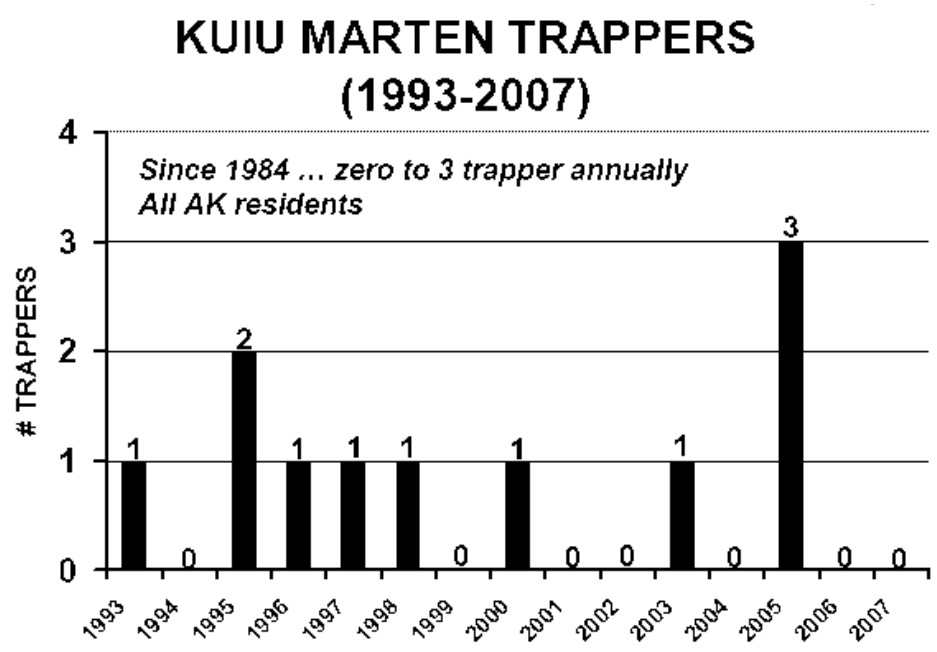

Figure 2. Annual number of marten trappers on Kuiu Island 1993-2007 (Lowell 2008).

A second alternative is to close the marten trapping season on Kuiu Island through July 1, 2010–June 30, 2012, which would provide four years for marten numbers to increase, as the trapping seasons would effectively be closed from 2008/2009 through 2011/2012. This would allow 2–3 sexual maturity life cycles for marten populations to increase without trapping mortality. As sexual maturity is achieved at approximately 15 months (Markley and Bassett 1942, Jonkel and Weckwirth 1963) each sexually mature female could potentially produce two to three young each year. Federally qualified subsistence users could be allowed to harvest marten on Kuiu Island beginning the regulatory years of July 1, 2012–June 30, 2014, with season length set appropriately.

A third alternative is to implement a combination of management methods over a short-term period, which would allow for marten conservation on Kuiu Island and limited subsistence harvest. ADF&G fur harvest reports indicate that only four trappers reported trapping marten on Kuiu Island since the 2000/2001 trapping season with 37 marten reported as harvested. During this time period, only two of these trappers were Federally qualified subsistence users. Allowing Federally qualified subsistence users the opportunity to trap marten on Kuiu Island beginning the regulatory year of July 1, 2012, with marten trapping season open from December 1–31, 2013, with a harvest limit of 10 marten per trapper, would implement several measures (limited season and harvest limits) to permit recovery of the populations and allow Federally qualified subsistence users the opportunity to harvest marten for economic gain and allow the collection of biological information and samples.

Effects of the Proposal

If this proposal is adopted, it would prohibit Federally qualified subsistence users from trapping marten in the Kuiu Island portion of Unit 3, effective July 1, 2010–June 30, 2012. All other areas of Unit 3 would remain open to marten trapping under Federal Subsistence Regulations. Because a majority of the lands on Kuiu Island are Federal, the current State closure may not be as effective to protect the marten populations, if Federal subsistence regulations are not aligned to close the area to marten trapping. Fur sealing records indicated that only four trappers have trapped marten on Kuiu Island since 2001. No Federally qualified subsistence users have trapped marten on Kuiu Island since 2005; therefore, it would appear that local trappers are voluntarily avoiding this area and no Federally qualified subsistence users attended the Kake hearing or provided feedback regarding the proposal. Although harvest has historically been minimal, given the apparent relatively low population density and high natural mortality, any additional mortality may jeopardize the health of this population.

OSM CONCLUSION

Support Proposal WP10-07 **with modification**. Reopen marten trapping in this portion of Unit 3 for Federally qualified subsistence users beginning the regulatory year of July 1, 2012.

Justification

Recent studies indicate the marten population on Kuiu Island is among the lowest in southeast Alaska and suggests that the population has declined over the past two years. Although trapping pressure on Kuiu Island has been light and marten harvest has been low, the combination of trapping pressure, a high natural mortality rate, and recent hard winters has resulted in a conservation concern for the marten population. Three consecutive years of heavy snowfall have likely decreased the small-mammal prey population or snow accumulations have hampered the marten's ability to secure food for survival and reproduction. The low population density, isolation, and indications of decline in this population over the past two winters suggest that an approach that minimizes risk and errs on the side of conservation is the best approach to manage the Kuiu Island marten population. Closing the trapping season in the affected

area will provide time for marten life cycles and populations to be enhanced without additional trapping mortality, then implementing a subsistence marten trapping season beginning the regulatory year of July 1, 2012. Currently, it is unknown what conditions, funding, or research will warrant additional marten population investigations on Kuiu Island, which would provide information to warrant the re-opening or continued closure of the marten trapping season on Kuiu Island. If Federally qualified subsistence users elect to pursue marten during the regulatory year of 2012, valuable population information can be collected through carcass collection, fur sealing process, trapper questionnaires, or telephone interviews. It is recommended that the marten trapping season be opened the next regulatory cycle which would implement an alternative that provides for conservation of marten, while providing biological information and subsistence priority.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-07 **with modification** as described in the OSM Conclusion. The Council determined that this proposal was necessary to provide for conservation of marten on Kuiu Island. The modification provides a mechanism to reopen the Federal harvest season after marten populations have a chance to recover.

INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee notes that the precautionary action of the Regional Council in halting trapping for a short period of time is in keeping with sound principles of wildlife management and can be revisited in two years if another proposal is submitted.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-07: This proposal, as submitted by the Southeast Regional Advisory Council, would close the marten trapping season in a portion of Unit 3 – Kuiu Island due to very low population levels. The Council then proposed an amendment to its own proposal that would automatically reopen the marten trapping season in 2012.

Introduction: Current federal subsistence trapping regulations for marten in Unit 3 (including Kuiu Island) allow for an unlimited take and a season from December 1 through February 15. Research conducted during the past few years involving extensive live capture and hair-snaring efforts by department personnel and university researchers indicates that the Kuiu Island marten population exists at extremely low levels. Because of this research effort, Alaska Department of Fish and Game was concerned enough about the low numbers and high mortality rate of marten on Kuiu Island in 2008 to submit a proposal to the Alaska Board of Game to close the marten trapping season. The Alaska Board of Game adopted the proposal in November 2008, effective July 1, 2009, to remain in effect until the population increases sufficiently to support harvest or until biologists determine that some level of harvest could be sustainable. The department closed the trapping season by Emergency Order in 2008 due to conservation concerns. The Federal Subsistence Board closed the federal subsistence harvest of marten on Kuiu Island through adoption of Wildlife Special Action WSA 09-03 at the November 12, 2009, meeting.

Impact on Subsistence Users: During the 10-year period 1998-2007, an average of 0.6 trappers (range 0-3 trappers annually) reported trapping marten on Kuiu Island. During the same period, the annual marten harvest on Kuiu Island ranged from 0-32 marten annually. No federally qualified subsistence users have trapped marten on Kuiu Island since 2005. Due to low harvest and participation in trapping on Kuiu Island, a closure would have negligible impact on federal subsistence trapping activities.

Opportunity Provided by State: The marten trapping season throughout most of Unit 3 extended from December 1 through February 15. Due to conservation concerns, the Alaska Board of Game closed the marten trapping season on Kuiu Island until the population increases.

Conservation Issues: A decade of research indicated that marten numbers on Kuiu Island are among the lowest in Southeast Alaska. Extensive live capture and hair-snaring efforts conducted by department personnel in fall 2009 indicated that marten populations on Kuiu remain at low levels. Habitat conversion resulting from past and planned timber harvest and road building further contribute to concerns regarding Kuiu Island marten populations. Logging road densities on the northern half of Kuiu Island have exacerbated concern for overharvest of marten by increasing human access and trapping vulnerability. Telemetry relocation data indicate that Kuiu Island marten tend to concentrate near the beaches during winter where they are similarly vulnerable to shoreline trapping.

In 2002, a genetic survey in Southeast Alaska by personnel from the University of Alaska Fairbanks found that both marten species (*Martes americana* and *Martes caurina*) were found in

the region. This survey found that *M. caurina* inhabits only two islands within the Alexander Archipelago (Kuiu and Admiralty islands) and should be considered endemics. *Martes Americana* appears to be invading Kuiu Island from adjacent Kupreanof Island and interbreeding with *Martes caurina.*

Despite no trapping on Kuiu Island, the poor quality habitat, hard winters, and high mortality indicate that the decline in this population over a decade is unlikely to improve in two or three seasons and will likely remain a conservation concern.

Other Comments: The Southeast Alaska Regional Advisory Council amended their proposal to reopen the trapping season during the 2012 regulatory year, presuming that some data might be recovered from carcass collection, fur sealing process, trapper questionnaires, and telephone interviews to ascertain any recovery of the marten population. Although the department normally supports automatic reopening and collection of data from carcasses to assess population status of furbearers, we oppose this management approach in this case. The population is unlikely to recover enough by 2012 to provide a harvestable surplus, and the few marten that might be trapped would not provide adequate data to evaluate the status of the population. Better information will be collected from the ongoing research project which will continue through 2011, with proposed monitoring by live-trapping to continue for several more years.

The department recommends that both the state and federal seasons remain closed until the population increases. ANILCA Section 805(c) and federal subsistence regulations (100.11(c)(3)) require that the Federal Subsistence Board decisions be supported by substantial evidence and consistent with recognized principles of fish and wildlife conservation. Automatically reopening the Kuiu Island federal trapping season in 2012 does not meet either standard. The federal program automatically will conduct a review of the closure in three years to determine whether there is sufficient information to recommend reopening the federal trapping season. However, there is no evidence that the population will recover enough by 2012 to support automatically reopening harvest on this seriously diminished population. An automatic reopening does not provide for conservation of marten, would not provide sufficient biological information to determine the status of the population, and, if the population is subjected to unsustainable harvest, could potentially impact the small population leading to a longer period of recovery that would further delay a reopening for future subsistence use.

The available information and sound wildlife management principles necessitate leaving the trapping season closed to eliminate all but natural mortality until more information is known about this marten population. Therefore, the present research project should be the focal point of data gathering, and the data collected should be used to guide the management of marten on Kuiu Island.

Recommendation: Support the original proposal. Oppose the amendment to automatically reopen the trapping season in 2012. Such action would not be consistent with sound principles of wildlife management.

WP10-08 Executive Summary	
General Description	Proposal WP10-08 requests that the harvest limit for deer in Unit 1A be reduced to two bucks. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 1A — Deer** ***Cleveland Peninsula south of the divide between Yes Bay and Santa Anna Inlet - ~~4 antlered deer~~ 2 antlered deer*** *Aug. 1 – Dec. 31* **Remainder** – *4 antlered deer*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-08

ISSUES

Proposal WP10-08, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the harvest limit for deer in Unit 1A be reduced to two bucks.

DISCUSSION

In November 2008, the Alaska Board of Game adopted a regulation to reduce the harvest limit of deer in the Cleveland Peninsula area of Unit 1A from four bucks to two bucks. This action was determined to be necessary for conservation of a depressed population of deer and to make regulations consistent with Unit 1B which includes a portion of the Cleveland Peninsula. The Council Chair provided clarification that the intent of this proposal is to align Federal and State regulations, and only change the harvest limit on the Unit 1A side of the Cleveland Peninsula.

Existing Federal Regulation

Unit 1A — Deer

4 antlered deer	*Aug. 1 – Dec. 31*

Proposed Federal Regulation

Unit 1A — Deer

Cleveland Peninsula south of the divide between Yes Bay and Santa Anna Inlet — ~~4 antlered deer~~ 2 antlered deer	*Aug. 1 – Dec. 31*
Remainder — *4 antlered deer*	

Existing State Regulation

Unit 1A — Deer

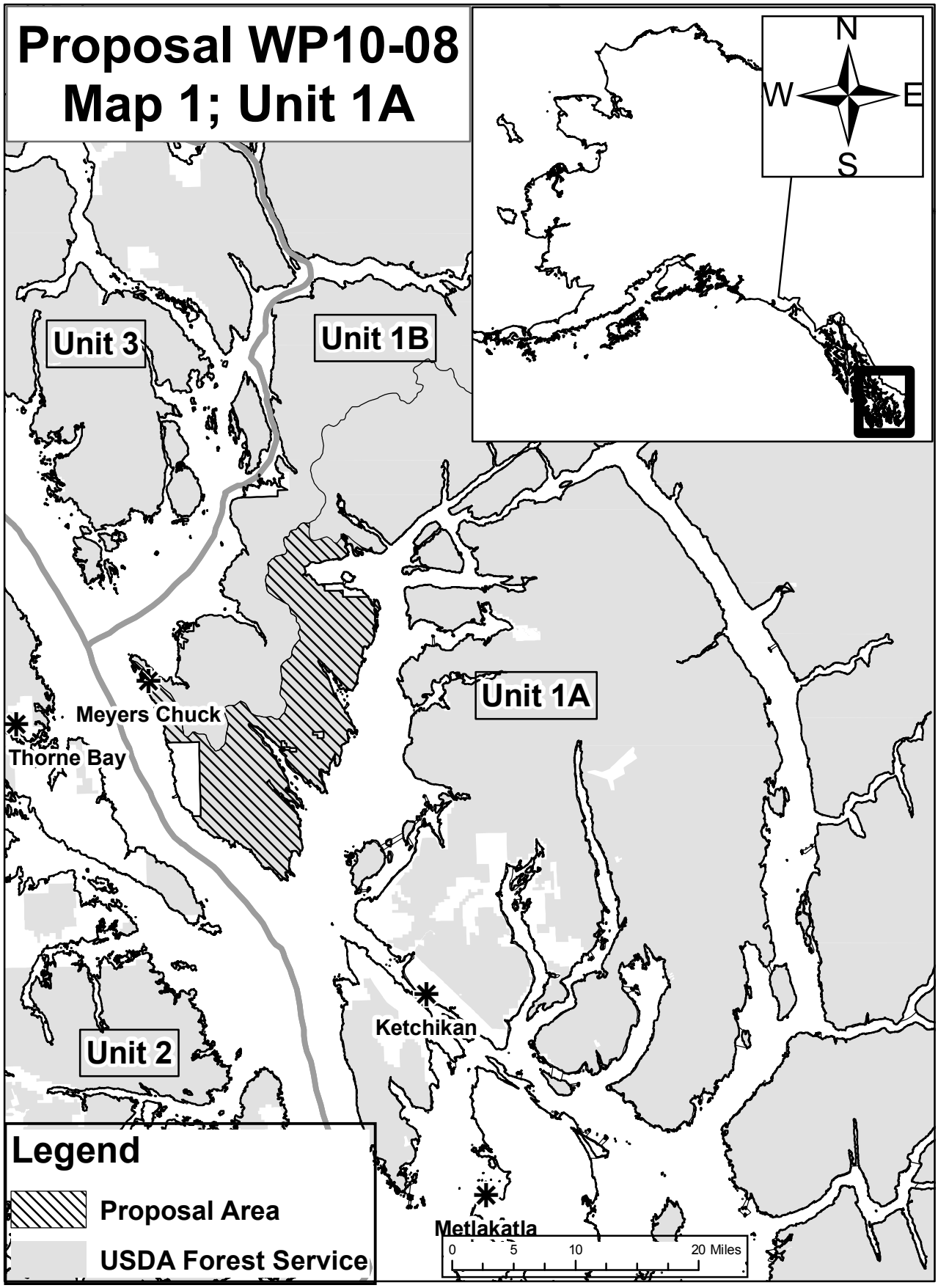
Cleveland Peninsula south of the divide between Yes Bay and Santa Anna Inlet — 2 bucks	*Aug. 1 – Dec. 31*
Remainder — 4 bucks	

Extent of Federal Public Lands

Federal public lands comprise 95% of Unit 1A and 92% of the proposal area. All Federal public lands in the proposal area are managed by the USDA Forest Service (USFS), Tongass National Forest (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Units 1A and 2 have a positive customary and traditional use determination for deer in Unit 1A.


Proposal WP10-08
Map 1; Unit 1A
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Unit 3
Unit 1B
Unit 1A
Unit 2
Meyers Chuck
Thorne Bay
Ketchikan
Metlakatla
Legend
Proposal Area
USDA Forest Service
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20 Miles

Regulatory History

The history of State and Federal harvest regulations for deer in Unit 1A is shown in **Table 1**. The Federal subsistence harvest limit has been four antlered deer from Aug. 1 – Dec. 31 since its inception in 1990. The State reduced the harvest limit on the Cleveland Peninsula for 2009, but otherwise has had a four antlered deer, or buck, harvest limit and Aug. 1 – Dec. 31 season since 1988.

Current Events

At its fall 2008 meeting, the Alaska Board of Game adopted a regulation to reduce the harvest limit from four bucks to two bucks for the Cleveland Peninsula. The regulation was in response to a long-term decline in the deer population which resulted in low harvests in this part of Unit 1A. The reason for the population decline and lack of recovery is unknown, but is suspected to be a combination of deep snow winters, predation, and poor habitat quality (Porter 2009, pers. comm.).

Biological Background

Basic biological information on deer is provided in the analysis for proposal WP10-14.

The clumped distribution of deer on the Cleveland Peninsula creates a situation for potential overharvest of bucks in certain areas of the Cleveland Peninsula (ADF&G 2008).

Habitat

Old-growth forests are considered primary deer winter range, in part because the complex canopy cover allows sufficient sunlight through for forage plants to grow but intercepts snow, making it easier for deer to move and forage during winters when deep snow hinders access to other habitats. **Table 2** shows the estimated deer habitat capability remaining on USFS managed lands in the proposal area. Although there has been some timber harvest, the habitat is largely intact.

Recent population indices

There are no population estimates for deer in Unit 1A. Porter (2007) indicated that deer numbers were at moderate to low levels in southern southeast Alaska, including Unit 1A. ADF&G deer pellet surveys are the primary source of available population information. Relating pellet group data to population levels is difficult, because factors other than changes in deer population size can affect deer pellet-group density. Snowfall patterns influence the distribution and density of deer pellets from year to year, and snow persisting late into the spring at elevations below 1500 feet limits the ability to consistently survey the same elevation zones among years. In mild winters, deer can access forage in a greater variety of habitats, not all of which are surveyed. Conversely, in severe winters deep snow concentrates deer (McCoy 2008). **Figure 1** shows deer pellet survey results for all transects on the Cleveland Peninsula in Unit 1A (McCoy 2008). These data indicate increasing populations during the 1980s, with relatively high populations during the late 1980s through the early 1990s; followed by decline and low numbers during the late 1990s to the present. The relatively high pellet densities recorded during 2007 (**Figure 1**) are likely the result of deep snow concentrating the deer at Helm Bay (McCoy 2007).

Harvest History

Figure 2 summarizes deer harvest and hunter effort for the Cleveland Peninsula since 1990. Harvests peaked in the early 1990s then declined and remain at a low level. Similar trends are evident for the number of hunters and number of days hunted.

Table 1. Regulatory history for Unit 1A deer, 1925 to present.

Year	Unit	Season Type	Season	Limit	Conditions and Limitations
1925	1A	Open	Sept 16-Dec 15	3 Bucks	3 inch or greater antler
1926-1929	1A	Open	Sept 1-Nov 30	3 Bucks	3 inch or greater antler
1930-1941	1A	Open	Aug 20-Nov 15	3 Bucks	3 inch or greater antler
1942-1943	1A	Resident	Sept 16-Nov 15	2 Bucks	3 inch or greater antler
1942-1943	1A	Nonresident	Sept 16-Nov 15	1 Buck	3 inch or greater antler
1944-1948	1A	Resident	Sept 1-Nov 15	2 Bucks	3 inch or greater antler
1944-1948	1A	Nonresident	Sept 1-Nov 15	1 Buck	3 inch or greater antler
1949	1A	Resident	Sept 1-Nov 7	2 Bucks	3 inch or greater antler
1949	1A	Nonresident	Sept 1-Nov 7	1 Buck	3 inch or greater antler
1950-1951	1A	Resident	Sept 1-Nov 15	2 Bucks	3 inch or greater antler
1950-1951	1A	Nonresident	Sept 1-Nov 15	1 Buck	3 inch or greater antler
1952	1A	Open	Aug 20-Nov 15	2 Bucks	3 inch or greater antler
1953-1954	1A	Open	Aug 20-Nov 22	2 Bucks	3 inch or greater antler
1955	1A	Open	Aug 20-Nov 22	3	3 bucks or 2 bucks and 1 doe; bucks 3 inch or greater antler.
1956	1A	Open	Aug 20-Nov 26	3 Bucks	
1957-1958	1A	Open	Aug 20-Nov 30	3 Bucks	
1959	1A	Open	Aug 8-Nov 30	4	4 bucks or 3 bucks and one doe; bucks only before 10/15.
1960	1A	Open	Aug 20-Dec 15	4	4 bucks or 3 bucks/ 1 doe, or 2 bucks/ 2 does, bucks only before 10/1.
1961	1A	Open	Aug 1-Nov 30	4	Only 2 Antlerless; antlerless only from 9/15 to 11/30.
1962	1A	Open	Aug 1-Dec 15	4	Antlerless deer from 9/15 to 12/15 only.
1963-1966	1A	Open	Aug 1-Dec 31	4	Antlerless deer from 9/15 to 12/31 only.
1967	1A	Open	Aug 1-Dec 31	4	Antlerless deer from 10/1 to12/31 only.
1968	1A	Open	Aug 1-Dec 15	4	Antlerless deer from 9/15 to 12/15 only.
1969-1970	1A	Open	Aug 1-Dec 31	4	Antlerless deer from 10/1 to 12/31 only.
1971	1A	Open	Aug 1-Nov 30	3	Antlerless deer from 10/1 to 10/31 only.
1972	1A	Open	Aug 1-Nov 30	3	Antlerless deer from 11/1 to 11/30 only.
1973	1A	Open	Sept 1-Nov 30	3	One antlerless deer from 11/1 to 11/30.
1974-1977	1A	Open	Aug 1-Nov 30	3	One deer antlerless from 11/1 to 11/30.
1978-1984	1A	Open	Aug 1-Nov 30	3	Antlered deer.
1985-1987	1A	Subs./General	Aug 1-Nov30	3	Antlered deer.
1988-1990	1A	Subs./General	Aug 1-Dec 31	4	Antlered deer.
1990-2009	1A	Fed. Subs.	Aug 1-Dec 31	4	Antlered deer.
1991-2008	1A	Subs./General	Aug 1-Dec 31	4 Bucks	
2009	1A	General	Aug 1-Dec 31	2 Bucks	Cleveland Peninsula south of the divide between Yes Bay and Santa Anna Inlet
2009	1A	General	Aug 1-Dec 31	4 Bucks	Remainder

Residents of Ketchikan dominate the deer harvest and harvest effort on the Cleveland Peninsula (**Table 3**). Meyers Chuck is the only community with a positive customary and traditional use determination that has documented use of the area for deer harvest from 1997–2008 (McCoy 2009, pers. comm.). The number of hunters that harvest two or more deer is unknown, but the average number of deer harvested per hunter (0–0.5 deer per hunter from 1997–2008; McCoy 2009, pers. comm.) suggests that few hunters achieve this level of harvest.

Table 2. Deer habitat capability remaining on USFS managed lands in 2006 as a percentage of habitat capability prior to large scale timber harvest beginning in 1954. Data are reported by Wildlife Analysis Areas for the ADF&G Major Hunt Area within the proposal area. Habitat capability includes only National Forest System managed lands (USFS 2008).

Major	WAA	Land <1500' Elevation (acres)	Percent of 1954 Habitat Capability Retained, 2006
X06	612	61,861	99
X06	613	38,416	95
X06	614	10,729	98

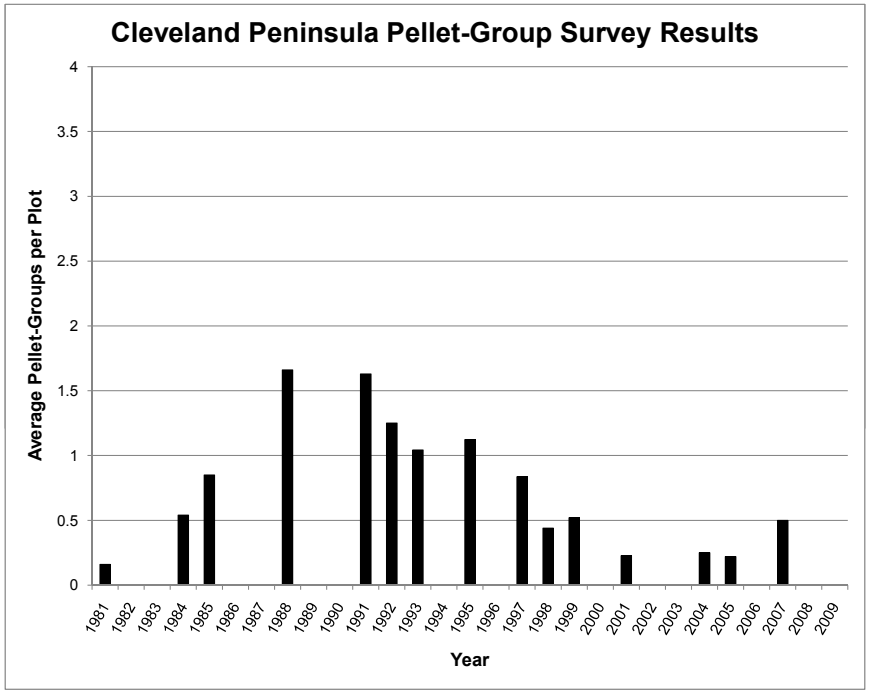

Figure 1. Combined pellet-group survey results for all dates and transects on the Cleveland Peninsula in Unit 1A (McCoy 2008).

Effects of the Proposal

Adopting this proposal would reduce the harvest limit for Federally qualified subsistence users and restrict opportunities for them to harvest deer. In practice, this would restrict the opportunity for residents of Meyers Chuck to harvest additional deer near their community. Current harvest levels by Federally qualified users seem unlikely to substantially affect the population.

If this proposal is adopted, it would align Federal subsistence and State general regulations regarding deer in Unit 1A and make harvest limits consistent with the Unit 1B portion of the Cleveland Peninsula.

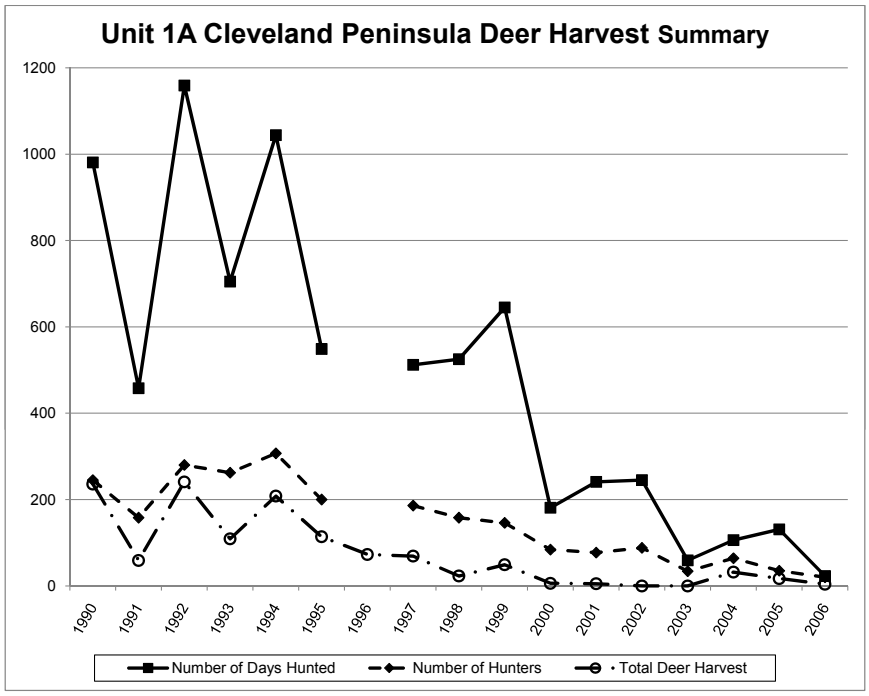

Figure 2. Deer harvest and hunter effort data for the Cleveland Peninsula of Unit 1A (Porter 2007, 2009 pers. comm.). Effort data for 1996 is unavailable.

Table 3. Community of residence, hunter effort, and number of deer harvested on the Cleveland Peninsula of Unit 1A from 1997-2003 (Porter 2009, pers. comm.).

Community	Annual Number of Days Hunted	Average Number of Deer Harvested
Juneau	1	1
Ketchikan	312	26
Meyers Chuck	20	2
Other Alaska	5	0
Outside Alaska	5	1
Wrangell	1	1

OSM CONCLUSION

Oppose Proposal WP10-08.

Justification

Deer harvest by federally qualified subsistence users is limited, so the impact of harvest on the health of the deer population may be low. In this subunit, it appears that very few hunters achieve the bag limit due, in part, to the low population level, and conservation is dependent upon managers monitoring weather and populations to take necessary inseason action to assure sustainability. If harvest increases in the near future without an increase in the deer population, a reduction in the federal subsistence bag limit may be necessary.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-08. The Council determined that this proposal was an unnecessary restriction on subsistence uses. The low levels of subsistence harvest will have no effect on recovery of the deer population in this area.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-08

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-08
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-08: The Southeast Regional Advisory Council submitted this proposal to reduce the federal subsistence bag limit in Unit 1A from 4 bucks to 2 bucks.

Introduction: This proposal would change the federal subsistence bag limit for deer on the Cleveland Peninsula portion of Unit 1A from 4 bucks to 2 bucks, matching the bag limit in the state hunting regulations for this area. The Alaska Board of Game adopted a reduced bag limit from four bucks to two bucks in November 2008 for conservation reasons due to a depressed population and be consistent with Unit 1B. The Cleveland Peninsula is split between Units 1A and 1B, and this proposed change in federal subsistence regulations would make the entire Cleveland deer bag limit consistent. The Alaska Department of Fish and Game and local deer hunters have been concerned about a decline in deer numbers on the Cleveland Peninsula over the past 15 years. The deer population in this area remains at a low level with no obvious signs of recovery. The deer population appears to persist in small patches at low elevations, and a lower federal subsistence bag limit will help insure all the bucks are not harvested from these patches, especially during the vulnerable November period.

Impact on Subsistence Users: If the proposal is adopted, the bag limit reduction could impact a small number of federal subsistence hunters, while benefitting all users in the long term by providing deer a greater chance of rebounding from the present low levels. Approximately 7,000 federally qualified residents from units 1A and 2 are eligible to hunt deer under federal subsistence regulations in Unit 1A. However, during 1997-2008, an average of 2.3 federally qualified hunters took an average of 1.7 deer from this area, with a range of 0-7 hunters and a range of 0-13 deer taken. Based on these numbers, this regulatory change will not impact federally qualified deer hunters. Additionally, by lowering the bag limit, a greater number of hunters will have the opportunity to harvest deer because any single hunter can only take two of the available bucks, rather than four. This strategy has been used successfully in State hunting regulations for much of the Southeast Alaska mainland area between Ketchikan and Juneau.

Opportunity Provided by State: The state hunting season for both residents and non residents is August 1 through December 31 with an annual limit of two bucks.

Conservation Issues: Population trend data derived from spring pellet counts suggest the deer population along the Cleveland Peninsula declined around 1997 and remained at low levels. Vegetation surveys were conducted in this area and compared to similar work completed in nearby Unit 2. The results showed similar habitats on the Cleveland Peninsula produce less than one-third the digestible forage compared to Prince of Wales Island. This may explain, at least in part, why this area is slow to recover. The decline and slow recovery is most likely a combination of factors such as: snow depth, snow persistence, low value winter forage, and predation by black bears, brown bears, and wolves. Addressing this conservation by adopting a lower bag limit may aid in the recovery of the Cleveland Peninsula deer population.

Enforcement Issues: Hunters will need to be aware of bag limit restrictions. If a hunter has taken two deer during the season from anywhere in Alaska, they can not take additional deer

from this area with a two buck bag limit. If someone wanted to hunt on the Cleveland Peninsula, they could harvest deer in that area first then move to an area with a higher bag limit.

Recommendation: Neutral in view of the Council's changed position. The department supported as originally proposed.

WP10-09 Executive Summary	
General Description	Proposal WP10-09 requests Federal draw-permit hunts for moose in Units 1B, 1C and 3: five draw-permits for Units 1B and five draw-permits for Unit 3 for any bull moose. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Units 1B, 1C (south of Point Hobart), and 3 — Moose** *1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only.* *Sept. 15 – Oct. 15* ***A total of 5 draw-permits will be issued to harvest any-bull moose in Units 1B and 1C south of Point Hobart, and 5 additional any-bull moose draw-permits in Unit 3***.
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-09

ISSUES

Proposal WP10-09 was submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council) to provide Federal draw-permit hunts for moose in Units 1B, 1C and 3. The proposal requests five draw-permits for Units 1B, 1C and five draw-permits for Unit 3 for any bull moose.

DISCUSSION

The proponent believes that an any-bull moose draw-permit harvest regulation would provide a meaningful subsistence opportunity for Federally qualified subsistence users. The Council Chair provided clarification that the intent of this proposal was to include Federal lands in Units 1B, 1C south of Point Hobart, and 3, consistent with the boundary for State registration hunt RM038 (**WP10-10, Map 1**).

The proponent also submitted proposal WP10-10 requesting that the Federal definition of a legally harvested moose in Units 1B and 3 be amended to include moose with two brow tines on each antler, consistent with State regulations. For the 2009 regulatory year, the Federal Subsistence Board supported Special Action WSA09-01, allowing the harvest of bull moose with 2 brow tines on each antler in Units 1B, 1C south of Point Hobart, and 3, consistent with State regulations.

Existing Federal Regulation

Units 1B, 1C (south of Point Hobart), and 3 — Moose

1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only.	*Sept. 15 – Oct. 15*

Proposed Federal Regulations

Units 1B, 1C (south of Point Hobart), and 3 — Moose

1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only.	*Sept. 15 – Oct. 15*

A total of 5 draw-permits will be issued to harvest any-bull moose in Units 1B and 1C south of Point Hobart, and 5 additional any-bull moose draw-permits in Unit 3.

Existing State Regulations

Units 1B, 1C (south of Point Hobart), and 3 — Moose

1 bull with spike-fork antlers or 50-inch antlers, or antlers with 3 or more brow tines on at least one side, or antlers with 2 or more brow tines on both sides, by permit available in person in Douglas, Kake, Ketchikan, Petersburg, Sitka, Wrangell, or by mail from Petersburg beginning Aug. 17.	*Sept. 15 – Oct. 15*

Extent of Federal Public Lands

Federal public lands comprise 99% of Unit 1B, 96% of Unit 1C, and 94% of Unit 3. Federal public lands within Units 1B and 3 are managed by the U.S. Forest Service (USFS), as part of the Tongass National Forest.

All Federal public lands within Unit 1C south of Point Hobart are managed by the Tongass National Forest.

Customary and Traditional Use Determinations

Unit—Moose	Customary and Traditional Use Determinations
Unit 1B	*Residents of Units 1, 2, 3, and 4*
Unit 3Mitkof and Wrangell Islands	*Rural residents of Units 1B, 2, and 3*
Unit 3 Remainder	*All rural residents*
Unit 1C Remainder	*All rural residents*

Regulatory History

Information on the regulatory history for the proposal area can be found in the analysis for proposal WP10-10.

Current Events

Current events for the proposal area are discussed in the analysis for proposal WP10-10.

Biological Background

The analysis for proposal WP10-10 provides a discussion of the biological background for moose in the proposal area.

As described in the analysis for WP10-10, the proposal area has recently experienced three consecutive deep snow winters. While population numbers are not available in Units 1B, 1C south of Point Hobart, and 3, White and Barten (2009) estimated a 30% decline in the Berners Bay (northern Unit 1C) moose population between fall 2006 and spring 2009, which they attributed to the three consecutive deep snow winters.

The spike-fork, 50 inch spread, three brow-tine antler restriction is a selective harvest management system that works independently of population size. It targets for harvest a portion of yearling bulls (spike and fork antlers) and mature bulls (it may take *gigas* moose 4–5 years to achieve a 50 inch antler spread), always leaving a protected segment of the bull population for breeding purposes. The two-by-two brow tine restriction is intended to do the same thing, but with an antler configuration that is more appropriate for the *andersoni* subspecies of moose in southeast Alaska. Data on age and antler configuration collected by ADF&G during the any bull permit hunts found that the median age of bulls from the RM058 hunt area with 2 brow tines on both antlers is 6 years of age (n = 39, range 3–11) (Lowell 2009, pers. comm.). When these data were gathered, the two-by-two brow-tine bulls in the population had not been targeted for harvest, so the median age likely is higher than it will be after implementation of the two-by-two brow-tine antler restriction. There are concerns about whether this antler configuration restriction will work as intended, because *andersoni* moose do not develop predictable antler configurations that correlate well with age (Lowell 2009, pers. comm.).

Harvest History

The harvest history for the proposal area is presented in the analysis for proposal WP10-10.

Effects of the Proposal

If this proposal is adopted, it would provide additional opportunity for Federally qualified subsistence users to harvest five bulls in Units 1B and 1C (south of Point Hobart), and five bulls in Unit 3. The any bull draw-permit would increase the likelihood of success for the permit holders.

Harvesting five additional bulls in Units 1B and 1C south of Point Hobart, could increase the harvest up to 15% over the 1995–2008 average of 33 moose. Harvesting five additional bulls in Unit 3 could increase the harvest up to 16% over the 1995–2008 average of 32 moose. This assumes none of the draw-permit harvested moose meet the spike-fork, 50 inch spread, three brow-tine or two-by-two brow tine antler configurations. Antler configuration data from the 2006–2008 any bull draw-permit harvests indicates approximately 17% of the any bull harvest would have been legal under the spike-fork, 50 inch spread, three brow-tine antler restriction and another 16% would have been legal under two-by-two brow tine regulations. Therefore, an increase of approximately 10%, compared to the long term average, is more likely for both areas.

If this proposal is adopted, the additional harvest combined with the effects of liberalized antler restrictions and three consecutive above average snow winters, could have a detrimental effect on the moose population. Harvest in these units increased substantially in 2009 due to the new two-by-two brow tine regulation. Most of this additional harvest was two-by-two brow tine bulls that were not legal to harvest in prior years.

The proposed any-bull harvest would remove some bulls from the protected segment of the population and would be more dependent on knowledge of population status to manage properly. Population information is unavailable for most of this area (except the Stikine River) because suitable techniques are lacking for surveying moose in the forested habitat of southeast Alaska. Under the spike-fork, 50 inch spread, three brow-tine restriction there appeared to be sufficient bull moose to support this extra harvest. However, it is unknown whether that surplus will be available after changes to the population resulting from implementation of the two-by-two brow tine antler restriction and recent deep snow winters.

OSM CONCLUSION

Oppose Proposal WP10-09.

Justification

The ability of the moose population to withstand harvest under the two-by-two antler restriction is unknown at this time. This moose population has suffered 3 consecutive deep snow winters that may have increased mortality and reduced recruitment. Until the effects of the change to the two-by-two brow tine antler restriction are more fully understood, it is prudent to refrain from harvesting moose within the protected portion of the bull population.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-09. The Council determined that this proposal would reduce harvest opportunity for local hunters and may result in a conservation issue if the change in definition of legal moose to include two brow tines on each antler (Proposal WP10-10) is supported and later determined to be unsustainable.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-09

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-09
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-09: This proposal would provide five federal subsistence drawing permits for any-bull moose in Units 1B and an additional five federal subsistence drawing permits for any-bull moose in Unit 3. (Federal staff indicates that the SE council chair requested to modify the proposal to include Unit 1C south of Point Hobart, so we address that as well.)

Introduction: Moose hunting in the RM038 hunt area (including Units 1B and 3) is currently managed under antler restrictions. In November 2004, the Alaska Board of Game authorized a limited number of any-bull moose drawing permits specifically to gather information on antler characteristics and age structure of bulls protected under the previous antler regulation (spike or fork on one antler or three or more brow tines on one antler or 50 inch antler spread). The primary objective of the any-bull permits was to obtain information needed prior to making data-driven changes to the preexisting antler restrictions, which were widely believed to be overly restrictive. After three season of gathering information on bulls harvested during the any-bull drawing hunts, it was determined that the herd could likely sustain the additional harvest of bulls possessing 2 brow tines on both antlers, ***provided the any-bull drawing hunts were eliminated***. Based on information gathered during the any-bull drawing hunts, the Alaska Board of Game in November 2008 liberalized the antler restrictions for moose in the RM038 hunt area to include the harvest of bulls with 2 brow tines on both antlers. As a part of the same action, the Board eliminated the any-bull drawing hunts ***until such time that the impact of the new liberalized antler regulations on the herd could be evaluated.***

Illegally harvested bull moose currently represent approximately 10% of the annual RM038 moose harvest. Illegal moose represent animals that are being taken from the segment of the bull population that current antler restrictions are designed to protect for breeding purposes. Any additional harvest under the proposed any-bull drawing permits would further reduce the segment of the population that the current antler restrictions are designed to protect.

Impact on Subsistence Users: From 2004 to 2008, approximately 95 percent (range: 93-98%) of the 324 successful RM038 moose hunters were federally qualified subsistence hunters. If this proposal is adopted, the few federal subsistence hunters who receive any-bull permits will benefit in the short term, but any additional harvest of sublegal bulls from the relatively small segment of the population currently protected by antler restrictions will risk overharvest. If the combined harvest of bulls via any-bull drawing permits and liberalized antler restrictions proves unsustainable, all hunters could be negatively impacted. As a result, emergency closures and/or reductions in season length may be necessary to reduce the harvest to sustainable levels.

Opportunity Provided by State: The Unit 1B and 3 moose season is September 15 through October 15 with a bag limit of one bull with spike-fork antlers, 50 inch antler spread, antlers with 3 or more brow tines on at least one antler, or 2 brow tines on both antlers.

Conservation Issues: Antler restrictions are intended to maximize hunting opportunity while ensuring that bull:cow ratios remain within acceptable levels. During the November 2008 meeting, the Alaska Board of Game significantly increased moose hunting opportunity in the

RM038 hunt area by liberalizing moose antler restrictions to allow harvest of bulls with 2 brow tines on both antlers. The Board of Game' deliberations acknowledged the department's support for liberalizing the existing antler restrictions was contingent upon elimination of any-bull permit hunts that existed at that time in order to assure sustainability of the population. From 1999–2008, the RM038 moose harvest averaged 62 moose per year (range 47–83). As a result of the recently liberalized antler regulations, the fall 2009 RM038 moose harvest reached 109, the highest on record. This represents a 76% increase from the preceding 10-year average. Record harvest during fall 2009 was the direct result of recently liberalized antler restrictions which facilitated additional harvest of 36 2x2 brow tine bulls that would otherwise have been protected. It remains unclear if the harvest increase associated with the new antler regulations will prove sustainable over the long-term. Until results of the recently revised antler restrictions on the RM038 moose herd can be fully evaluated, allowing harvest of additional bulls from the currently protected segment of the population would increase the risk of overharvest and could prove detrimental to the herd and all Unit 1B and 3 moose hunters.

Other Comments: The federal and state hunt is currently coordinated by requiring a state registration permit. If additional harvest is authorized by federal subsistence regulations and not authorized under state regulations, a separate federal subsistence permit will be necessary.

If adopted as modified for Unit 1C south of Point Hobart and Unit 3 other than Wrangell and Mitkoff Islands, a federal subsistence priority will be established without a positive customary and traditional finding. As a result, all rural residents will qualify to apply for a federal drawing permit for these areas, increasing the applicant pool and lowering the local federal subsistence user's chance of drawing a permit.

Because there is no customary and traditional use finding for Unit 1C Remainder, the proposed drawing permit system would necessitate implementation through ANILCA Section 804 because it would restrict the taking of wildlife for subsistence purposes among federally qualified users. If adopted as modified to add that portion of Unit 1C south of Point Hobart and Unit 3 other than Wrangell and Mitkoff Islands, the regulation would be the first statewide federal subsistence moose drawing permit hunt for all rural residents in Alaska. The department suggests that it would be more appropriate to determine which communities have evidence of customary and traditional use of the moose population in this portion of Unit 1C and Unit 3.

Recommendation: Oppose.

WP10-10 Executive Summary	
General Description	Proposal WP10-10 requests that the definition of a legally harvested moose in Units 1B and 3 be amended to include moose with two brow tines on each antler. The Council Chair has provided clarification that the intent of the proposal is to change the antler definition to align with the State registration hunt RM038; which includes all of Unit 1B, Unit 3 and a small portion of Unit 1C. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*Units 1B, 1C, that portion south of Point Hobart including all Port Houghton drainages, and 3—Moose* *1 antlered bull with spike-fork or 50-inch antler, or antlers with 3 or more brow tines on one side,* ***or antlers with 2 brow tines on both sides*** *by State registration permit only* — *Sept. 15–Oct. 15*
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** only if WP10-09 is not adopted.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-10

ISSUES

Proposal WP10-10, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the definition of a legally harvested moose in Units 1B and 3 be amended to include moose with two brow tines on each antler. The Council Chair has provided clarification that the intent of the proposal is to change the antler definition to align with the State registration hunt RM038; which includes all of Unit 1B, Unit 3 and a small portion of Unit 1C.

DISCUSSION

In November 2008, the Alaska Board of Game adopted a regulation amending the definition of a legal moose for State registration hunt RM038 (Units 1B and 3 and that portion of Unit 1C south of Point Hobart) **(Map 1)** to allow the harvest of a moose with two brow tines on each antler. The current definition of a legally harvested moose in Federal regulations for this hunt area is a moose with spike-fork or 50-inch antlers or 3 or more brow tines on either antler. The proponent states that this change would align Federal regulations with less restrictive State regulations. Since subsistence users are currently able to hunt under the more liberal State regulations, any additional harvest as a result of this proposal will be limited to moose harvested under the Federal designated hunter program.

Existing Federal Regulations

Units 1B, 1C, that portion south of Point Hobart including all Port Houghton drainages, and 3 — Moose	
1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only.	*Sept. 15–Oct. 15*

Note: The Federal Subsistence Board passed a Special Action (WSA09-01) allowing harvest of bull moose with antlers with 2 brow tines on both sides for the 2009 season within State registration hunt area RM038 (Units 1B, 3and that portion of 1C south of Point Hobart), consistent with State regulations

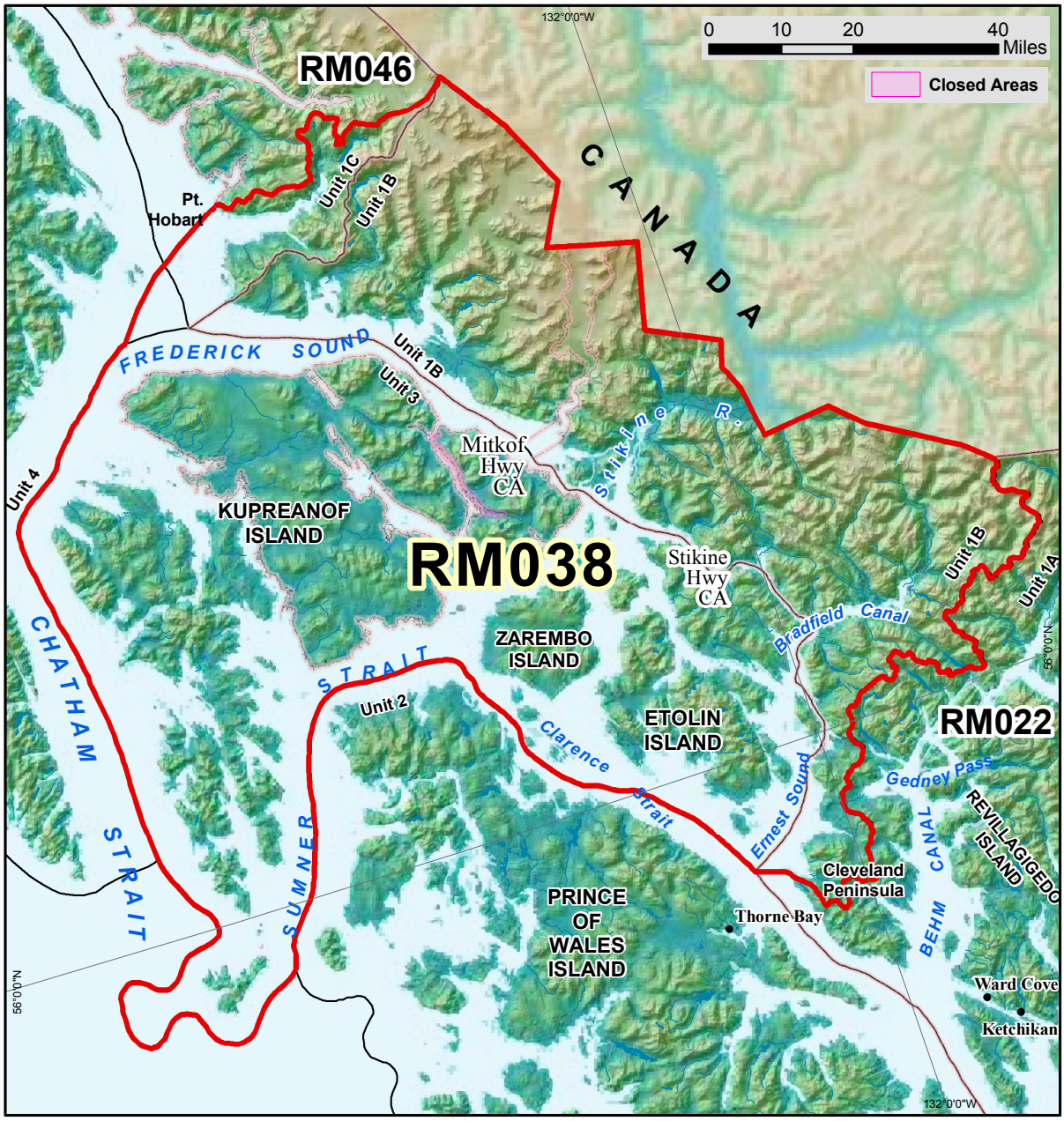
Proposed Federal Regulations

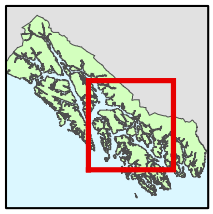
Units 1B, 1C, that portion south of Point Hobart including all Port Houghton drainages, and 3—Moose	
1 antlered bull with spike-fork or 50-inch antler, or antlers with 3 or more brow tines on one side, ***or antlers with 2 brow tines on both sides*** *by State registration permit only*	*Sept. 15–Oct. 15*

Existing State Regulations

Units 1B, 3, and 1C south of Point Hobart including all Port Houghton drainages—Moose

RM038 - Moose Registration Permit Hunt





AREA DESCRIPTION FOR RM038 - Moose - Registration Permit Hunt

HUNT AREA: Units 1B, 3, and that portion of Unit 1C south of Point Hobart.

Source maps: USGS 1:63,360 Bradfield Canal, Craig, Ketchikan, Sitka, Sumdum, Port Alexander, Petersburg

t:\wc\huntarea\arcmap\rm038.mxd 05/04 skt; 07/04 ras; 08/29/05 skt

One bull with spike-fork or 50-inch antlers, antlers with 3 or more brow tines on at least one side, or antlers with 2 brow tines on both sides	*Sept. 15–Oct. 15*

Extent of Federal Public Lands

Federal public lands comprise over 90% of Units 1B, 1C and 3 and are managed by the U.S. Forest Service.

Customary and Traditional Use Determinations

Unit—Moose	**Customary and Traditional Use Determinations**
Unit 1B	*Residents of Units 1, 2, 3, and 4*
Unit 3 Mitkof and Wrangell Islands	*Rural residents of Units 1B, 2, and 3*
Unit 3 Remainder	*All rural residents*
Unit 1C Remainder	*All rural residents*

Regulatory History

In Unit 3, from 1960 through 1967, the State season was Sept. 15–Oct. 14with a one-bull limit. The season was closed from 1968 until 1990, when the season reopened on Wrangell Island from 1–15 Oct., with a bag limit of one-bull with a spike-fork or 50-inch antler restriction, and a harvest ticket requirement. In 1991, the season reopened on Mitkof Island from 1–15 Oct. with a bag limit of one-bull with a spike-fork or 50-inch antler restriction, and a harvest ticket requirement. In 1993, the remainder of Unit 3 was reopened from 1–15 Oct. with a bag limit of one-bull with a spike-fork, 3-brow tine or 50-inch antler restriction; and a registration permit requirement. From 1995 to present the season dates have remained15 Sept.15 Oct.

From 1959 to present, in Unit 1B, Stikine River, the State moose hunt, season was 15 Sept.–15 Oct. with a one-bull limit. However, between 1972 and 1974 the harvest of antlerless moose was allowed by permit. Since 1993 a registration permit (RM038) has been required in the unit. Antler restrictions were implemented in 1995, defining a legal bull as having a spike-fork, at least a 50-inch antler spread, or three or more brow tines on at least one antler.

From 1959 to 1981, the Unit 1B, Thomas Bay area season was bulls-only and typically 31 days long, 15 Sept. –15 Oct. From 1980 to 1994, the moose season was from 1–15 Oct. In 1984, a spike, fork, or at least 50-inch antler harvest limit restriction was implemented as well as a registration permit. In 1993 the State antler restriction was amended to include bulls with three or more brow tines on at least one side. Since 1995 the State season has remained 15 Sept.–15 Oct.

In 1995, the Alaska Board of Game established a registration permit (RM038) hunt in Units 1B and 3 and Unit 1C south of Point Hobart.

The Alaska Board of Game authorized an any-bull drawing permit hunt in the RM038 hunt area, for the 2005 season. The change was made to allow the removal of surplus bulls and provide information on the age structure and antler characteristics of that segment of the bull population protected under the then existing antler restrictions.

Current Events

In November 2008, the Alaska Board of Game adopted a regulation to allow the harvest of moose with two brow tines on each antler within the RM038 area, to be implemented during the 2009 season. The Alaska Board of Game also suspended the any-bull drawing permit within the RM038 hunt area. The Alaska Board of Game justified this action by evaluating information regarding age and antler configuration obtained by examining moose harvested through the any-bull drawing program. State regulations do not allow the use of a proxy to participate in a moose hunt with antler restrictions.

The Council submitted a Special Action Request (WSA09-01) to amend the definition of legal moose for subsistence harvest in Units 1B and 3 to include moose with two brow tines on each antler for the 2009 season. The Federal Subsistence Board (Board) approved this request with modification to include that portion of Unit 1C south of Point Hobart, consistent with the intent of the Council and State regulations for registration hunt RM038.

The Council submitted another proposal (WP10-09) requesting a limited number of subsistence draw-permits to be issued for any-bull moose in Units 1B and 3 for this regulatory cycle. The proposal requests that a total of 5 draw-permits be issued to harvest any-bull moose in Unit 1B and 5 additional any-bull moose draw-permits be issued in Unit 3, to provide a meaningful subsistence opportunity for qualified users.

Southeast Alaska received high snowfalls during the winters of 2006–2009. Above average snowfalls were recorded in Petersburg during the winters of 2006–2007 (230.6”), 2007–2008 (149.60”) and 2008–2009 (166.50”). The average total snowfall from 1982–2009 was 91.78 inches (Western Regional Climate Center 2009a). Similarly, in Wrangell, above average snowfalls were recorded during the winters of 2006–2007 (141.2”), 2007–2008 (85.40”), and 2008–2009 (90.90”), as compared to 61.56” average total snowfall from 1948–2009 (Western Regional Climate Center 2009b). These harsh winters may have resulted in a temporary decline in the moose population, as indicated by reduced harvest in 2007 and 2008 (see harvest history section).

Biological Background

With the exception of two transplants, moose were present on all major ranges in southeast Alaska by the 1950’s (ADF&G 1990). In most cases, moose thrived and the population increased rapidly as a result of previously unexploited range. Hunting and other human use expanded as the moose populations increased. Harsh winters are thought to have caused steep declines in most populations during the early 1970’s. Moose populations gradually recovered, and by the early 1990s most populations were estimated to be at or near the carrying capacity of the habitat (ADF&G 1990).

Moose occur in isolated populations in several areas of Unit 1B (Lowell 2006a). Concentrations occur near Thomas Bay and along the Stikine River. Moose also occur around Virginia Lake, Mill Creek, and Aaron Creek. Moose immigrated to the Unit 3 islands over the past several decades from the Stikine and possibly Thomas Bay populations (Lowell 2006b). Isolated populations of moose now occur on the major islands of Unit 3, and populations and distribution may be increasing (Lowell 2006b).

Moose generally exhibit a harem mating system, in which a dominant male herds and defends a group of females, and courts females as they come into estrus (Bowyer et al. 2003, Van Ballenberghe and Miquelle 1993, Molvar and Bowyer 1994). The most dominate males mate most often (Van Ballenberghe and Miquelle 1993, 1996). Harvest regulations are generally designed to prevent low male to female ratios (Schwartz et al. 1992).

Moose in Units 1B and 3 are believed to be the andersonii subspecies (Lowell 2006a, b). Andersoni moose are thought to have different antler characteristics than the gigas subspecies of moose found elsewhere in Alaska, including; 1) smaller body and antler size; 2) less predictable antler configurations relative to age; 3) only occasionally achieve 3 brow tines; and 4) almost never achieve 50-inch spreads (Lowell 2008). Data obtained from the any-bull drawing hunts since 2005 indicate little difference in bulls with three brow tines on one side or two brow tines on both sides: the median age was five for both, average spread of bull moose with three brow tines on one side was 39 inches, and average spread of bulls with two brow tines on both sides was 40 inches (Lowell 2008).

Speculation has long existed that the current antler restrictions, which were developed for the gigas subspecies of moose found elsewhere in Alaska, are overly restrictive when applied to the smaller *andersonii* subspecies in Units 1B and 3 (Lowell 2006a, b). Moose in Units 1B and 3 do not appear to develop antler configurations that are predictable relative to age; they rarely achieve 50-inch antler spreads, and in Thomas Bay, in particular, the population appears to contain a surplus of sub-legal bulls in excess of that needed to ensure timely breeding of cows (Lowell 2006a).

Wolves are common throughout Units 1B 3, and predation by wolves on both adult and calf moose has been documented (Lowell 2006b). Substantial predation of moose calves by black bears in Unit 3 is probable as well (Lowell 2006b). The extent of predation on moose in Unit 1B is unknown, but it appears that in some years, wolves and bears (both black and brown) are responsible for low calf survival on the Stikine River. At Thomas Bay, wolves are thought to be responsible for the majority of moose predation (Lowell 2006a).

Habitat Condition and Trends

Moose habitat in Unit 3 consists primarily of old-growth spruce-hemlock forest and clearcut areas. Early succession vegetation in clearcut areas provides good moose browse. There is no information available on the quantity or quality of moose range in this unit (Lowell 2006b). Because moose appear to depend on deciduous vegetation in clearcut areas, it is unknown whether the habitat can sustain a viable moose population over the long term as existing clearcuts age and browse availability decreases (Lowell 2006b).

The Thomas Bay moose population in Unit 1B occupies an area that was logged from the late 1950s to the early 1970s; this population may decline significantly as these clearcut areas mature and forage production is reduced (Lowell 2006a). Since the initial logging, closed-canopy forests resulting from natural regeneration of second growth stands has reduced the available understory browse vegetation (Lowell 2006a).

ADF&G conducted a preliminary assessment of browse utilization in the Thomas Bay and Stikine River areas in 2003. Observations of high browse utilization rates indicate that moose may be at or above carrying capacity in Thomas Bay (Lowell 2006a). Browse utilization on the Stikine River appeared to be lower, indicating that moose are probably below carrying capacity along the river corridor (Lowell 2006a).

ADF&G implemented habitat enhancements (pre-commercial thinning and partial strip clearing of second-growth stands) for moose on State land at Thomas Bay in 1997. Hunter reports and staff observations indicate that use by moose has increased in the treated areas, as browse production increases and the slash begins to settle and decompose (Lowell 2006a).

Recent Population Trends

There is no current population estimate for moose in Unit 3 and no population assessment surveys have ever been conducted in this unit. ADF&G estimates that moose in Unit 3 are at low-to-moderate density and appear to be increasing (Lowell 2006b). Densities seem highest on Mitkof and eastern Kupreanof islands (Lowell 2006b).

Population assessment surveys in Unit 1B are conducted infrequently. In 1983, the Stikine River moose population was estimated at 300 moose and appeared to be increasing (Craighead et al. 1984, in Lowell 2006a). The population has fluctuated but was thought to be stable at a moderate density in 2005 (Lowell 2006a). An aerial moose survey of the Stikine River in February 2005 documented 134 moose on the U.S. side of the international boundary (Lowell 2006a).

The Thomas Bay population in Unit 1B was estimated at 180 moose in the late 1970s (Lowell 2006b).

Bull cow ratios are difficult to determine due to difficult survey conditions. One of the few estimates was produced during an aerial survey of the Stikine River area in 2005, which provided a ratio of 40 bulls per 100 cows. The upper boundary Stikine area is the Canadian border, which the moose cross freely (Lowell 2006b).

Harvest History

The average annual harvest in Unit 3 was 32 moose from 1995–2008. Total annual harvest in Unit 3 was lower in 2007 (33) and 2008 (34) than 2006 (43), possibly related to the recent harsh winters. During the 2009 season, a total of 64 moose were harvested, primarily due to the harvest of two brow tine on each antler moose **(Figure 1)** (Lowell 2009). The majority of hunters in Unit 3 are local residents of Petersburg, Kake, and Wrangell. No non-local residents were successful in harvesting a moose in Unit 3 from 1995–2004 (Lowell 2006b).

The average annual harvest in Unit 1B was 33 moose from 1995–2008. Total annual harvest in Unit 1B was less in 2007 (31) and 2008 (27) than 2006 (48), possibly related to the recent harsh winters During the 2009 season, a total of 43 moose were harvested, again primarily the result of the double two brow tine regulation **(Figure 1)** (Lowell 2009). The Thomas Bay moose harvest began to decline in 2000 and has remained relatively stable at low levels (Lowell 2006a).

The majority of moose hunters in Unit 1B are local residents. In 2003, for example, local residents of Wrangell and Petersburg represented 83% of successful hunters on the Stikine River, and in 2004 local residents represented 93% of successful hunters. During the 2003–2005 reporting period, 100% of successful hunters in Thomas Bay and Farragut Bay were Petersburg residents (Lowell 2006a).

During the period of 1996–2008, there were four moose harvested in Unit 1C within the RM038 permit area, with one moose harvested in 1996, 2001, 2006, and 2008. There were two moose harvested in the Unit 1C portion of hunt area RM038 during the 2009 season. A Petersburg and Sitka resident harvested the moose in 1996 and 2001, respectively, and Juneau residents were responsible for the harvest in 2006 and 2008.

Between 2003 and 2008, a total of 31 designated hunter permits were issued in Units 1 and 3, averaging 5 permits issued annually. Of the 31 designated hunter permits issued, 20 of those hunters reported that they did not hunt, 11 reported hunting, and one reported harvesting a bull moose. In 2009, there were

nine designated moose hunting permits issued for Units 1 and 3 with a reported harvest of one moose **(Table 1)**.

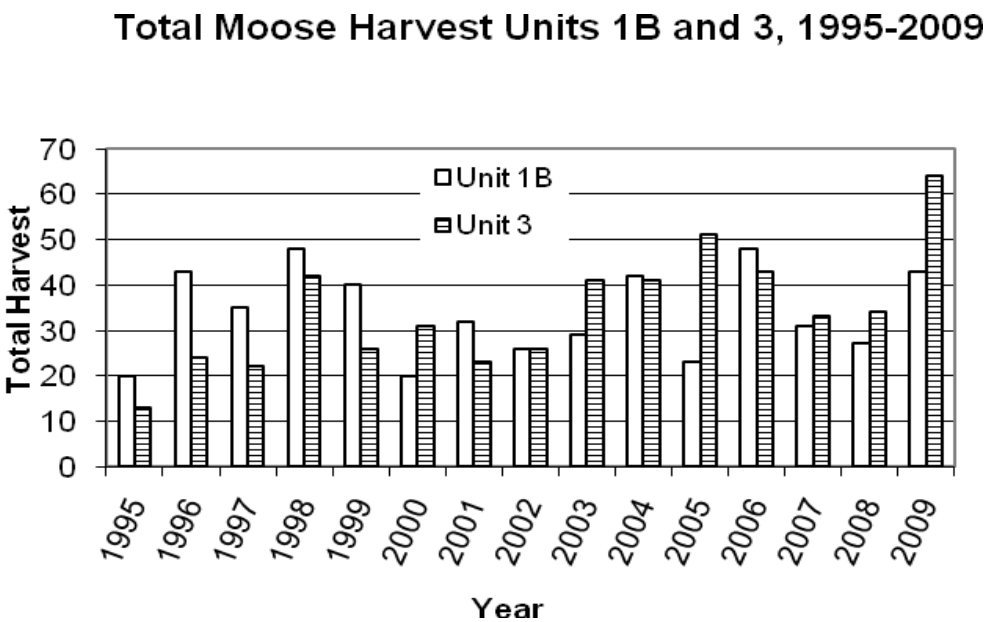


Figure 1. Total annual moose harvest for Units 1B and 3 1995-2009. Includes reported legal, illegal, and defense of life and property harvest. This figure does not include a total of six moose harvested during this time span from Unit 1C, south of Hobart Bay. Source: ADF&G Winfonet Database.

Table 1. Designated moose hunter data for Units 1 and 3, 2003-2009 (USFS unpublished data).

Year	Total # Permits	# Hunted	# Did Not Hunt	# Bulls Harvested
2003	5	2	3	0
2004	0	N/A	N/A	N/A
2005	6	2	4	0
2006	4	1	3	1
2007	6	2	4	0
2008	10	4	6	0
2009	9	5	4	1

During the 2009 season, 36 moose out of a total of 109 moose harvested in Units 1B, 3, and the portion of Unit 1C south of Point Hobart exhibited the two brow tines on each antler configuration. The total of 109 moose harvested in 2009 is significantly higher than the average of 65 moose harvested in Units 1B and 3 from 1995–2008.

Effects of the Proposal

If this proposal is adopted it would align Federal and State regulations, ensuring that Federal subsistence users have opportunities similar to those of State hunters in moose registration hunt area RM038.

Adoption of this proposal would allow a larger segment of the moose population to be available for harvest, and could result in additional harvest by Federally qualified subsistence users who use the designated hunter provision. Because of State regulations, subsistence users have no option to use a State proxy permit to harvest moose with two brow tines on each antler. Harvest of moose under the Federal designated hunter program has been minimal in Units 1 and 3 during the past five years; therefore, any additional harvest as a result of this proposal is likely to be low. The recent suspension of the any-bull drawing permits by the Alaska Board of Game will help to compensate for any additional harvest as a result of adopting this proposal, unless this is re-instated under proposal WP10-09. If this proposal is not adopted, the subsistence regulations for this area will have the unusual status of being much more restrictive than State regulations.

Although there was a negative effect by recent winter conditions, moose populations in 1B appear to be stable with areas of increasing abundance in some portions of Unit 3. Harvest was low in both units during the 2007 and 2008 seasons, likely due to harsh winters; however, harvest increased in 2009, in part due to the liberalized antler restrictions under both State and Federal regulations. As long as the State retains the new definition of legal antlers, additional harvest as a result of this proposal is expected to be low; consequently, adoption of this proposal, by itself, is not likely to cause a conservation concern.

OSM CONCLUSION

Support Proposal WP10-10.

Justification

Adoption of this proposal is necessary to ensure that Subsistence users have opportunities similar to those of State hunters. Populations appear to be stable or increasing at low to mid densities throughout Units 1B and 3 at this time. Additional harvest as a result of this proposal will be limited to moose harvested under the Federal designated hunter program and therefore expected to be low, since subsistence users are currently able to hunt under the more liberalized State regulations. Consequently, adoption of this proposal is not likely to cause a conservation concern.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-10. The Council determined that Federally-qualified users can currently harvest moose in this area under State regulations. Most of the additional harvest as a result of this proposal would be due to a very small harvest by designated hunters. However, the Council is concerned for the sustainability of this regulation and encourages the staff to monitor the harvest and the health of the moose population.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-10

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-10
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-10: This proposal would liberalize the moose antler restriction in Units 1B and 3 to allow the harvest of bulls with 2 brow tines on both antlers in addition to the existing spike-fork, 3 or more brow tines on one side, or 50-inch antler criteria.

Introduction: The antler restrictions currently in place for the RM038 moose hunt (Units 1B, 3 and southern 1C) were originally developed for Alaska-Yukon moose (*Alces alces gigas*) on the Kenai Peninsula and later applied to western Canada moose (*Alces alces andersoni*) inhabiting central southeast Panhandle. Speculation had long existed that the previous antler restrictions were overly restrictive when applied to the smaller *andersoni* subspecies inhabiting the central Panhandle region and were protecting mature bulls in excess of those needed for complete and timely breeding of cows. Unlike *gigas* moose found elsewhere in the state, *andersoni* moose in the central Panhandle region typically possess smaller antlers and seldom acquire antler spreads in excess of 50 inches. Therefore, the previous antler restrictions did not partition the harvest among various age classes as intended. Nonetheless, the antler restrictions were very effective at maintaining the harvest to within sustainable levels given the nearly 1,000 registration permits issued annually.

In fall 2004, the Alaska Board of Game implemented a limited number of any-bull moose drawing permits to gather information on the antler characteristics and age structure of bulls protected under previous antler regulation (spike or forked antler on one side, 3 or more brow tines on one antler, or 50 inch antler spread). The intent of the any-bull permits was specifically to obtain information with which to make data driven changes to the preexisting antler regulations. After three season of gathering information on bulls harvested during the any-bull drawing hunts, it was determined that the herd could likely sustain the additional harvest of bulls with 2 brow tines on both antlers, ***provided that any-bull drawing permits were eliminated.***

In fall 2008, the Alaska Board of Game liberalized the antler restrictions for moose in the RM038 hunt area to allow the additional harvest of bull moose with 2 brow tines on both antlers. As a part of the same action, the Board of Game eliminated the any-bull drawing hunts ***until such time that the impact of the new antler regulations on the herd could be evaluated.*** The Federal Subsistence Board adopted WSA09-01 on September 3, 2009, which liberalized the federal subsistence moose hunting antler restrictions to allow the harvest of bull moose with two brown tines on both antlers in Units 1B and 3 during the September 15 through October 15, 2009, federal season.

Impact on Subsistence Users: From 2004 to 2008, approximately 95 percent (range: 93-98%) of the 324 successful RM038 moose hunters were federally qualified subsistence hunters.

Opportunity Provided by State: The Unit 1B and 3 moose season is September 15 through October 15 with a bag limit of one bull with spike-fork antlers, 50 inch antler spread, antlers with 3 or more brow tines on at least one antler, or 2 brow tines on both antlers.

Comments WP10-10
April 30, 2010; Page 1 of 2

Conservation Issues: Antler restrictions are intended to maximize hunting opportunity while maintaining bull:cow ratios at acceptable levels. From 1999–2008, the RM038 moose harvest averaged 62 moose per year (range 47–83). As a result of the recently liberalized antler regulations, the fall 2009 RM038 moose harvest reached 109, the highest on record. This represents a 76% increase from the preceding 10-year average. The record harvest last fall directly resulted from the recently liberalized antler restrictions, which facilitated additional harvest of 36 2x2 brow tine bulls that would otherwise have been protected. It is unclear if increased harvest associated with the new antler regulations will be sustainable over the long-term. It remains unknown what impact the liberalized antler will have on bull:cow ratios, reproductive success, or recruitment of young into the population.

Enforcement Issues: Illegally harvested animals currently represent approximately 10% of the annual RM038 moose harvest. These illegal kills represent animals that are already being removed from the segment of the bull population the current antler restrictions are designed to protect for breeding.

Other Comments: The impacts of adoption of WP10-10 if WP10-09 is also adopted need to be carefully considered. Adoption of both WP10-09 (establish a federal subsistence permit drawing for 10 any bull moose) and WP10-10 (liberalize moose antler restrictions) may cumulatively increase bull moose harvest rates to a level which may not be sustainable under the current combined federal subsistence and State regulations.

Recommendation: Support only if WP10-09 is not adopted.

WP10-11 Executive Summary	
General Description	Proposal WP10-11 requests the recognition of customary and traditional uses of moose in Unit 1C for all rural residents of the Southeastern Alaska Management Area and the Yakutat Management Area, comprised of Units 1 through 5. No season and no harvest limit are requested. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**~~Unit 1C Berners Bay Drainages—Moose~~** *~~No Federal subsistence priority~~* **Unit 1C ~~Remainder~~—Moose** *~~All rural residents~~* ***Rural residents of Units 1, 2, 3, 4, and 5***
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-11

ISSUES

Proposal WP10-11, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests the recognition of customary and traditional uses of moose in Unit 1C for all rural residents of the Southeastern Alaska Management Area and the Yakutat Management Area, comprised of Units 1 through 5 (from here forward referred to as Southeast Alaska). No season and no harvest limit are requested.

DISCUSSION

For most of Unit 1C no Federal customary and traditional use determination has been made for moose. All rural residents are Federally qualified users. The Berners Bay drainage is an exception. In this area of Unit 1C the Federal Subsistence Board (Board) has determined that there is no Federal subsistence priority for moose and thus no Federally qualified users.

Unit 1C encompasses northern portions of the Southeast Alaska mainland, north of Port Houghton and south of Sullivan Island in Lynn Canal (see **Unit 1 Map**). Glacier Bay National Park constitutes one third of the land mass in Unit 1C. Federal public lands within the park are closed to all hunting, and wildlife management in the park is not in the Board's jurisdiction. The proponent is aware that the request will not affect the hunting regulations in the park.

There is one rural community in Unit 1C, Gustavus. A significant factor affecting hunting effort in Unit 1C is the heavily populated Juneau road system area (about 30,000 people; US Census 2009). The Juneau area is a nonrural area under Federal subsistence management regulations. Juneau area residents are not eligible to harvest fish and wildlife under Federal subsistence regulations, and the proposed determination will not apply to Juneau area residents.

Through Proposal WP10-11, the Council requests the evaluation of the uses of moose by rural residents of Units 1, 2, 3, 4, 5. Because no Federal customary and traditional use determination has been made for moose in most of Unit 1C the analysis will evaluate use by all rural residents who may harvest the resource in the management unit.

Existing Federal Regulation

Unit 1C Berners Bay Drainages—Moose

No Federal subsistence priority

Unit 1C Remainder—Moose

All rural residents

Proposed Federal Regulation

~~**Unit 1C Berners Bay Drainages—Moose**~~

~~*No Federal subsistence priority*~~

Unit 1C ~~Remainder~~—Moose

~~*All rural residents*~~ ***Rural residents of Units 1, 2, 3, 4, and 5***

Extent of Federal Public Land

Federal public lands comprise approximately 98% of Unit 1C and consist of 65% U.S. Forest Service lands (Tongass National Forest) and 35% National Park Service lands (Glacier Bay National Park). Federal public lands within the park are closed to all hunting (see **Unit 1 Map**).

Regulatory History

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the Board adopted the customary and traditional use determinations from the State. The majority of the Berners Bay drainage was in the Juneau nonrural area established by the State, and the State did not allow subsistence uses in nonrural areas. As a result, the Board established a no Federal subsistence priority for moose within Berners Bay drainages. In 2002, Proposal WP02-14 was submitted to the Federal program requesting that the Board remove the no Federal subsistence priority customary and traditional use determination for moose in the Berners Bay drainage. The Council tabled the proposal until their spring 2003 meeting when staff could present information for a customary and traditional use determination in Unit 1C (SERAC 2002). However, before the next regulatory cycle the proponent withdrew the proposal (FWS 2003). In 2007, Proposal WP08-06 was submitted to the Federal program. The Council requested that the Board defer the proposal, giving the Council the opportunity to submit its own proposal, WP10-11, requesting an evaluation of the customary and traditional uses of moose in Unit 1C by rural residents of all of Southeast Alaska, Units 1 through 5.

Currently in Southeast Alaska, customary and traditional use determinations for moose exist for Units 1, 3, and 5 only. There is no mention of moose in Federal regulations for Unit 2 and Unit 4 because these units are islands cut off from the mainland, and moose have not migrated there. Additionally, moose were scarce in Unit 3 until 1990, the year a season first opened.

Since the implementation of the Federal program in 1990, the Board has adopted two customary and traditional use determinations for moose in Southeast Alaska. One recognized uses in an area previously closed to Federal regulations, described as having no Federal subsistence priority, in Unit 1B (WP96-04). The other reduced the pool of eligible hunters from all rural residents for a portion of Unit 3 (WP96-10).

Community Characteristics

The proposal seeks to change the customary and traditional use determination in Unit 1C from all rural residents to rural residents of Units 1, 2, 3, 4, and 5 only. The population of rural residents in these management units is roughly 29,000 people living in about 39 widely dispersed communities (ADLWD 2009). **Table 1** shows the rural Southeast Alaska communities for which an effort to harvest moose in Unit 1C has been documented. This is based on ADF&G's harvest permit database 1983–2007 and Berners Bay drawing permit applications 1993–2007.

Gustavus is the only rural community in Unit 1C. Gustavus lies on the north shore of Icy Passage, and the surrounding area is called the forelands. Gustavus began as an agricultural homestead in 1914. It is surrounded by Glacier Bay National Park on three sides. Glacier Bay National Monument, part of

Table 1. The population and number of households in selected rural communities in Southeast Alaska, 2000 (U.S. Census 2009).[a]

Unit of Residence	Community	Number of People	Number of Households	Unit of Residence	Community	Number of People	Number of Households
1A	Metlakatla	1,375	469	2	Port St. Nicholas	*	*
1A	Neets Bay	*	*	2	Thorne Bay	557	219
1A	Saxman	431	127	3	Kake	710	246
1A	Yes Bay	*	*	3	Petersburg	3,224	1,240
1B	Meyers Chuck	21	9	3	Wrangell	2,308	907
1C	Excursion Inlet	10	8	4	Angoon	572	184
1C	Gustavus	429	199	4	Cube Cove	72	25
1C	Hobart Bay	3	2	4	Elfin Cove	32	15
1C	Swanson Harbor	*	*	4	Funter Bay	*	*
1D	Haines/Klukwan	2,392	991	4	Game Creek	35	10
1D	Skagway	862	401	4	Gull Cove	*	*
2	Craig	1,397	523	4	Hoonah	860	300
2	Edna Bay	49	19	4	Pelican	163	70
2	Hydaburg	382	133	4	Port Alexander	81	34
2	Kasaan	39	17	4	Sitka	8,835	3,278
2	Klawock	854	313	4	Tenakee Springs	104	59
2	Naukati Bay	135	60	4	Whitestone	116	36
2	Point Baker	35	13	5	Yakutat	808	265
2	Port Protection	63	31		TOTAL	26,954	10,203

* Information not available.

[a] Residents of the communities in this table have reported attempting to harvest moose in Unit 1C to ADF&G (see **Table 3**) or have attempted to hunt moose in Unit 1C by applying for a Berners Bay moose draw permit (see **Table 4**). Any additional communities that have applied for a moose draw permit for Gustavus forelands are not included in this table at this time.

the national park system, was established in 1925 and expanded in 1939. Hoonah Tlingit used the land and resources in the Gustavus area, as well as the lands and waters now inside the park (Schroeder and Kookesh 1990). A permanent community of primarily Hoonah Tlingit is located on Chichagof Island in Unit 4, across Icy Strait from Gustavus.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the following eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest that are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR Part 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such customary and traditional use determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limitations or seasonal restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

Moose (*dzisk'w* in Tlingit) are recent arrivals in Southeast Alaska according to historical records (Brown 2004). The documented moose migrations into Southeast Alaska have been by way of river valley corridors from the Interior through the Coast Range. By the 1950s, moose were present on all major ranges in Southeast Alaska. Prior to the migration of moose into hunting areas, moose skins and sinew were valued and traded, probably along with moose meat, by the Tlingit (Goldschmidt and Hass 1998, Kamenskii 1985 [1906], Oberg 1973). For example, Stikine Tlingit traded with Tahltan hunters in the interior. Taku Tlingit were harvesting moose prior to 1946 from upriver areas. As soon as moose became available, local hunters, both Native and non-Native, began utilizing this resource. Emmons (1991) lists among Tlingit crests that of moose for the Raven moiety, and several Houses throughout Southeast Alaska are named after moose. In Unit 1C the first documented migration of moose was in 1962. Fifteen moose calves were introduced to Berners Bay in 1958 and a supplemental release of six more calves occurred in 1960.

Since the Council review of this analysis, 2003–2007 data have become available and have been added to Tables 2 and 3. **Table 2,** based on ADF&G's hunting permit database from 1983 to 2007, shows that people from all over Alaska have attempted to harvest moose in Unit 1C (ADF&G 2009a). It is clear that most of the hunting effort (5,401 of 7,934 hunters, about 68%) and moose taken (1,302 of 1,986 moose, about 66%) were by residents of the nonrural Juneau area. The remaining 32% of hunters came from communities throughout Southeast Alaska and parts of the rest of Alaska. It is also apparent that many hunters come from nonrural communities such as Ketchikan (18 hunters) making the percentage of moose harvested by residents of rural communities small (31%). Because Saxman is counted in these data along with Ketchikan, no separate tally is available for Saxman hunters. **Table 2** also shows that in some cases significant effort has gone into hunting with little or no harvest occurring. In the case of Hoonah, for example, 228 hunting attempts over 25 years yielded 46 moose. In short, residents of rural communities in each of Units 1, 2, 3, 4, and 5 have harvested moose in Unit 1C.

The section below looks at the pattern of use in Unit 1C by communities within Southeast Alaska and by communities outside the region.

From 1983 to 2007, based on ADF&G harvest permit data shown in **Table 3**, there were 1,625 hunters from Unit 1 using Unit 1C during this period. During the same period, 11 hunters from Unit 2 communities attempted to harvest moose in Unit 1C; 117 hunters from Unit 3 communities attempted to harvest moose in Unit 1C; 533 hunters from Unit 4 communities attempted to harvest moose in Unit 1C; and 4 hunters from Unit 5 communities attempted to harvest moose in Unit 1C.

Table 2. The number of hunters attempting to harvest moose in Unit 1C and successfully harvesting moose in Unit 1C by community, cumulative 1983-2007, based on reports to ADF&G (ADF&G 2009a).

Unit of Residence	Community	Number of hunters	Number harvested	Unit of Residence	Community	Number of hunters	Number harvested
	Nonresident	151	35	4	**Game Creek**	1	0
	Residency Unknown	16	3	4	**Hoonah**	228	46
1A	Ketchikan Area	18	6	4	**Pelican**	22	1
1B	**Meyers Chuck***	3	0	4	**Port Alexander**	10	5
1C	**Excursion Inlet**	3	0	4	**Sitka**	211	64
1C	**Gustavus**	1,332	407	4	**Tenakee Springs**	14	3
1C	**Hobart Bay**	23	1	4	**Whitestone**	1	0
1C	Juneau Area	5,401	1,302	5	**Yakutat**	4	1
1C	**Swanson Harbor**	5	2	7	Seward	2	0
1D	**Haines/Klukwan**	236	45	14A	Houston	1	0
1D	**Skagway**	23	3	14A	Sutton	1	0
2	**Craig**	7	5	14A	Wasilla	1	0
2	**Edna Bay**	1	0	14C	Anchorage	34	15
2	**Hydaburg**	1	0	14C	Chugiak	2	1
2	**Naukati Bay**	1	1	14C	Eagle River	3	0
2	**Thorne Bay**	1	0	14C	Girdwood	1	0
3	**Kake**	2	0	15A	Soldotna	1	0
3	**Petersburg**	108	21	15B	Kasilof	2	0
3	**Wrangell**	7	2	15C	Homer	2	0
4	**Angoon**	19	3	15C	**Ninilchik**	3	2
4	**Elfin Cove**	25	8	20B	Fairbanks	4	1
4	**Funter Bay**	2	2	22C	**Nome**	1	1
	(*continue next column*)				TOTAL	7,934	1,986

* **Bolded** communities are rural communities in Alaska.

Two rural communities from outside Southeast Alaska, Nome and Ninilchik, account for a total of 4 hunters taking a total of 3 moose from Unit 1C in the 25 year span between 1983 and 2007 (see **Table 2**).

Concerning Berners Bay specifically, **Table 4**, based on ADF&G's harvest permit data 1993–2007, shows that people from all over Alaska have applied for drawing permits to harvest moose in the Berners Bay drainages in Unit 1C (ADF&G 2007). It is clear that most of the applicants (15,840 of 17,939 applicants, about 88%) were residents of the nonrural Juneau area. The remaining 12% of applicants came from communities throughout Southeast Alaska and parts of the rest of Alaska. The percentage of applicants from rural communities was small (9%). Residents of rural communities in each of Units 1, 2, 3, 4, and 5 have applied to harvest moose in the Berners Bay drainage. For all communities, during this 15-year period (1993–2007), on average, 1,196 people applied and 11 permits total were given out. The corresponding draw success rate was 1%.

The number of applicants from a community demonstrates that people were interested in using the area, but the actual level of interest in hunting moose in the Berners Bay drainage has not been documented.

The use of river drainages to harvest wild resources in Southeast Alaska is well documented (Davidson 1928, Goldschmidt and Haas 1998). Drainages were regularly used to hunt goat and bear, trap furbearers, and collect plants and berries. Cabins and smokehouses were often located on these routes where meat was preserved by smoking. After migrating into these areas, moose were also harvested. Berners Bay

Table 3. The number of hunters attempting to harvest moose in Unit 1C and successfully harvesting moose in Unit 1C, by rural Southeast Alaska community, cumulative 1983-2007, based on reports to ADF&G (ADF&G 2009a).

Unit of Residence	Rural Community	Number of hunters	Number harvested
1B	Meyers Chuck	3	0
1C	Excursion Inlet	3	0
1C	Gustavus	1,332	407
1C	Hobart Bay	23	1
1C	Swanson Harbor	5	2
1D	Haines	236	45
1D	Skagway	23	3
	Subtotal	**1,625**	**458**
2	Craig	7	5
2	Edna Bay	1	0
2	Hydaburg	1	0
2	Naukati Bay	1	1
2	Thorne Bay	1	0
	Subtotal	**11**	**6**
3	Kake	2	0
3	Petersburg	108	21
3	Wrangell	7	2
	Subtotal	**117**	**23**
4	Angoon	19	3
4	Elfin Cove	25	8
4	Funter Bay	2	2
4	Game Creek	1	0
4	Hoonah	228	46
4	Pelican	22	1
4	Port Alexander	10	5
4	Sitka	211	64
4	Tenakee Springs	14	3
4	Whitestone	1	0
	Subtotal	**533**	**132**
5	Yakutat	4	1
	Subtotal	**4**	**1**
	TOTAL	2,290	620

(*Daxanáak* in Tlingit) was visited by both Chilkat Tlingit, from Skagway and Haines areas, and Auk Tlingit, from Juneau and Admiralty Island areas, to harvest wild resources during the late nineteenth and early twentieth centuries. In the nineteenth century, there were two, year-round villages, seasonally occupied camps, and smokehouses located along Berners Bay drainages.

Further review of the pattern of use in Southeast Alaska indicates that, historically, moose hunting was undertaken during fall and occasionally winter or spring. Moose are generally considered to be in their prime prior to the fall rutting season. There have been open seasons for moose from the 1950s to the present, occurring in September and October. State regulations provide a hunt for residents and nonresidents across Unit 1C; however, the State moose season in the Berners Bay drainage has not

Table 4. Applicants: Berners Bay drawing permit, cumulative 1993 - 2007 (ADF&G 2007).

Unit of Residence	Community	Number of applicants	Unit of Residence	Community	Number of applicants
	Nonresident	91	4	**Pelican**	27
	Residency unknown	4	4	**Port Alexander**	4
1A	Ketchikan	113	4	**Sitka**	409
1A	**Metlakatla***	9	4	**Tenakee Springs**	68
1A	**Neets Bay**	1	4	**Whitestone logging camp**	4
1A	**Yes Bay**	1	5	**Yakutat**	2
1B	**Meyers Chuck**	11	6C	Cordova	3
1C	Auke Bay	1,083	6D	Valdez	2
1C	Douglas	1,490	7	Seward	4
1C	**Gustavus**	19	8	Kodiak	43
1C	**Hobart Bay**	6	8	Port Lions	2
1C	Juneau	13,267	11	Copper Center	1
1C	**Swanson Harbor**	10	12	Tok	3
1C	**Thorne Bay**	5	13A	Glennallen	2
1D	**Haines**	543	14A	Wasilla Palmer Area	23
1D	**Klukwan**	1	14C	Eagle River	5
1D	**Skagway**	35	14C	Anchorage	160
2	**Craig**	38	15A	Kenai	11
2	**Kasaan**	6	15A	Sterling	1
2	**Klawock**	1	15B	Soldotna	7
2	**Point Baker**	1	15C	Homer	3
2	**Port Protection**	6	19C	Kasilof	2
2	**Port St Nicholas**	1	20B	Eielson AFB	3
3	**Kake**	2	20B	Fairbanks	48
3	**Petersburg**	155	20B	North Pole	3
3	**Wrangell**	17	20B	Two Rivers	3
4	**Angoon**	13	20D	Delta Junction	6
4	**Cube Cove**	7	20E	Chicken	2
4	**Elfin Cove**	37	22D	Savoonga	2
4	**Funter Bay**	4	22C	Nome	2
4	**Gull Cove**	2	28	Barrow	15
4	**Hoonah**	90			
	(*continue next column*)			TOTAL	17,939

* **Bolded** communities are rural communities in Southeast Alaska.

opened since 2007. Federal subsistence regulations provide a hunt in Unit 1C except along Berners Bay drainages.

From 1983 through 2002, ADF&G harvest permit data (ADF&G 2009a) show that the pattern of use in Unit 1C has been primarily by boat (2,958 hunters), with some access by airplane (715 hunters) and highway vehicle (454 hunters). Use of horse/dogsled (2 hunters), ATV (44 hunters), and airboat (32 hunters) were also reported. Skiffs or small boats are used for river access to hunt moose. Moose are hunted with rifles or bow and arrow. Off road vehicles are used for transportation and hauling if feasible. In some areas, prior to logging, hunters walked inland to the lakes to get a moose and packed the moose back to their boats. After the construction of logging roads, hunters used vehicles to transport the harvest (Smythe 1988).

Southeast Alaska moose populations are associated with habitats located near streams with suitable forage of willow and dogwood. Moose prefer the valleys around the rivers and areas recently exposed

by receding glaciers. Boat access to moose habitat is particularly effective, especially for residents of communities such as Petersburg and Haines who live relatively close to Unit 1C. Traditionally, the Native peoples of Southeast Alaska were able to travel throughout the region by boat, and the tradition continues with travel by fishing boat, skiff, and other small boats.

Patterns of sharing are a common characteristic of customary and traditional uses. A tradition of distribution and exchange continues as part of the great gift-giving associated with elaborate feasts and ceremonies, and between individuals and families at the everyday level (De Laguna 1990). These traditions of sharing are observed in contemporary patterns. Communities often have designated hunters or fishers for groups of relatives or neighbors. Subsistence use household surveys conducted in Southeast Alaska indicate a pattern of sharing moose through giving and receiving (**Table 5**). For example, many residents of Southeast Alaska reported that they used moose even though no one in the community reported harvesting a moose. These households received moose from successful hunters in other communities. This illustrates cross-community sharing in Southeast Alaska.

Table 5. The estimated moose harvest in selected years in Unit 1 through Unit 5 based on household harvest surveys (ADF&G 2009b).

				% of Households that			
Community	Unit of Residence	Study Year	Estimated Harvest	Harvest	Use	Receive	Give
Metlakatla	1A	1987	0	0	4	4	0
Saxman	1A	1987	3	3	21	18	3
Meyers Chuck	1B	1987	2	10	10	0	10
Gustavus	1C	1987	0	0	14	14	0
Haines	1D	1996	68	8	67	59	11
Klukwan	1D	1996	2	7	65	61	7
Skagway	1D	1987	0	0	15	15	0
Coffman Cove	2	1998	3	4	30	28	6
Craig	2	1997	4	1	11	11	2
Edna Bay	2	1998	0	0	8	8	0
Hollis	2	1998	3	4	9	9	4
Hydaburg	2	1997	0	0	4	4	4
Hyder	2	1987	2	6	33	27	0
Kasaan	2	1998	0	0	7	7	7
Klawock	2	1997	9	3	7	5	3
Point Baker	2	1987	0	0	5	5	0
Port Protection	2	1996	0	0	8	8	0
Thorne Bay	2	1998	0	0	9	9	1
Kake	3	1996	3	1	4	3	0
Petersburg	3	1987	119	8	27	22	7
Wrangell	3	1987	64	6	43	38	6
Angoon	4	1996	0	0	3	3	0
Hoonah	4	1996	11	4	16	12	4
Pelican	4	1987	3	4	16	13	4
Sitka	4	1996	112	3	12	10	4
Tenakee Springs	4	1987	0	0	10	10	0
Yakutat	5	2000	45	17	77	65	30

Although salmon continues to be the mainstay of the economy in most of Southeast Alaska, moose is an important part of wild resource harvests and uses. Hunting for large land mammals, including moose, goats, bears, and deer, is augmented and complemented by the seasonal round of collecting fish, hunting for other terrestrial and marine mammals, collecting intertidal resources, and harvesting plants from beaches, forests, and elsewhere (ADF&G 2009b).

Effects of the Proposal

If this proposal is adopted, the pool of Federally qualified users eligible to hunt moose in Unit 1C under Federal wildlife regulations would be reduced from all rural residents of the state to rural residents of Units 1, 2, 3, 4, and 5 only. Currently there is no Federal open moose season or harvest limit in the Berners Bay drainage, and therefore no other effects are anticipated until a moose season and harvest limit are adopted.

If this proposal is not adopted, there would continue to be no Federal subsistence priority in the Berners Bay drainage and hunters would continue to hunt in the Berners Bay drainage with a State draw permit only. Additionally, all rural residents of the state would continue to be eligible to harvest moose under Federal wildlife regulations in Unit 1C.

OSM CONCLUSION

Support Proposal WP10-11.

Justification

Based on a review of the eight factors, rural residents of Units 1–5 have demonstrated customary and traditional uses of moose in areas of Unit 1C in close proximity to them or accessible to them by boat. According to ethnographic descriptions and harvest documentation supporting such a finding, rural residents of Southeast Alaska customarily and traditionally used moose from Unit 1C since moose first migrated into the area. The ability to harvest moose in the Berners Bay drainage has been restricted by the drawing permit process and, therefore, due to reasons beyond the control of the rural residents of Southeast Alaska, few harvests by them from this area have been documented. Additionally, several subunits located in Southeast Alaska are sparsely populated with no access to air or mail services. Their moose harvesting efforts were often grouped with nearby communities. In the case of Unit 1B, for example, harvest reporting was likely grouped with nearby Petersburg and Wrangell, located in Unit 3. Therefore, even though no reported harvest from Unit 1B residents was documented in the harvest data reviewed in this analysis, the rural residents of Unit 1B have been included in the customary and traditional determination for moose in Unit 1C.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-11. The Council determined that participation in the moose harvest in Unit 1C was controlled by the State system of drawing permits for Berners Bay. Residents of the Region would and could hunt in Unit 1C much like Unit 1B, 3 and 5 if the opportunity was available. Application of the eight factors clearly includes all residents of Units 1–5.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-11

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The ISC would like to point out to the Board a few items concerning this proposal:

- Currently all Alaskan rural residents can hunt in all of Unit 1C, except Berners Bay. This proposal reduces that statewide eligibility to only residents of Units 1-5.

- Table 2 shows that there has been successful harvest by residents of every management unit proposed for C&T in Unit 1C. However, Table 2 also shows very low effort by some of the communities within those management units.

- Table 1 includes additional communities in Units 1-5, not included in Table 2. Residents in those listed rural communities have made an effort to hunt moose in Unit 1C, including by applying for (but not necessarily receiving) restricted-availability drawing permits.

- A more complete search of permit databases could result in additional applicable data, some of which may be available at the Board meeting. That data would only show additional use in Unit 1C, or attempt to use, by rural Alaskans living in Units 1-5.

Comments WP10-11
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-11: The Southeast Regional Advisory Council proposed a positive finding of customary and traditional uses of moose in Unit 1C for all rural residents of Southeast Alaska and Yakutat management areas; i.e., all residents of Units 1 through 5.

Discussion: The information presented by Office of Subsistence Management in its analysis of customary and traditional uses of the moose population in Game Management Unit 1C is cursory at best. Although the federal analysis claims to only be required to demonstrate a "holistic" approach, there is insufficient information available to, in fact, demonstrate use of the moose population in Unit 1C by any of the 19 communities in Units 1-5. This lack of information does not justify a positive finding of customary and traditional use by all residents of Southeast Alaska.

The analysis presents information about Tlingit use of moose in some river valleys in the past, but very little information about current use and little information about communities that demonstrate historic use. The staff analysis seems to assume that if there are reported moose harvests by local residents (regardless of where they hunted and without demonstrating a pattern of use), then any or all of the eight factors in federal regulations would be met. This assumption is contrary to the federal regulations for customary and traditional determinations and contrary to the requirements stated by the Ninth Circuit Court of Appeals in *State v. Federal Subsistence Board*, 544 F.3d 1089 (9th Cir. 2008).

Other Concerns: The methodology of using residency location for applicants of a state drawing permit to hunt a recently transplanted, geographically isolated moose population in order to make a finding of customary and traditional use would also support making a positive finding for residents of Barrow (see page 115). This approach is not consistent with the federal priority in ANILCA Title VIII to provide for the continued customary and traditional use for subsistence by rural residents on federal land. Making a positive determination without evidence of use by specific communities of specific moose populations not only is contrary to the Federal Subsistence Board's own regulations and the Ninth Circuit Court of Appeals' instructions, under this approach most communities statewide could be found to have a positive customary and traditional finding for any and all moose populations. Based on the information presented, in fact, the Board would find a customary and traditional use of moose in Unit 1C by all residents of Alaska.

When wildlife populations cannot sustain harvests by all communities with customary and traditional findings, then the federal program must initiate an evaluation under ANILCA Section 804 to limit subsistence harvests among those federally qualified residents. Federal analyses should provide documentation of evidence of use by specific communities of specific wildlife populations at the time each customary and traditional determination is made on the record to be consistent with the regulations and also for the Federal Subsistence Board to have sufficient data to evaluate future restrictions among eligible subsistence users in 804 decisions.

Comments WP10-11
April 30, 2010; Page 1 of 2

Recommendation: Oppose. No evidence is presented as required by the federal regulations and Court to support a finding of customary and traditional use of any moose population in Unit 1C by any community or all residents of Units 1 through 5.

WP10-12 Executive Summary	
General Description	Proposal WP10-12 requests that the wolverine trapping season in Units 1–5 be changed from November 10–April 30 to November 10–February 15. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Units 1, 2, 3, 4, and 5—Wolverine (Trapping)** *No limit* *Nov. 10.–~~April 30~~* ***Feb. 15***
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support** Proposal WP10-12 **with modification**. The modified regulation would read: **Units 1, 2, 3, 4, and 5—Wolverine (Trapping)** *No limit* *Nov. 10 – ~~April 30~~* ***March 1***
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** closure date February 15. **Oppose** modification to close March 1.
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP10-12

ISSUES

Proposal WP10-12, submitted by the Southeast Alaska Subsistence Regional Advisory Council, requests that the wolverine trapping season in Units 1–5 be changed from November 10–April 30 to November 10 –February 15.

DISCUSSION

In November 2008, the Alaska Board of Game reduced the length of the wolverine trapping season in Units 1–5 effective for the 2009 season. As a consequence, the Federal subsistence trapping season, which was previously aligned with the State season, now ends 2 1/2 months later. The Alaska Board of Game shortened the wolverine trapping season to protect lactating female wolverine in the harvest after February 15. This change would decrease opportunity to harvest wolverine for subsistence users in the short term, but increase reproductive potential of the population.

Existing Federal Regulation

Units 1, 2, 3, 4, and 5—Wolverine (Trapping)

No limit	*Nov. 10.–April 30*

Proposed Federal Regulation

Units 1, 2, 3, 4, and 5—Wolverine (Trapping)

No limit	*Nov. 10.–~~April 30~~* ***Feb. 15***

Existing State Regulation

Units 1–5—Wolverine (Trapping)

No limit	*Nov. 10.–Feb. 15*

Extent of Federal Public Lands

The Southeast Region is composed of Units 1–5. The Region includes all of the Tongass National Forest, all of the Glacier Bay National Park and Preserve and the southeast portion of the Wrangell-St. Elias National Park and Preserve. Approximately 95% of the lands are Federal public lands although there is no subsistence use allowed within the Glacier Bay National Park.

Customary and Traditional Use Determinations

There has been no customary and traditional use determination made for wolverine trapping in Units 1–5. Therefore, all rural Alaskan residents are eligible to trap wolverine under Federal subsistence regulations.

Regulatory History

Prior to 1985, the regional wolverine trapping season typically extended from November 10 through February 15. In 1986 the Alaska Board of Game adopted a November 10 to April 30 trapping season to allow for incidental wolverine harvest during wolf trapping season.

On July 1, 1990, the Federal Subsistence Board (Board) adopted subsistence regulations for wolverine trapping that aligned with State regulations. The Units 1–5 wolverine subsistence trapping season remains the same as initially adopted; November 10–April 30 with no harvest limit.

During the November 2008 meeting of the Alaska Board of Game, the season was changed to November 10 to February 15; primarily to reduce the harvest of female wolverines with dependant young. February 15 was selected to align the season closing date with the closing date of the mink and marten trapping season.

Biological Background

Wolverine populations occur in Units 1, 3 and 5. Although there is a trapping season, wolverines are not known to occur in Units 2 and 4. There are no wolverine population estimates for the area, however based on harvest records; the wolverine population appears to be stable. There is not an estimate of the total number of wolverine in this region. Kits are typically born in February and March and the loss of those young may result in reduced recruitment. Recent studies have documented the importance of protecting reproductive females for successful survival of wolverine kits and health of the population (Magoun et al. 2008).

Harvest History

Harvested wolverines must be sealed within 30 days of capture. The average annual harvest of wolverines for Unit 1 has been 21 animals; in Unit 3, one animal and Unit 5, two animals; for a total annual harvest of 24 wolverines from the Southeast Region (ADF&G 2009). Females comprise approximately 40% of the total harvest, 43% of the March harvest and 42% of the April harvest. Approximately 83% of wolverines are taken between November and February with an additional 10% taken in March and 7% in April **(Table 1)**. There is no information on how many wolverines are taken incidentally in set for other species. However, it is common knowledge that in Southeast Alaska, traps specifically designed to harvest wolverine on the uplands are much more effective at capturing wolverine than traps designed to capture wolves in the intertidal areas. Trapping effort for both wolverine and wolves decreases in March and April due to the increased potential to catch black bears as they emerge from hibernation.

Effects of the Proposal

Adoption of this proposal would reduce wolverine trapping opportunities for subsistence users in February, March and April. However, harvest and effort is low during this time. The shorter season will reduce the harvest of female wolverines with dependant young after February 15. This should help with kit survival and ultimately increase recruitment of young into the population. There may be some incidental harvest of wolverine, if the season is shortened, during wolf trapping season. The potential is thought to be small due to the differences in trapping techniques employed when targeting wolves. If this proposal is adopted it would also align the Federal and State trapping seasons in the region.

Table 1. Units 1–5 wolverine harvest by month (ADF&G 2009)

Month	Average Harvest	Percent Harvest	Percent Female
November	1	2%	64%
December	5	22%	35%
January	8	35%	39%
February	6	23%	39%
March	2	10%	43%
April	2	7%	42%

OSM CONCLUSION

Support Proposal WP10-12.

Justification

Recent information has highlighted the importance to the health of wolverine populations by protecting reproductive female wolverines after the kits are born. Reduced survival of reproductive female and young-of-year wolverine may affect the size of the total population and result in fewer adult animals available for harvest.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-12 **with modification**. The Council determined that shortening the season to protect female wolverine with young is an example of a recognized principle of game management. However the Council was very concerned that the proposal is a significant restriction on subsistence uses without a demonstrated conservation issue and did not provide for a subsistence priority. An amendment to the proposal was adopted to add two weeks to the end of the State season and close the Federal season on March 1. This change would shorten the current subsistence trapping season by two months to protect female wolverine while providing for a subsistence preference.

The modified regulation would read:

Units 1, 2, 3, 4, and 5—Wolverine (Trapping)

No limit *Nov. 10 – ~~April 30~~* ***March 1***

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-12

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-12
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-12: The Southeast Regional Advisory Council proposed to shorten the wolverine trapping season in Units 1-5 by ending the season on February 15 rather than the present April 30. The Southeast Regional Advisory Council subsequently supported an amendment to the proposal to change the season closure date to March 1 instead of February 15.

Introduction: To maintain sustainable populations of wolverines in Southeast Alaska, harvest of females with dependent young should be minimized. Female wolverines do not produce young until at least three years old and successfully raise only one or two young every other year. Wolverine kits are born in February and early March and remain in the den until late May. November 2008, the Alaska Board of Game took action to shorten the wolverine trapping season to limit exposure of reproductive females with dependent young to harvest. Prior to Board action, Units 1-5 had the longest wolverine trapping season in Alaska and, in conjunction with the hunting season, wolverines were vulnerable to harvest 242 days of the year. As a result of reduced state season length, all trappers will benefit from increased survival and reproductive success of denning females and potential increase in recruitment of young into the population for future harvest.

Impact on Subsistence Users: Most wolverines in Southeast Alaska are harvested in December, January, and February. Shortening the wolverine season will not significantly impact trapping opportunity or the time period when most are trapped. While opportunity may be reduced for a relatively small number that trap wolverines during late February through April, federal subsistence trappers will benefit from the potential increase in recruitment of young into the population as a result of increased survival and reproductive success of denning females.

Opportunity Provided by State: State regulations allow wolverine trapping from November 10 through February 15 and do not limit the number of wolverines that can be harvested.

Conservation Issues: From February through March, reproducing females are most vulnerable to trapping because they travel extensively to obtain food while attempting to meet the energetic demands of lactation for their den-bound kits. Harvesting reproductive female wolverines after mid-February during this period impacts survival of young and could negatively affect recruitment into the population. Although sample sizes are small, harvest data do appear to show higher harvests of females later in the season. Closing the wolverine trapping season on February 15 will contribute to long-term, sustainable wolverine hunting and trapping opportunities.

Enforcement Issues: Closing the wolverine trapping season on February 15 will reduce confusion and risk of enforcement action by making the closing dates and sealing deadlines consistent with most other furbearers across the region. Differences in federal and state regulations that would result from adoption of the Council's proposed closure date modification of March 1 will create confusion and other enforcement difficulties.

Recommendation: Support closure date February 15. Oppose modification to close March 1.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-12. The proposed change is being requested by subsistence users in the region and aligning the Federal season with the State season dates will make the regulations easier to understand.

Wrangell-St. Elias National Park Subsistence Resource Commission

WP10-13 Executive Summary	
General Description	Proposal WP10-13 requests that the doe harvest season be closed on January 15, in that portion of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 4 — Deer** ***That portion of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet — 6 deer; however, female deer may be taken only from Sept. 15–Jan. 15 .*** *Aug. 1−Jan. 31* **Remainder -** *6 deer; however, antlerless deer may be taken only from Sept. 15–Jan. 31.* *Aug. 1–Jan. 31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-13

ISSUES

Proposal WP10-13, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the doe harvest season be closed on January 15, in that portion of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet.

DISCUSSION

Conservation concerns regarding the deer population in Unit 4 have developed over the last several years due to deep snow winters, which have resulted in increases in mortality and reduced recruitment. In response to these harsh winters, there have been several doe season closures in all or parts of Unit 4. The Council submitted this proposal to protect female deer when they are most vulnerable.

There are two other proposals requesting deer season or harvest restrictions in Unit 4. Proposal WP10-14 requests the closure of Federal public lands in a portion of Unit 4 to the harvest of female deer by non-Federally qualified users in December. Proposal WP10-21 requests that deer harvest on Federal public lands in the Northeast Chichagof Controlled Use Area (NECCUA) be restricted to residents of Hoonah.

Existing Federal Regulation

Unit 4 — Deer

6 deer; however, antlerless deer may be taken only from Sept. 15–Jan. 31. *Aug. 1−Jan. 31*

Note: Federal in-season managers closed the NECCUA doe season from Sept. 15 – Nov. 13 by Emergency Special Action (7-BD05-09). The Federal Subsistence Board closed the NECCUA doe season through January 31, 2010 (WSA09-10).

Proposed Federal Regulation

Unit 4 — Deer

That portion of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet — 6 deer; however, female deer may be taken only from Sept. 15–Jan. 15 . *Aug. 1−Jan. 31*

Remainder - *6 deer; however, antlerless deer may be taken only from Sept. 15–Jan. 31.* *Aug. 1–Jan. 31*

Existing State Regulation

Unit 4 — Deer

Chichagof Island east of Port Frederick and north of Tenakee Inlet including all drainages into Tenakee Inlet.

3 deer total:	*Bucks*	*Aug. 1 – Sept. 14*
	Any deer	*Sept. 15 – Dec. 31*
Remainder.		
4 deer total:	*Bucks*	*Aug. 1 – Sept. 14*
	Any deer	*Sept. 15 – Dec. 31*

Note: ADF&G closed the doe harvest season in the NECCUA for the entire 2009/10 season.

Extent of Federal Public Lands

Federal public lands comprise 96% of Unit 4. Almost all Federal public lands within Unit 4 are managed by the U.S. Forest Service (USFS), as part of the Tongass National Forest.

Customary and Traditional Use Determinations

Rural residents of Unit 4, Kake, Gustavus, Haines, Petersburg, Pt. Baker, Klukwan, Port Protection, Wrangell, and Yakutat have a positive customary and traditional use determination for deer in Unit 4.

Regulatory History

A discussion of the regulatory history for deer in Unit 4 can be found in the analysis for WP10-14.

Current Events

Current events pertaining to Unit 4 deer are discussed in WP10-14.

Biological Background

The biological background for Unit 4 deer pertaining to this analysis is presented in WP10-14.

Harvest History

The harvest history for Unit 4 deer is presented in the analysis for WP10-14.

Effects of the Proposal

If this proposal is adopted, it would reduce harvest opportunities for Federally qualified subsistence users by closing a large portion of Unit 4 to doe harvest in late January, shortening the season by 16 days. All January harvest is by Federally qualified subsistence users because the State deer season closes December 31st.

Adopting this proposal would have a relatively small effect on the overall doe harvest within the proposal area. The harvest data (**Table 1** and WP10-14 **Table 8**) indicate that the reported January doe harvest accounts for 97 does, or 8% of the annual doe harvest within the proposal area, which is lower than the reported harvest in each of the months of October, November, and December. Mortality is expected to be additive at current deer population levels, so any decrease in doe mortality would likely benefit recruitment and population recovery.

Table 1. Number and percentage of the average January female deer harvest by major harvest area for regulatory years 1997/98 through 2006/07 (McCoy 2009, pers. comm.). This represents the ten years prior to partial closures of female deer hunting seasons in Unit 4.

Major Hunt Area	Average January Doe Harvest 1997/08 - 2006/07	Average Annual Doe Harvest 1997/98 - 2006/07	January harvest as Percent of Average Annual Doe Harvest
X33 - Peril Strait	54	356	15%
X34 - W. Chichagof/Yakobi	8	92	9%
X35 - NE Chichagof Island	6	245	2%
X36 - S Shore Tenakee Inlet	8	56	14%
X37 - E and S Baranof Island	5	54	9%
X38 - N Admiralty Island	0	160	0%
X40 - W Admiralty Island	6	129	5%
X42 - Icy Strait	10	96	10%
TOTAL	97	1,188	8%

In the long-term, and assuming the population recovers as expected, the proposed regulation would unnecessarily limit harvest opportunity by Federally qualified subsistence users. As mentioned above, short-term restrictions on doe harvest will likely reduce the recovery time, but the current low deer population is expected to be temporary because the deer population has historically recovered within five years after a deep snow year. As the deer population recovers and approaches carrying capacity, doe harvest can increase the harvestable surplus by reducing competition between individual deer and increasing fawn production.

Adopting this proposal would reduce management flexibility compared to existing in-season management authority. Federal managers and the ADF&G have emergency action authority to quickly close all, or any portion of Unit 4, if problems become evident. Federal in-season managers cannot expand seasons without regulatory proposals. The agencies have worked with local residents and the council to implement appropriate closures during the last three seasons.

If this proposal is adopted, it could displace some Federally qualified subsistence users to other areas, such as east Admiralty Island or western Baranof Island, which could affect deer population recovery rates in those areas.

OSM CONCLUSION

Oppose Proposal WP10-13.

Justification

Although the population data suggest that any restriction of doe harvest would improve recruitment at current deer population levels, adopting this proposal would decrease the overall doe harvest by a small percent. Federal and State management agencies have worked closely with local communities and the Council since 2006 to monitor the deer population and implement temporary harvest restrictions using existing authorities. These temporary authorities provide more flexibility to meet changing population levels during the recovery period than the proposed closure would. In the long-term, this reduction in doe harvest is probably not necessary and would restrict Federally qualified subsistence user opportunities to harvest does.

LITERATURE CITED

McCoy, K. 2009. Personal communication: email containing ADF&G deer harvest survey data. ADF&G, Douglas, AK.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-13. The Council determined that this proposal would have a very small effect on the number of doe deer harvested because few deer are harvested after January 15. It is very difficult to identify bucks once they have dropped their antlers. In-season management authority has been delegated to the local land manager and that authority is adequate to provide for conservation when restricting the harvest is necessary.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-13

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-13
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-13: The Southeast Regional Advisory Council proposed to shorten the federal subsistence deer season by two weeks in that portion of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet, on January 15.

Introduction: The federal deer hunting season for Unit 4 is August 1 through January 31, and the state season is August 1 through December 31. The state season originally also ended January 31 but was reduced in 1993 to protect deer that are extremely vulnerable when winter weather concentrates them on the beaches. The federal subsistence deer hunting season in Unit 4 extends through January 31, and the federal bag limit is six deer of which antlerless deer may be taken from September 15 to January 31. Reported annual doe harvest indicates 8% occurs in January.

Impact on Subsistence Users: Federally qualified subsistence hunters would have two fewer weeks (22 weeks instead of 24 weeks) to harvest six deer but the season would be sufficiently long to acquire deer necessary for subsistence use. The deer season has had to be closed early for the last three winters due to conservation concerns for does in all or parts of Unit 4. The Council submitted this proposal to protect female deer when most vulnerable, recognizing the need to protect recruitment. If the deer population declines, then further reductions in season length or bag limit will be necessary.

Opportunity Provided by State: The state deer hunting season in this proposal area is August 1 through December 31, with a bag limit of three deer in some portions (NECCUA) and four in others (remainder of Unit 4).

Conservation Issues: Conservation concerns exist for portions of the deer populations in Unit 4 due to recent high winter kills. Although the January season did not cause this deer decline, retention of the January season could delay recovery of the deer population if hunters harvest a high percentage of the remaining deer due to their vulnerability. It is imperative that federal and state managers work in concert to keep the doe season closed in this area until the population recovers to levels that can sustain a female harvest. If this occurs, the present deer seasons can continue without any long term negative impacts so long as managers take action to curtail female deer harvest when necessary.

In 1993, the department pushed for State season change from August 1 through January 31 to August 1 through December 31. This change was based on evidence that a 5 month season was sufficient for hunters to attain deer, and the January season subjected deer to extreme levels of harvest during heavy snow years that might be detrimental to the sustainability of the deer herd. The federal season needs to also close at the end of December for the same reasons.

The department opposes any January doe season in this area for conservation reasons, whether it is two weeks or the entire month. During January, deer are more likely to be concentrated on beaches, making them vulnerable to high levels of harvest. When deer numbers

are low, the January season could prove detrimental to the rebound of deer populations at the local level.

Federal and state agencies have successfully worked closely with the Council and local residents to implement closures during the last three winters, and the deer population in this area is not expected to recover sufficiently to allow a doe harvest for several more years even with less winter snowfall. Any restriction of doe harvest would improve recruitment at current population levels. Adopting this proposal would decrease overall doe harvest by a small percent, would not affect the flexibility of the authorities to implement closures to meet changing population levels, and would minimally affect the opportunity for subsistence harvest. The department appreciates the Council's recognition at the recent meeting that few deer are harvested after January 15 and it is very difficult to identify bucks once they have dropped their antlers.

Other Comments: The cooperation between the federal and state agencies, Council, and public during the last three seasons has been the foundation for successful implementation of inseason management actions designed to conserve the deer population and initiate the rebuilding process. The department expects additional inseason doe harvest restrictions for all users will be required to facilitate rebuilding of the hardest hit portions of the deer populations. Whether or not this proposal is adopted, the department intends to continue working closely with federal agencies, the Council, and the public to ensure the conservation and rebuilding of the deer population is demonstrated through implementing sound and swift management actions.

The State has long objected to the six deer federal bag limit, (beginning with proposal #3 adopted by the Federal Subsistence Board on July 29, 1992) because the federal subsistence bag limit was based on adopting the state's season in 1990, when the deer populations in Unit 4 were at peak abundance levels. The state recommends changing the federal regulation to use the 5-month, 4-deer season and bag limit which preceded peak abundance of deer in the late 1980s. This harvest regime met local subsistence needs from the time of statehood and was liberalized only to provide increased opportunities during a peak abundance of deer.

Recommendation: Neutral. The department has changed its position to neutral with the expectation of maintaining a high level of open communication and cooperation with federal staff, the Council, and the public regarding the implementation of inseason conservation measures when required. The inseason conservation based actions taken by federal staff in response to recent hard winters has mirrored the department's management efforts to conserve and rebuild the hardest hit deer populations in Southeast Alaska. Continuation of this level of successful and professional cooperation will benefit rebuilding the deer populations as well as benefit all users over time.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-13. The Sitka AC opposes this proposal. While the proposal appears to target NE Chichagof it also includes a large area with healthy populations. NE Chichagof is closed to does already.

Sitka Fish and Game Advisory Committee

WP10-14 Executive Summary	
General Description	Proposal WP10-14 requests the closure Federal public lands in the Northeast Chichagof Controlled Use Area to the harvest of female deer by non-Federally qualified users in December. Additionally, the Council requests that the analysis evaluate the need for closing the areas draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet to the harvest of female deer by non-Federally qualified users in December. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 4 — Deer** *6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.* — *Aug. 1 – Jan. 31* ***Federal public lands of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet are closed to the taking of female deer by non-Federally qualified users Dec. 1 – 31.*** — *Aug. 1 − Jan. 31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-14

ISSUES

Proposal WP10-14, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests the closure Federal public lands in the Northeast Chichagof Controlled Use Area (NECCUA, **Map 1**) to the harvest of female deer by non-Federally qualified users in December. Additionally, the Council requests that the analysis evaluate the need for closing the areas draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet (**Map 1**) to the harvest of female deer by non-Federally qualified users in December.

DISCUSSION

The Alaska Department of Fish and Game (ADF&G) and the Federal Subsistence Board (Board) have closed the NECCUA to the harvest of female deer by all hunters for all or portions of regulatory years 2007/08, 2008/09, and 2009/10. Additionally, all of Unit 4 was closed for a portion of 2007/08. These closures were in response to a series of deep snow winters in southeast Alaska that reduced the deer population and caused concerns about the status of the population and how long it will take to recover. The Council believes that there is a conservation concern for the local deer population and, because of this, it is necessary to protect female deer when they are most vulnerable.

There are two other proposals requesting deer season or harvest restrictions in Unit 4. WP10-13 requests that the doe harvest season be closed on January 15 within a portion of Unit 4. WP10-21 requests that deer harvest on Federal public lands in the Northeast Chichagof Controlled Use Area (NECCUA) be restricted to residents of Hoonah.

Existing Federal Regulation

Unit 4 — Deer

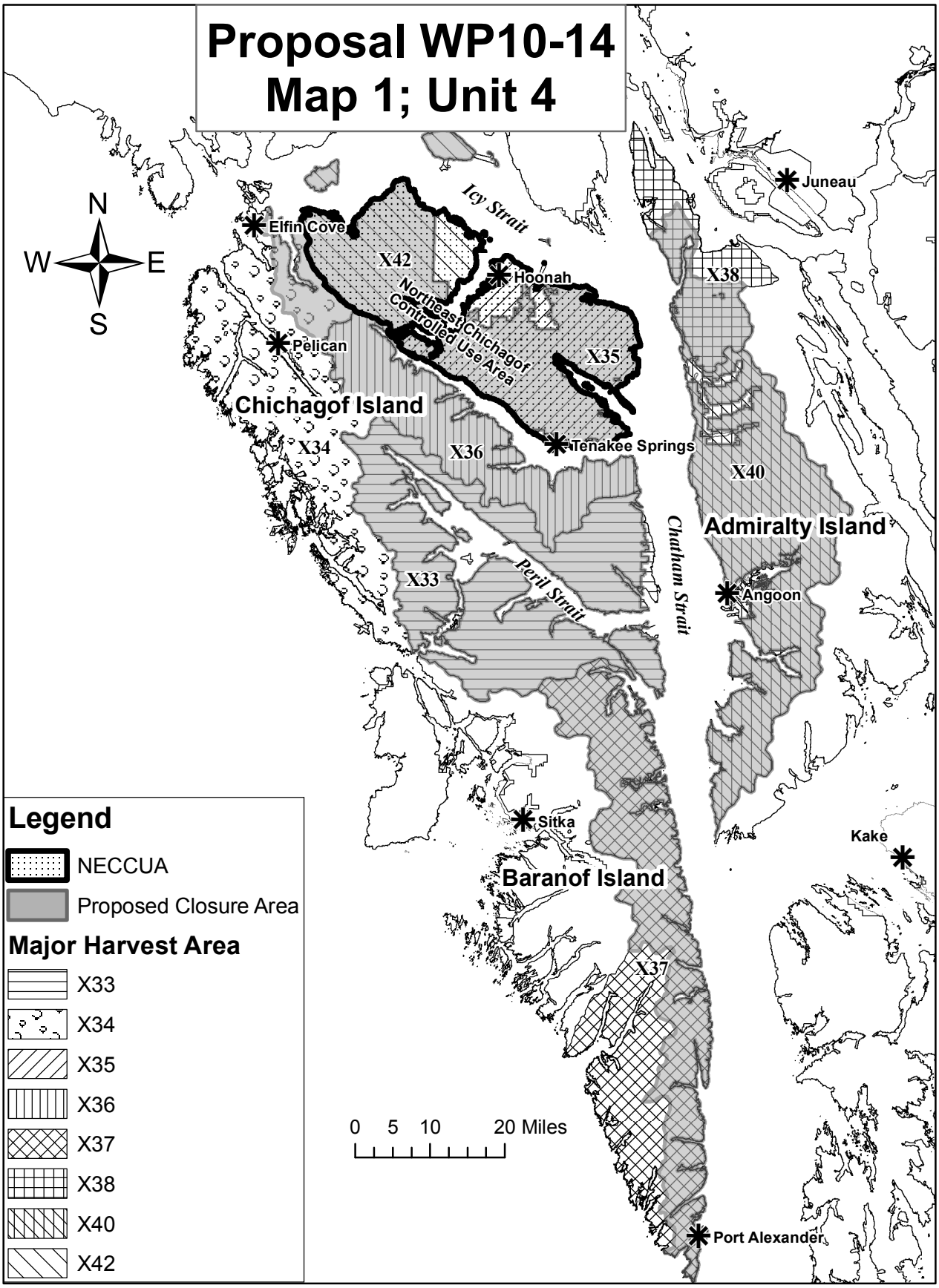
6 deer; however, antlerless deer may be taken only from Sept. 15–Jan. 31.	*Aug. 1 − Jan. 31*

Note: Federal in-season managers closed the NECCUA doe season from Sept. 15–Nov. 13, 2009 by Emergency Special Action (7-BD-05-09). The Federal Subsistence Board closed the NECCUA doe season Nov. 14, 2009–Jan. 31, 2010 (WSA09-10).

Proposed Federal Regulations

Unit 4 — Deer

6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.	*Aug. 1 – Jan. 31*
Federal public lands of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet are closed to the taking of female deer by non-Federally qualified users Dec. 1 – 31.	*Aug. 1 − Jan. 31*


Proposal WP10-14
Map 1; Unit 4
N
W
E
S
Icy Strait
Juneau
Elfin Cove
X42
Hoonah
X38
Northeast Chichagof Controlled Use Area
Pelican
X35
Chichagof Island
X34
X36
Tenakee Springs
X40
Admiralty Island
Chatham Strait
X33
Peril Strait
Angoon
Sitka
Kake
Baranof Island
X37
0 5 10 20 Miles
Port Alexander
Legend
NECCUA
Proposed Closure Area
Major Harvest Area
X33
X34
X35
X36
X37
X38
X40
X42

Existing State Regulation

Unit 4 — Deer		
Chichagof Island east of Port Frederick and north of Tenakee Inlet including all drainages into Tenakee Inlet.		
3 deer total:	*Bucks*	*Aug. 1 – Sept. 14*
	Any deer	*Sept. 15 – Dec. 31*
Remainder.		
4 deer total:	*Bucks*	*Aug. 1 – Sept. 14*
	Any deer	*Sept. 15 – Dec. 31*

Note: ADF&G closed the doe season in the NECCUA for the entire 2009/10 season.

Extent of Federal Public Lands

Federal public lands comprise 96% of Unit 4. Almost all Federal public lands within Unit 4 are managed by the U.S. Forest Service (USFS), as part of the Tongass National Forest.

Customary and Traditional Use Determinations

Rural residents of Unit 4, Kake, Gustavus, Haines, Petersburg, Pt. Baker, Klukwan, Port Protection, Wrangell, and Yakutat have a positive customary and traditional use determination for deer in Unit 4.

Regulatory History

With the exception of the 1992/93 and 1993/94 regulatory years, the Federal harvest season for deer in Unit 4 has been from August 1 to January 31, with a harvest limit of six deer (**Table 1**). Harvest of antlerless deer has been permitted from September 15 to January 31. In 1992, the northern Baranof Island area harvest limit was reduced to four deer, the season was shortened to December 31, and the area was closed to non-Federally qualified users. Also in 1992, the northeast Chichagof Island area was closed to non-Federally qualified users after November 1.

Since 1992, the State season has been from August 1 through December 31 with the antlerless deer season from September 15 through December 31 (**Table 1**). For Chichagof Island east of Port Frederick and north of Tenakee Inlet including all drainages into Tenakee Inlet, the harvest limit has been three deer while the harvest limit for the remainder of Unit 4 has been four deer. From the late 1980s through 1991, the State general season in the northeast Chichagof area had a harvest limit of three deer. However, the State subsistence season allowed six deer and the season extended from August 1 until January 31. In the remainder of Unit 4, the State general and subsistence harvest limits were six deer and the season extended from August 1 to January 31.

The State and Federal doe season closures that have been implemented in response to the deep snow winters that have depressed the Unit 4 deer population can be found in **Table 2**.

Table 1. Regulatory history for Unit 4 deer, 1985 to present.

Year	Unit	Season Type	Season	Limit	Conditions and Limitations
1985-1986	4	Subs./General	Aug 1-Dec 31	Four	All drainages on the west side on Admiralty I. from Pt. Marsden to Pt. Gardner. Antlerless deer from 9/15 to 12/31.
1985-1986	4	Subs./General	Jan 1-Jan 31	Two	By registration permit only.
1985-1986	4	Subs./General	Aug 1-Dec 31	Four	Baranof I. N and W of the divide between North Cape and Portage Pt. and Chicagof I. S of the divide between Pt. Leo and Pt. Hayes and all adjacent islands including Kruzof and Catherine islands. Antlerless deer from 10/15-12-31. One deer/day, 12/1-12/31.
1985-1986	4	Subs./General	Aug 1-Dec 31	Four	Remainder of Unit 4. Antlerless from 9/15 to 12/31.
1987	4	General	Aug 1-Jan 7	Six	Antlerless deer may be taken only from 9/15 to 1/31.
1987	4	Subsistence	Aug 1-Jan 31	Six	Antlerless deer may be taken only from 9/15 to 1/31.
1988-1990	4	Subsistence	Aug 1-Jan 31	Six	Chichagof I. E of Port Frederick and N of Tenakee Inlet including all drainages into Tenakee Inlet; antlerless deer may only be taken from Sept 15 to Jan 31.
1988-1990	4	General	Aug 1-Jan 31	Three	Chichagof I. E of Port Frederick and N of Tenakee Inlet including all drainages into Tenakee Inlet; antlerless deer may only be taken from Sept 15 to Jan 31.
1988-1990	4	Subs./General	Aug 1-Jan 31	Six	Remainder of Unit 4; antlerless deer from 9/15 to 1/31.
1991	4	Subs./General	Aug 1-Jan 31	Three	Chichagof I. E of Port Frederick and N of Tenakee Inlet including all drainages into Tenakee Inlet; antlerless deer may only be taken from Sept 15 to Jan 31.
1991	4	Subs./General	Aug 1-Jan 31	Six	Remainder of Unit 4; Antlerless deer from 9/15 to 1/31.
1990-1991	4	Fed. Subs	Aug 1-Jan 31	Six	Antlerless deer from 9/15 to 1/31.
1992-1993	4	Fed. Subs.	Aug 1-Jan 31	Six	Chichagof I. E of divide from Gull Cove to Trail R. and Upper Tenakee In., including drainages into Tenakee In. and Chatham St. N of Kook Lake; offshore islands included. Area closed to non-Federally qualified users beginning Nov 1. Antlerless deer 9/15-1/31.
1992-1993	4	Fed. Subs.	Aug 1-Dec 31	Four	Baranof I. N of North Pt./Kasnyku Bay, SW to North Cape of Whale Bay; Chichagof I. drainages into Peril St. Hoonah and Salisbury sounds E of Point Leo, and offshore islands. Area closed to non-Federally qualified users. Antlerless deer 9/15 to 12/31.
1992-1993	4	Fed. Subs.	Aug 1-Jan 31	Six	Remainder of Unit 4; antlerless deer from 9/15 to 1/31.
1992-2009	4	Subs./General	Aug 1-Dec 31	Three	Chichagof I. E of Port Frederick and N of Tenakee Inlet including all drainages into Tenakee Inlet; antlerless deer may only be taken from Sept 15 to Dec 31.
1992-2009	4	Subs./General	Aug 1-Dec 31	Four	Remainder of Unit 4; antlerless deer may only be taken from Sept 15 to Dec 31.
1994-2009	4	Fed. Subs.	Aug 1-Jan 31	Six	Antlerless deer may be taken only from 9/15 to 1/31.

Table 2. Doe season closures enacted by the Alaska Department of Fish and Game and the Federal Subsistence Board within Unit 4 since the winter of 2006-07.

Regulatory Year	Agency	Area	Closure Dates	Emergency Order / Special Action Number
2007/08	ADF&G	NECCUA [1]	November 8 - December 31, 2007	01-06-07
2007/08	ADF&G	Unit 4	December 14 - December 31, 2007	01-13-07
2007/08	FSB	NECCUA	November 27, 2007 - January 25, 2008	WSA07-05
2007/08	FSB	Unit 4	January 1 - January 31, 2008	WSA07-07
2008/09	ADF&G	NECCUA	October 1 - December 31, 2008	01-03-08
2008/09	FSB	NECCUA	October 2, 2008 - January 31, 2009	7-BD-05-08
2009/10	ADF&G	NECCUA	September 14 - December 31, 2009	01-02-09
2009/10	FSB	NECCUA	September 14 - November 13, 2009	7-BD-05-09
2009/10	FSB	NECCUA	November 14, 2009 - January 31, 2010	WSA09-10

[1] Northeast Chichagof Controlled Use Area

Current Events

The USFS held a public hearing in Hoonah in September 2009 regarding special action WSA09-10 which proposed doe harvest closures in the NECCUA for the 2009/10 season. Nobody present at the meeting spoke against the closure.

On September 10, 2009, the ADF&G closed the doe season in the NECCUA for the entire 2009 season (E.O. 01-02-09). Effective September 15, 2009, Federal in-season managers closed the Federal subsistence doe season on Federal public lands in the NECCUA through November 13, 2009 (Special Action 7-BD-05-09). In response to Special Action Request WSA09-10, submitted by the Council, the Board closed the doe season in the NECCUA through January 31.

Biological Background

Unit 4 deer population levels fluctuate, primarily influenced by winter snow depths (Olson 1979). Mooney (2007: 53) summarized the cyclic pattern of the Unit 4 deer population:

> Most winters in Unit 4 were mild from the mid 1970s through 1987–88, with high survival of fawns and adult deer. However, during the winters of 1988–89 through 1990–91, persistent snow caused significant deer mortality. During the winters of 1994–95 and 1998–99 many fawns died, but these appeared to be relatively minor setbacks. A series of mild winters beginning in 1999–2000 to the present period have allowed an apparent recovery of deer populations. Record low snowfall was recorded during the winters of 2002–06.

Deer have trouble meeting their energy needs in winter (Hanley and McKendrick 1985, Parker et al. 1999) and long periods of deep snow restrict the availability of forage, resulting in depletion of their energy reserves to the point of starvation (Olson 1979). White et al. (2009) found that forage availability (blueberry shrubs, Vaccinium spp.), even in prime old-growth forest habitat, is extremely limited when snow depths reach 12 inches. Herbaceous plants and roots provide higher energy intake than shrubs in winter but can be buried by four inches of snow (Parker et al. 1999). Record high snow levels occurred throughout much of southeast Alaska during the winter of 2006–07, and the winters of 2007-08 and 2008-09 had above average snow persisting late into the spring (Western Regional Climate Center 2009). During the winter of 2006–07, deep snow came early and stayed late. In Hoonah, for example, 70 inches

fell during November 2006 while 141 inches fell in March 2007. During the winters of 2007–08 and 2008–09, deep snow did not occur as early but lingered late into the spring (Western Regional Climate Center 2009). These severe winters have resulted in substantial winter mortality of deer (ADF&G 2009). In contrast, the winter of 2009-10 was mild with limited snow accumulation at lower elevations (National Weather Service 2010).

There has likely been limited recruitment of breeding does during the last three years because of the harsh winter conditions. Fawns have limited fat reserves and are typically some of the first animals to die from starvation during hard winters (Klein and Olson 1960, Ballard *et al*. 2001). Nutritionally stressed does produce smaller and fewer fawns (Olson 1979).

Summer nutrition is important for building body reserves for sustaining deer through the winter (Stewart *et al*. 2005). Not much information is available on summer habitat conditions because winter habitat carrying capacity is generally considered to be the limiting factor for deer in southeast Alaska. However, it has been shown that deer populations at or above habitat carrying capacity are affected by intra-specific competition for food and enter winter in reduced condition compared to deer populations below carrying capacity (Kie *et al*. 2003, Stewart *et al*. 2005). This can result in higher susceptibility to severe winters and lower productivity (Kie *et al*. 2003, Stewart *et al*. 2005).

The breeding season (or rut) peaks during late November. During the rut, bucks spend little time foraging and by late November have used up much of their fat reserve. Does typically enter December in prime condition. Prime age does (5 to 10 years) typically produce two fawns annually, so deer have a high reproductive potential (Merriam *et al.* 2008). Wolves are not present in Unit 4, which greatly reduces predation pressure during the winter, when deer are most susceptible. Thus, when mild winter conditions return, deer populations can increase quickly. At a recruitment rate around 30%, the population would double in two years (Person 2009, pers. comm.). Olson (1979) stated that deer populations are capable of recovering to previous levels within 4–5 years, based on prior deer population cycles.

Habitat

Old-growth forests are considered primary deer winter range. Habitat quality varies widely across Unit 4. **Table 3** shows estimated deer winter habitat capability remaining as of 2006 in each Wildlife Analysis Area (WAA) for the proposed closure area (USFS 2008). WAAs are subdivisions of Units that are used by ADF&G for data collection purposes, and generally include several small watersheds. This data only includes Federally managed lands of the Tongass National Forest. Thus, habitat capability on lands in ADF&G major harvest areas X35, X40, and X42 is less than indicated because of substantial timber harvest on private lands. Major harvest areas are larger Unit subdivisions used by ADF&G for analysis purposes and generally include several WAAs. Northeast Chichagof Island (X35) has had some of the most substantial habitat loss due to timber harvest and road development. In addition to the habitat changes resulting from timber harvest, a road system connected to Hoonah allows hunters easier access to interior deer habitat. Ferry system access to Hoonah allows relatively easy access for hunters from other communities as well. Some WAAs in the north Chichagof Island (X42), southeast Chichagof Island (X33, X36), and north Baranof Island (X33) areas have also had fairly substantial habitat loss to timber harvest, but the road systems are not connected to any communities. Compared to Northeast Chichagof Island (X35), no other area within the proposed closure area has a similar combination of habitat loss and road accessibility.

Based on information collected during deer-pellet and spring mortality surveys, Mooney (2008, pers. comm.) reported that prior to the winter of 2006–07, plants at low and high elevations showed signs of heavy browsing. Deer were targeting not only good, palatable species like blueberry (*Vaccinium* sp.),

Table 3. Deer habitat capability remaining in 2006 as a percentage of habitat capability prior to large scale timber harvest beginning in 1954. Data are reported by Wildlife Analysis Areas and ADF&G Major Hunt Areas within the proposed closure area. Habitat capability includes only National Forest System managed lands (USFS 2008).

Major	WAA	Land <1500' Elevation (acres)	Percent of 1954 Habitat Capability Retained, 2006
X33	3308	74187	66
X33	3309	30912	99
X33	3310	65612	93
X33	3311	48674	97
X33	3312	16080	91
X33	3313	51568	65
X33	3314	32321	88
X33	3315	34856	83
X34	3416	52726	100
X34	3417	116392	100
X34	3418	47059	100
X34	3419	37207	100
X34	3420	30546	100
X34	3421	33854	100
X35	3523	32707	81
X35	3524	7422	100
X35	3525	53779	78
X35	3526	26513	81
X35	3551	48218	83
X36	3627	21224	76
X36	3628	26066	98
X36	3629	66007	91
X36	3630	37917	99
X37	3731	42961	92
X37	3732	30652	100
X37	3733	127382	100
X37	3734	86474	100
X38	3835	29831	100
X38	3836	37757	100
X38	3837	23343	100
X40	4041	43788	90
X40	4042	44027	100
X40	4043	85729	100
X40	4044	26423	100
X40	4054	44896	100
X40	4055	44592	96
X42	4222	62605	97
X42	4252	10814	92
X42	4253	29418	85
X42	4256	18377	100

but less digestible species like copper bush. Surveys in 2008 and 2009 generally indicated that preferred browse and forbs were recovering and showed little evidence of use by deer (Mooney 2008, pers. comm.; 2009, pers. comm.). However, during spring 2009 deer heavily browsed some low elevation areas as green-up was delayed by cold spring temperatures (Mooney 2009, pers. comm.).

Recent population indices

There are no methods to directly count deer in southeast Alaska, so managers use a variety of indices and observations to monitor the deer population. The population is now considered to be at a low level (ADF&G 2009). Prior to the winter of 2006–07, deer densities were considered high, but below carrying capacity (Mooney 2007). Person *et al.* (2009) recently completed a study on Prince of Wales Island (POW, Unit 2) using DNA techniques to estimate deer populations. They estimated a 30% decrease in the population of deer on their study sites on POW between the spring of 2006 (prior to the severe winters) and spring of 2008.

ADF&G deer pellet surveys are the primary source of available population information. Relating pellet group data to population levels is difficult, however, because factors other than changes in deer population size can affect deer pellet-group density. Snowfall patterns influence the distribution and density of deer pellets from year to year, and snow persisting late into the spring at elevations below 1500 feet limits the ability to consistently survey the same elevation zones among years. In mild winters, deer can access forage in a greater variety of habitats, not all of which are surveyed. Conversely, in severe winters deep snow concentrates deer (McCoy 2008).

Figure 1 shows pellet-group survey results for all of Unit 4. Prior to the deep snow winters starting in 2006–07, pellet-group surveys indicated a slightly increasing population, reflecting a series of low snow winters (Mooney 2007). Pellet-group surveys since 2006 appear to indicate a downward trend. Trends appear similar for all subsets of transects within Unit 4, including the proposed closure area, outside the proposed closure area, within the NECCUA, and outside the NECCUA.

The USFS and ADF&G conducted deer mortality transects during the spring of 2007. Transects conducted in Unit 4 averaged 3.90 mortalities per beach mile (Dickerson 2007). During spring 2008, ADF&G documented approximately 0.17 dead deer per mile of beach (Mooney 2008, pers. comm.), while in spring 2009, ADF&G documented approximately 0.75 dead deer per mile of beach (Mooney 2009, pers. comm.). For comparison, Klein and Olson (1960) reported between 0.7 and 4.7 dead deer per mile in Unit 4 between 1952 and 1956. The 4.7 dead deer per mile occurred in the spring of 1956, which followed a deep snow winter. Olson (1979) reported one deer or less per mile in Unit 4 between 1971 and 1977, which were mild snow years.

ADF&G conducted shoreline condition assessment surveys during March 2008 around Peril Strait and Hoonah Sound and located few deer (107 observed), but the deer and beach habitat were in relatively good condition (Mooney 2008, pers. comm.). Surveys in February through April 2009 in Unit 4 located 1050 live deer, of which 325 were classified. Of these, 110 were in fair to poor condition while 215 were in good condition. Prior to the winter of 2006–07, Mooney (2007) reported that deer observed during spring condition surveys in Unit 4 in 2005 and 2006 were in good shape.

ADF&G conducted road surveys within the NECCUA during late October 2007. Survey techniques included roadside counts by vehicle during all times of day and walking spur roads with vehicle restrictions. Twenty seven deer were observed during these surveys, and all appeared to be in good physical condition. Road surveys in August 2008 detected 20 deer along 430 miles of road in the NECCUA. There was little evidence of browsing and few fresh pellets and tracks were seen. Browse

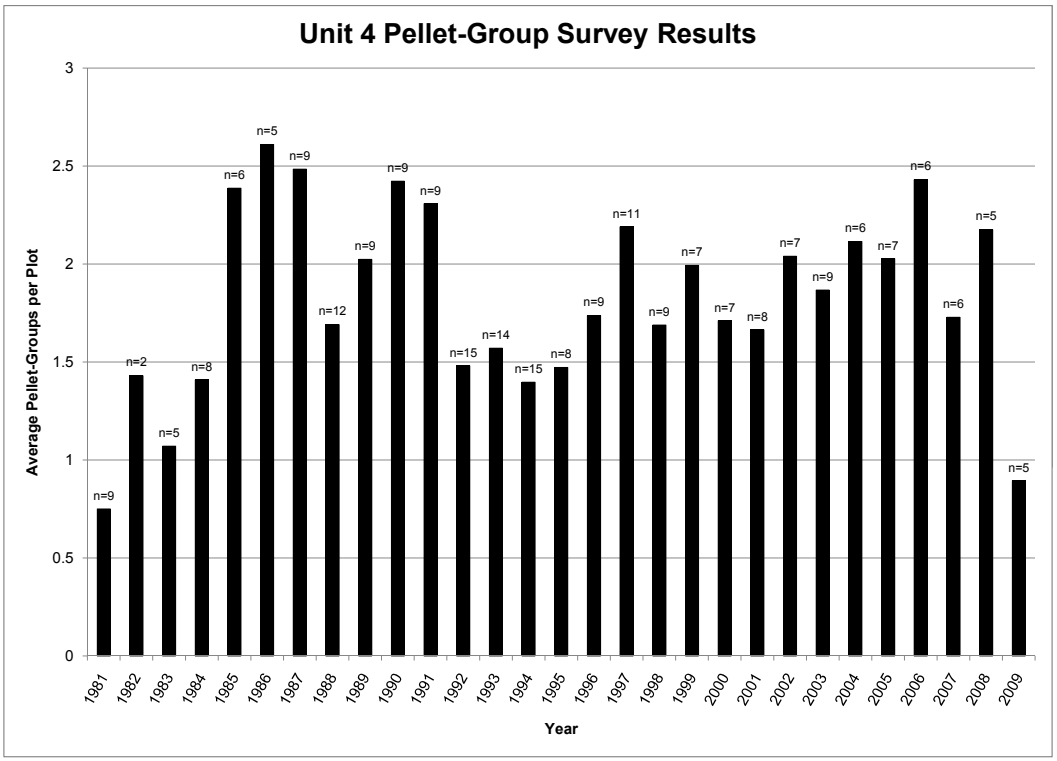


Figure 1. Average pellet-group counts for all of Unit 4 since transects began in 1981. Data labels represent the number of VCUs surveyed that year. 2009 data are preliminary (McCoy 2008, 2009).

and preferred forbs were in excellent condition overall with a remarkable recovery from just prior to the winter of 2006–07 (Mooney 2008, pers. comm.). Road surveys in 2009 located 52 does along 2180 miles of road surveyed. Deer forage again showed a lack of browsing pressure (Mooney 2009, pers. comm.).

ADF&G area biologists receive reports from hunters during the hunting season. During the 2008 season, hunters in the middle area of Unit 4 (Sitka Sound, Kruzof Island, and Peril Strait) reported fairly good success in the early deer hunt. Hoonah residents reported seeing more deer than in 2007, but the numbers were still very low. Deer harvested were in good condition (Mooney 2008, pers. comm.). In 2009, hunters reported seeing few deer, with tough hunting conditions of little snow and crunchy ground conditions. During the 2009 season, hunters reported that deer, including post-rut bucks, were in good condition with substantial fat deposition (Mooney 2009, pers. comm.).

Person *et al.*'s (2009) POW deer density estimates were used to develop deer population estimates for the proposed closure area (**Table 4**), to more quantifiably evaluate the level of population change in the context of population parameters that are useful in determining harvest strategies. While this information represents the best available information (i.e., most recent and locally relevant), there are differences between Units 2 and 4, so the numbers should be viewed as ball-park estimates. For example, differences between Person *et al.*'s (2009) study area and a specific area of Unit 4 could include, but are not limited to, vegetation productivity, wolf predation, snow levels, road access, habitat disturbances, and access to alpine (summer) habitat. The POW population estimates were corrected for Unit 4 using pellet-group ratios. The 2006 population estimate is assumed to represent the population at carrying capacity and was used to estimate maximum sustained yield (MSY). MSY is approximately 63% of carrying capacity for mule deer (Person 2001), and is the point on the population recruitment curve where the number of

Table 4. Estimated Unit 4 deer population in 2006 near carrying capacity, in 2009, and at maximum sustained yield, for major hunt areas within the proposed closure area; based on data provided by McCoy (2008, 2009), Person (2001), Person *et al*. (2009), Person (2009, pers. comm.). Majors composing the Northeast Chichagof Controlled Use Area are highlighted.

Major Hunt Area	Acres below 1500 feet Elevation	2006 Population Estimate [1]	2009 Population Estimate [2]	Estimated Population at Maximum Sustained Yield [3]
X33 - Peril Strait	354,210	33,200	6,700	21,000
X34 - W. Chichagof/Yakobi	317,784	29,800	6,000	18,800
X35 - NE Chichagof Island	168,639	15,800	3,200	10,000
X36 - S Shore Tenakee Inlet	151,214	14,200	2,900	8,900
X37 - E and S Baranof Island	287,469	26,900	5,500	16,900
X38 - N Admiralty Island	90,931	8,500	1,700	5,400
X40 - W Admiralty Island	289,455	27,100	5,500	17,100
X42 - Icy Strait	121,214	11,400	2,300	7,200

1 - The 2006 population estimates are based on the 2006 POW deer population estimate (12.1 deer/km2) corrected with a ratio of the 2006 Unit 4 average pellet-group density (2.43 pellet-groups per plot) to the 2006 Unit 2 average pellet-group density (1.27 pellet-groups per plot).

2 - The 2009 population estimates are based on the 2008 POW deer population estimate (8.4 deer/km2) corrected with a ratio of the 2009 Unit 4 average pellet-group density (0.89 pellet-groups per plot) to the 2008 Unit 2 average pellet-group density (1.59 pellet-groups per plot).

3 - MSY = 2006 population estimate * 0.63

recruits is maximized by removing the same number of individuals as would normally be added to the population. These estimates suggest that the deer population in the proposal area has declined below MSY. In populations below MSY, mortality is thought to be additive (e.g., deer not harvested would survive) and harvesting females lowers recruitment (Ballard *et al*. 2001, Kie *et al*. 2003). As populations grow beyond MSY and approach carrying capacity, mortality becomes compensatory (e.g., harvested deer would not survive) and intraspecific competition results in lower productivity (Ballard *et al*. 2001, Kie *et al*. 2003).

Harvest History

Harvest data reported below are provided by ADF&G (McCoy 2009, pers. comm.) and are based on a sample of hunters. In general, 35% of hunters from each community are sampled each year and while response rates vary by community, the overall response rate across communities is approximately 60% each year. Harvest numbers are extrapolated using expansion factors that are calculated as the total number of harvest tickets issued to a community divided by the total number of survey responses for that community. If response is low from a community, an individual hunter may have a disproportionate effect on the data. As confidence intervals are not available for these data, exact numbers should be considered as estimates and used with caution. Trends, however, especially at larger scales, should be fairly accurate.

Deer harvest in Unit 4 in 2007/08 (1,858 ± 236) was down significantly from 2006/07 (7,746 ± 594) and is the lowest harvest for Unit 4 in over a decade (McCoy *et al*. undated). Prior to 2007/08, Unit 4 deer harvest was mostly stable, fluctuating around 7,000 deer. **Table 5** illustrates how 2007/08 hunter success and effort compare to the average for the previous ten years for the major harvest areas in the proposed closure area. Decreased harvest per unit effort indicates a lower deer population.

Table 5. Measures of hunter effort and success for the 2007/08 season compared to the average for the prior ten years for each major harvest area in the proposed closure area (McCoy 2009, pers. comm.). Majors composing the Northeast Chichagof Controlled Use Area are highlighted.

	Deer per Hunter			Days per Deer			Total Days Hunted			Total Deer Harvest		
Major Hunt Area	**97-06 Avg [1]**	**2007**	**% Change**	**97-06 Avg**	**2007**	**% Change**	**97-06 Avg**	**2007**	**% Change**	**97-06 Avg**	**2007**	**% Change**
X33 - Peril Strait	3.1	0.9	-71%	1.8	5.7	320%	1,979	1,054	-47%	1,195	185	-85%
X34 - W. Chichagof/Yakobi	2.5	1.0	-60%	2.2	4.1	189%	964	497	-48%	466	122	-74%
X35 - NE Chichagof Island	2.2	0.7	-68%	2.7	6.7	249%	2,458	1,019	-59%	922	151	-84%
X36 - S Shore Tenakee Inlet	2.2	0.9	-58%	2.7	6.1	230%	580	452	-22%	232	74	-68%
X37 - E and S Baranof Island	2.9	3.3	16%	1.8	2.9	164%	467	525	12%	289	182	-37%
X38 - N Admiralty Island	1.3	0.3	-77%	3.3	13.5	405%	1,598	942	-41%	493	70	-86%
X40 - W Admiralty Island	2.2	0.9	-59%	2.4	5.1	209%	1,024	729	-29%	412	142	-66%
X42 - Icy Strait	2.0	0.4	-80%	2.2	13.5	603%	745	406	-46%	341	30	-91%

1 Average for regulatory years 1997/98 through 2006/07.

Table 6. Number and percentage of the average annual female deer harvest by major hunt area and hunters' Federal qualifications for regulatory years 1997/98 through 2006/07 (McCoy 2009, pers. comm.). This represents the ten years prior to partial closures of female deer hunting seasons in Unit 4. Majors composing the Northeast Chichagof Controlled Use Area are highlighted.

Major Hunt Area	**Average Annual Doe Harvest 1997/98 - 2006/07**	**Average Annual Doe Harvest by Federally Qualified Users**	**Percent Doe Harvest by Federally Qualified Users**	**Average Annual Doe Harvest by non-Federally Qualified Users**	**Percent Doe Harvest by non-Federally Qualified Users**
X33 - Peril Strait	356	321	90%	35	10%
X34 - W. Chichagof/Yakobi	92	61	66%	31	34%
X35 - NE Chichagof Island	245	153	62%	92	38%
X36 - S Shore Tenakee Inlet	56	27	48%	29	52%
X37 - E and S Baranof Island	54	48	89%	6	11%
X38 - N Admiralty Island	160	6	4%	154	96%
X40 - W Admiralty Island	129	51	40%	78	60%
X42 - Icy Strait	96	72	75%	24	25%
TOTAL	1,188	739	62%	449	38%

Table 7. Number and percentage of the average December female deer harvest by major hunt area and hunters' Federal qualifications for regulatory years 1997/98 through 2006/07 (McCoy 2009, pers. comm.). This represents the ten years prior to partial closures of female deer hunting seasons in Unit 4. Majors composing the Northeast Chichagof Controlled Use Area are highlighted. Rows may not total correctly due to rounding errors.

Major Hunt Area	Average December Doe Harvest 1997/08 - 2006/07	Average December Doe Harvest by Federally Qualified Users	Percent December Doe Harvest by Federally Qualified Users	Average December Doe Harvest by non-Federally Qualified Users	Percent December Doe Harvest by non-Federally Qualified Users
X33 - Peril Strait	103	93	90%	10	10%
X34 - W. Chichagof/Yakobi	23	15	65%	9	39%
X35 - NE Chichagof Island	29	14	48%	15	52%
X36 - S Shore Tenakee Inlet	11	6	55%	5	45%
X37 - E and S Baranof Island	23	22	96%	1	4%
X38 - N Admiralty Island	45	1	2%	44	98%
X40 - W Admiralty Island	18	12	67%	6	33%
X42 - Icy Strait	22	14	64%	8	36%
TOTAL	274	177	65%	98	36%

Table 6 shows the average annual doe harvest for each major harvest area in the proposed closure area by Federal eligibility of the hunters from regulatory years 1997/98 through 2006/07. Regulatory year 2007/08 data were excluded from this portion of the analysis because of partial closure of the doe harvest season. All harvest by residents of communities with a positive customary and traditional use determination is considered Federal subsistence harvest; however, there is no way to determine if this harvest occurred on Federally managed lands and under Federal subsistence harvest regulations. These data indicate that Federally qualified hunters dominate the harvest in the Peril Strait (X33) and East and South Baranof Island (X37) major harvest areas. Non-Federally qualified hunters dominate harvest in the North Admiralty Island (X38) major harvest area. **Table 7** shows the average December doe harvest. December harvest patterns generally reflect annual harvest patterns, although some of the late season effort by non-Federally qualified hunters appears to shift from West Admiralty to the NECCUA.

Table 8 shows the chronology of the doe harvest by major harvest area for regulatory years 1997/98 through 2006/07. December generally ranks as the second or third highest for doe harvest behind November and October.

Table 8. Female deer harvest by month, as a percentage of the total female deer harvest for major hunt areas in the proposed closure area for regulatory years 1997/08 through 2006/07 (McCoy 2009, pers. comm.). Majors composing the Northeast Chichagof Controlled Use Area are highlighted. Major Hunt Areas do not total 100% because some harvest reports did not include harvest date information.

Major Hunt Area	August	September	October	November	December	January
X33 - Peril Strait	0%	7%	12%	32%	29%	15%
X34 - W. Chichagof/Yakobi	0%	9%	12%	41%	25%	8%
X35 - NE Chichagof Island	3%	15%	24%	31%	12%	2%
X36 - S Shore Tenakee Inlet	0%	4%	19%	40%	20%	13%
X37 - E and S Baranof Island	2%	3%	12%	30%	42%	8%
X38 - N Admiralty Island	0%	7%	22%	40%	28%	0%
X40 - W Admiralty Island	2%	9%	25%	43%	14%	4%
X42 - Icy Strait	1%	5%	27%	26%	23%	11%

Non-Federally qualified hunters reported taking an estimated average of 98 does per year within the proposed closure area during December (**Table 7**), which represents approximately 8% of the reported annual doe harvest for the proposed closure area. Approximately half of the non-Federally qualified December doe harvest total occurs on north Admiralty Island, which is not fully included in the proposed closure area. Non-Federally qualified hunters take an estimated average of 23 does per year within the NECCUA during December, which is approximately 7% of the annual doe harvest for the NECCUA.

Table 9 shows the 2009 estimated population level and harvest pressure indicators for the proposed closure area. Harvest rates and hunter pressure is highest in major harvest areas X35 (Northeast Chichagof) and X38 (North Admiralty), but the estimated harvest rates are below the 27% allowable harvest rate estimated by McCullough (2001) for mule deer. It is also below the 8%–14% combined doe harvest and wolf predation rate on the doe population for which Person (2004) documented a 7% per year population increase on POW. However, the POW deer population increase occurred with a 30%–35% recruitment rate. The recruitment rate for Unit 4 is unknown, but was likely well below 30% the last 3 years.

Supporting Information Summary

The available information clearly shows that the deer population in Unit 4 has declined since 2006. This is a recurring cycle for deer in southeast Alaska after deep snow winters. Deer populations can recover

Table 9. Estimated population and harvest pressure indicators by major hunt area for the proposed closure area (McCoy 2008, 2009, 2009, pers. comm.; Person *et al*. 2009). Majors composing the Northeast Chichagof Controlled Use Area are highlighted.

Major Hunt Area	2009 Population Estimate [1]	2007 Total Deer Harvest	2007 Harvest - Percent of Population	97-07 Average Annual Hunter Days / mi^2
X33 - Peril Strait	6,700	185	3%	3.6
X34 - W. Chichagof/Yakobi	6,000	122	2%	1.9
X35 - NE Chichagof Island	3,200	151	5%	9.3
X36 - S Shore Tenakee Inlet	2,900	74	3%	2.5
X37 - E and S Baranof Island	5,500	182	3%	1.0
X38 - N Admiralty Island	1,700	70	4%	11.2
X40 - W Admiralty Island	5,500	142	3%	2.3
X42 - Icy Strait	2,300	30	1%	3.9

1 See Table 4 for calculation information.

quickly with mild winters; historically within about five years. Surviving deer appear to be in good shape and despite late snows the last two springs, winter mortality appears to be substantially reduced compared to the winter of 2006–07 (Mooney 2008 and 2009, pers. comm.). The available data suggest that the Unit 4 deer population is not depressed to the point that all harvest should be eliminated, but at current estimated population levels, harvest of does will reduce recruitment and extend the length of time before the deer population recovers to near 2006 levels.

The NECCUA has a road system connected to a community which provides easy accessibility to interior habitat in addition to fairly extensive winter habitat reduction from timber harvest. This is a unique situation in Unit 4 that creates additional concerns specific to that area. Hunter reports, changes in harvest success parameters, and harvest pressure information suggest the NECCUA deer population may have been particularly hard hit. In December, non-Federally qualified users harvest approximately 45% (23 does) of the does harvested in the NECCUA.

Effects of the Proposal

Adopting this proposal would likely reduce the doe harvest in the proposed closure area. At current deer population levels, protecting these does would likely increase recruitment. The estimated number of does that would be protected is a small portion of the overall doe harvest.

In the long-term, and assuming the population recovers as expected, the proposed regulation could reduce deep population productivity. As the deer population recovers and approaches carrying capacity, doe harvest can increase the harvestable surplus by reducing competition between individual deer and increasing fawn production.

Adopting this proposal would reduce management flexibility compared to existing in-season management authority. Federal managers and the ADF&G have emergency action authority to quickly close all, or any portion of Unit 4, if problems become evident. Federal in-season managers cannot expand seasons or provide larger harvest limits without regulatory proposals, which are on a two year cycle. The agencies have worked with local residents and the Council to implement appropriate closures during the last three seasons. History suggests the decline in the deer population will be temporary and the population should recover to levels sufficient for doe harvest in about three to five years assuming more typical winter snowfall. For example, a similar series of severe winters occurred in the late 1980s which resulted in the Board adopting restrictive regulations for the 1992/93 and 1993/94 seasons. The original Federal regulations were restored for the 1994/95 season.

If this proposal is adopted, opportunities for non-Federally qualified users to harvest does in the proposed closure area would be reduced. The Federal Subsistence Board has established a closure policy, based on ANILCA, which includes conditions that must be met in order to exclude non-Federally qualified users. The two conditions that apply in the situation covered by this proposal include: 1) when a population is not sufficient to provide for both Federally qualified subsistence users and other users, and 2) when necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users. The population appears to be large enough to support harvest of bucks by all users. Current harvest rates appear to be within acceptable limits for population growth, assuming more usual winter weather returns. It does not appear that adopting this proposal is necessary to ensure the continuation of subsistence uses. Adopting this proposal would decrease competition somewhat by eliminating doe harvest by non-Federally qualified users during December in a portion of unit 4. Non-Federally qualified users would still be able to harvest bucks in the area during December. Whether it would increase harvest efficiency or the number of deer harvested by Federally qualified subsistence users is unknown.

Adopting this proposal could displace some non-Federally qualified users to other areas, such as east Admiralty Island or western Baranof Island, which could affect the recovery rates in those areas.

OSM CONCLUSION

Oppose Proposal WP10-14.

Justification

Although the population data indicate that any restriction of doe harvest would improve recruitment, adopting this proposal would decrease the overall doe harvest by a small amount. History suggests that the population is likely to recover within about five years, and reduced doe harvest may decrease deer productivity and unnecessarily restrict harvest opportunities. Federal and State management agencies have worked closely with local communities and the Council since 2006 to monitor the deer population and implement temporary harvest restrictions using existing authorities. These temporary authorities provide more flexibility to meet changing population levels during the recovery period than the proposed closure would.

The proposed exclusion of non-Federally qualified users does not meet the conditions set by the Federal Subsistence Board for closing Federal public lands to non-Federally qualified users. Existing population and harvest information indicate that the deer population in the proposed closure area is sufficient to provide for continued harvest of male deer by both Federally qualified and non-Federally qualified users. Adopting this proposal would not necessarily improve deer harvest for Federally qualified subsistence users.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-14. The Council is very concerned about the deer population and reduced harvest in the Northeast Chichagof Controlled Use Area. Discussions indicate very low deer numbers at present but a potential to rebound in five years with mild winter conditions. Restricting the harvest of doe deer will encourage rebuilding of the population, however, the harvest of doe deer by non-qualified hunters during December is very small. The Council anticipates that in-season management authority will provide for conservation of deer by restricting harvests when conditions warrant.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-14

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-14
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-14: The Southeast Regional Advisory Council proposal would close a portion of federal public lands to harvest of female deer by non-federally qualified users during December in the Northeast Chichagof Controlled Use Area (NECCUA). If a broader conservation concern exists, the Council proposed to expand the closure to include all of Unit 4 draining into Chatham Strait, Peril Strait, and Icy Strait, including Tenakee Inlet.

Introduction: The federal deer hunting season for Unit 4 is August 1 through January 31 and is one month longer than the August 1 though December 31 State season. The federal and state regulations allow taking of female deer after September 15, but, due to severe winter weather and resulting mortality, federal and State seasons for female deer were shortened or closed for portions of Unit 4 during 2007, 2008, and 2009. In 2009 the female deer season in the NECCUA was closed prior to opening under both federal subsistence and State hunting regulation due to low deer numbers. During 2007 through 2009, the NECCUA has been frequently closed due to extreme levels of winter mortality in this area. Other portions of Unit 4 were included in the closures in 2007, when the second year of heavy snows resulted in closing of female deer season for all of Unit 4 under federal subsistence and State regulations in early December. The department determined this widespread closure was necessary in 2007 to protect female deer in all of these areas to allow deer populations to rebound.

The department did not support Unit-wide closures on harvest of does in 2008 or 2009 because concern focused on NECCUA where deer numbers appear to be more heavily impacted by recent winters than other areas. The situation for deer in NECCUA is unique due to easy hunting access via logging roads, extreme snow conditions during the past three winters, and compromised winter habitat due to clear cutting of mature forests. These three factors make the deer population in this area especially vulnerable and caused federal and State managers to focus management actions on specific areas (e.g., NECCUA) only, rather than taking an overly restrictive and unnecessary broad scale approach.

Impact on Subsistence Users: The department supports a December closure to the harvest of female deer <u>by all user groups in specific areas</u> hit hardest by snow conditions with significantly increased mortality rates. For example, the department fully supported closure of the NECCUA to the harvest of female deer by all user groups during a portion of the 2008 season and again in 2009 to rebuild that population. The department would support similar closures of <u>specific areas</u> to harvest of female deer by all user groups until deer populations rebound if necessary for conservation purposes.

Opportunity Provided by State: The deer hunting season under State regulation in this area (NECCUA) is August 1 through December 31, with a bag limit of three deer. The remainder of Unit 4 has a bag limit of four deer during the same season dates. The department closed harvest of doe deer in NECCUA for the 2009/2010 hunting season under Emergency Order (01-02-09).

Conservation Issues: At the February 2009 Southeast Regional Advisory Council meeting, federal and department wildlife biologists agreed that deer populations have declined

dramatically in portions of GMU 4 due to recent heavy winter mortalities, likely caused by extreme snow falls during the last few winters. Heavy snows significantly impacted some deer populations, especially in areas where extensive habitat alterations reduced or eliminated winter habitat necessary to improve deer population overwintering survival rates. Adoption of this proposal would result in an additional conservation issue by allowing harvest of female deer by federally qualified users in an area hard hit by three consecutive winters.

The department opposes this proposal for several reasons. Conservation concerns that necessitated closing of the female deer season are due mostly to winter weather conditions and resulting deer mortality. **In portions of GMU 4, taking of female deer by all users** should be curtailed until the populations recover. There is no substantial evidence of a conservation concern for deer populations in all of GMU 4 and no evidence that closure is necessary for the entire unit to ensure continuation of subsistence uses by federally-qualified subsistence users on all of the identified federal public lands in GMU 4. Adoption of this proposal in areas that do not have conservation concerns would also result in unnecessary restrictions on non-federally qualified users, contrary to Section 815 of ANILCA.

Enforcement Issues: Differences in federal and State regulations resulting from adoption of this proposal create confusion and enforcement issues in areas with mixed land ownership.

Other Comments: The intent of this proposal was discussed at the October 6, 2009, Southeast Regional Advisory Council meeting in Yakutat. At the meeting, the federal and State wildlife managers stated the harvest of any female deer by any user group should be prohibited until the NECCUA deer population rebounds.

The Department has concerns with the information provided in Tables 4 and 9 of the federal staff analysis. The deer population estimates and the methodology to obtain such that are included or described in these tables have *not* been peer reviewed for validity or substance, and the Department cannot comment on the accuracy of the estimates at this time. A precursory evaluation of the methodology for generating the estimates as identified in the federal analysis leads the department to recommend the data not be utilized until further scientific review is completed.

Recommendation: Oppose. The proposed closure does not meet the criteria of the closure policy adopted by the Federal Subsistence Board.

WP10-15 Executive Summary	
General Description	Proposal WP10-15 requests that the Federal subsistence goat hunting season in Unit 5A, that area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord, be closed. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 5A—Goat** *Unit 5A, That area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord – ~~1 goat by Federal Registration Permit. The U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the harvest quota prior to the season. A minimum of two goats in the harvest quota will be reserved for Federally qualified subsistence users. The season will be closed by local announcement when the quota has been taken~~.* ~~*Aug. 1 – Jan. 3*~~ ***No Federal open season*** ~~*The harvest quota and season announcements will be made in consultation with the National Park Service and local residents.*~~
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-15

ISSUES

Proposal WP10-15, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the Federal subsistence goat hunting season in Unit 5A, that area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord, be closed.

DISCUSSION

The proponents state that there is a conservation concern for goats in this area, and that it is necessary to close the hunting season to protect the goat population. The goat population appears to have begun declining in this portion of Unit 5A, commonly referred to as the Nunatak Bench, around the year 2000, and has remained at low levels since the early 2000s. The Federal subsistence season has been closed by Federal managers annually since 2001. Following an emergency closure in 2001, the State eliminated this area from the State registration permit (RG170) area.

Regulatory proposal, WP10-22 was also submitted by the Council, and it requests standardization of the in-season management of fish and wildlife in the Southeast region by removing specific references to in-season management authority in the Southeastern Alaska Area wildlife regulations. If this proposal is approved by the Federal Subsistence Board, in-season management authority to close, reopen or adjust Federal Subsistence seasons and to set harvest and possession limits for wildlife would be delegated by letter from the Board to a uniform set of fish and wildlife in-season managers.

Existing Federal Regulation

Unit 5A—Goat	
Unit 5A, That area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord –1 goat by Federal Registration Permit. The U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the harvest quota prior to the season. A minimum of two goats in the harvest quota will be reserved for Federally qualified subsistence users. The season will be closed by local announcement when the quota has been taken.	*Aug. 1 – Jan. 31* *The harvest quota and season announcements will be made in consultation with the National Park Service and local residents.*

Note: The Federal Subsistence Board closed the 2009-2010 goat season in the affected area (Wildlife Special Action WSA09-10).

Proposed Federal Regulation

Unit 5A—Goat	
Unit 5A, That area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord – ~~1 goat by Federal Registration Permit. The U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the harvest quota prior to the season. A minimum of two goats in the harvest quota will be reserved for Federally qualified subsistence users. The season will be closed by local announcement when the quota has been taken~~.	*~~Aug. 1 – Jan. 3~~* ***No Federal open season*** *~~The harvest quota and season announcements will be made in consultation with the National Park Service and local residents.~~*

Existing State Regulation

Unit 5A—Goat	
Unit 5A, That area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord	*No open season*

Extent of Federal Public Lands

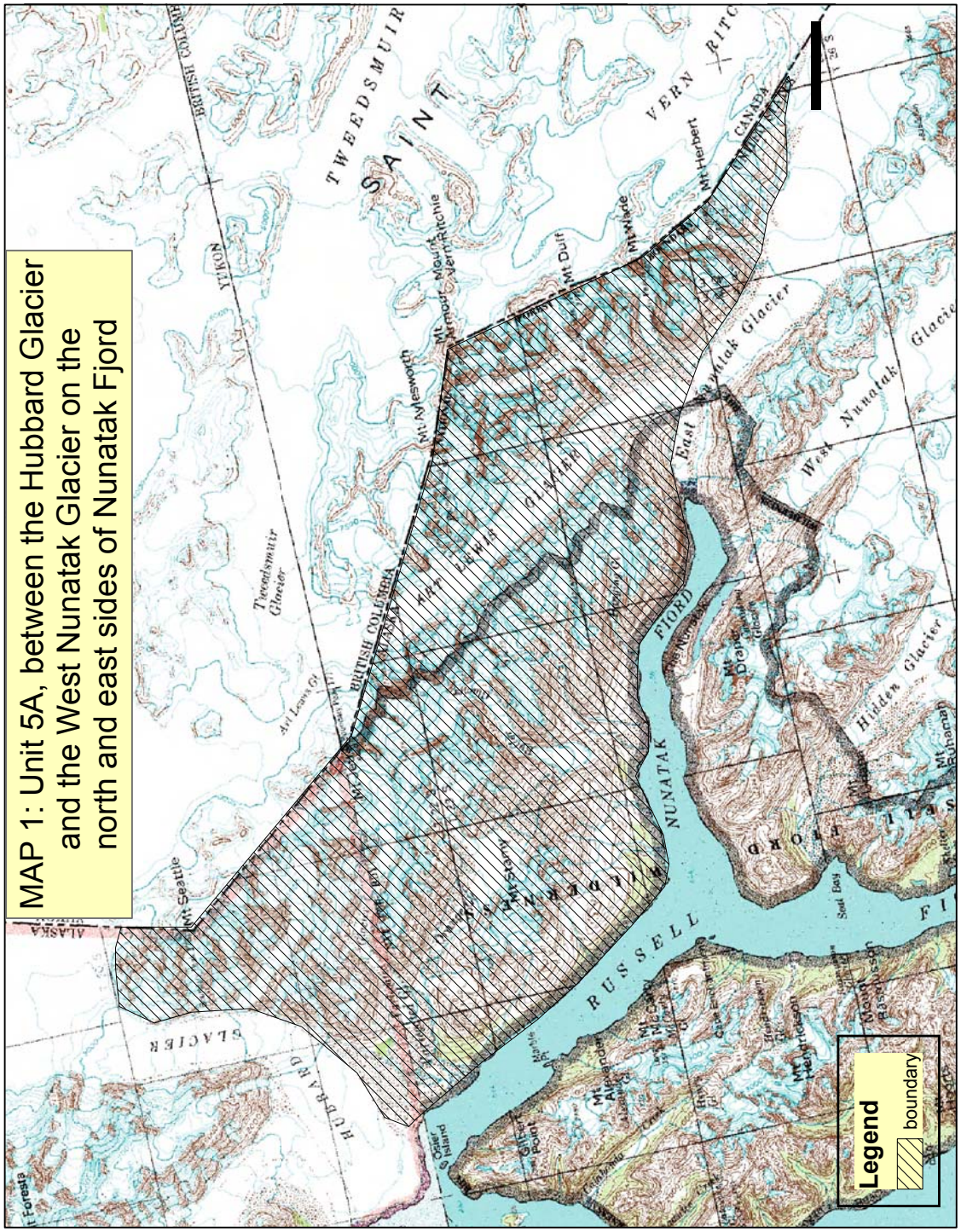
Federal public lands comprise 100% of the area of Unit 5A between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord, and are managed by the U.S. Forest Service and National Park Service (**Map 1**).

Customary and Traditional Use Determinations

All rural residents of Unit 5A are eligible to harvest goat under Federal subsistence hunting regulations in Unit 5A, including that area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord.

Regulatory History

From 1959 until 1972, the State season dates for goat in Unit 5A varied, although between 1973 and 2000, the State season was open annually from August 1st to December 31st. Since 1975, the harvest limit was one goat by registration permit. The Federal subsistence season was implemented in 1996, with effective harvest season dates of August 1st-January 31st, and a harvest limit of one goat by Federal registration permit. After an initial emergency closure of the Nunatak Bench Area in 2001, because of the continued decline in the population, ADF&G eliminated the Nunatak Bench from the State registration permit area (RG170) in 2002, thereby eliminating the need for repeated emergency closures and assuring a closure until survey data indicates the population has a harvestable surplus. The Federal subsistence season has been closed annually by in-season action since 2001.


MAP 1: Unit 5A, between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord
Legend
boundary
RUSSELL
NUNATAK
FIORD
HUBBARD
GLACIER
SAINT
TWEEDSMUIR
Tweedsmuir Glacier
Hidden Glacier
West Nunatak Glacier
Mt Seattle
Mt Alexander
Mt Hendrickson
Mt Draper
Mt Herbert
Mt Duff
Mt Wilde
Mt Wolseley
Mt Armour
Mt Vernon
Mt Ritchie
Mt Lewis
Mt Stanley
YUKON
BRITISH COLUMBIA
ALASKA
CANADA

Current Events

Southeast Alaska experienced high snowfalls during the winters of 2006-2009. Above average snowfalls were recorded at the Yakutat airport during the winters of 2006-2007 (225”), 2007-2008 (162.3”) and 2008-2009 (163.5”). The average total snowfall from 1987-2008 was 147 inches (Endicott 2008, pers. comm., Western Regional Climate Center 2009).

Biological Background

Habitat and Diet

Goats have been reported to winter in coniferous forests down to sea level and to summer in the mountains (alpine and subalpine areas) in coastal areas of British Columbia and Southeast Alaska (Hebert and Turnbull 1977, Fox 1983, Smith 1984, Robus and Carney 1995). In more inland areas of Southeast Alaska, where drier and colder conditions generally prevail, radio collared goats have been observed to winter at high elevations (White 2009, pers. comm.). Selection for south facing slopes during winter has been documented throughout the range of the goat, including Southeast and Southcoastal Alaska (Hebert and Turnbull 1977, Fox 1978, Schoen and Kirchhoff 1982, Hundertmark et al. 1983, Nichols 1985, Smith 1985, Smith 1986a, Poole and Heard 2003, Taylor et al. 2006). Goats in Southeast Alaska are associated with escape terrain during both summer and winter (Fox et al. 1989, Schoen and Kirchhoff 1982, Fox 1983, Smith 1985). Goats generally occupy distinct seasonal areas, although seasonal ranges usually overlap in Southeast Alaska goat populations (Schoen and Kirchhoff 1982). Winter use areas are usually smaller than summer use areas (Smith 1982). Goat home ranges average 10-20 km^2 in Southeast Alaska (Fox et al. 1989).

Goats eat a variety of forage, and are classified as intermediate browsers. They appear to be a generalist herbivore that eats what is available; therefore, diets vary according to availability (Côte and Festa-Bianchet 2003). Fox et al. (1989) summarized that goats in Southeast Alaska make use of a variety of habitats during summer, including tall grass-herbs, mesic sedge-grass tundra, alpine herbaceous tundra, and substantial use of closed tall shrub, open conifer forest, and wet sedge-grass tundra. In winter, goats in Southeast Alaska predominantly use closed conifer forest, alpine herbaceous tundra, tall grass-bluejoint herb, and open conifer forest, with lesser use of closed tall shrub and shrub tundra (Fox et al. 1989). Most recently, White and Barten (2008) reported that preliminary estimates of the summer and fall diet of goats in Southeast Alaska is composed of four primary forage types: sedges/rushes, lichens, forbs, and ferns. During winter, conifer needles (*Tsuga* sp.) comprised over 70% of the diet, with lichens (*Lobaria* sp.) and *Vaccinium* sp. comprising approximately 12% and 10% of the diet, respectively. Fox et al. (1989) suggested that quantity and quality of forage is likely a major limiting factor for goats in Southeast Alaska.

Reproduction

Mating season generally occurs from late October to early December, and the birthing season is usually from mid-May to early June. Goats have a low reproductive rate compared to some other ungulates. Females generally begin producing kids at around age five (see Festa-Bianchet and Côte 2008 for review). White and Barten (2008) did not document any case where females less than four years of age had kids at heel during the summer in a Southeast Alaska goat population. Females generally produce a single kid; twinning may be more common in introduced and rapidly growing populations than in native or established and stable populations (Côte and Festa-Bianchet 2003). Productivity varies between populations and annually. White et al. (2007) observed that 57-64% of females in a Southeast Alaska goat population were seen with kids during the summer; however, this study did not directly monitor the initial

parturition rate. Reproductive success has been linked to winter conditions, specifically late spring snow depth (Adams 1981).

Mortality Factors

Causes of goat mortality are often difficult to determine. Natural mortality factors include predation, accidents, parasites and diseases, and malnutrition (generally associated with winter habitat and weather conditions). The most likely predators of goats are brown bears and wolves; coyotes, black bears, and wolverines are potential predators, and eagles may occasionally prey on kids (Côte and Festa-Bianchet 2003). Other studies have reported minimal extent and effect of predation on goats (Klein 1953, Chadwick 1979, and Festa-Bianchet et al. 1994); however, predation may be an important mortality factor in native populations (Côte and Festa-Bianchet 2003) and may inhibit recovery of depressed populations (Ballard 1977, Fox and Steveler 1986). Based on data from Caw Ridge, Alberta, predation could be an important source of mortality in young goats (Festa-Bianchet et al. 1994).

Contagious echthyma (CE, commonly known as Orf or sore mouth disease) is a viral disease, characterized by proliferative, crusted, and sometimes pustular lesions of the lips and muzzle, and occasionally of the udder, feet and vulva (Samuel et al. 1975). Most populations appear to be free of CE (Côte and Festa-Bianchet 2003). Samuel et al. (1975) suggested that CE is probably negligible in animals with mild infections, but that in combination with other factors such as a high number of parasites and low nutrition, can be an important mortality factor in wild sheep and goats. CE has been documented in goats in Southeast Alaska (Beckmen 2009). Although not confirmed, local hunters have reported seeing goats exhibiting the symptoms of CE in the Nunatak Bench and surrounding areas (Oehlers and Henniger 2009).

Smith (1995) suggested that winter weather is the primary factor limiting goat populations. High snow accumulations not only limit forage availability, but also contribute to mortality through avalanches and accidental falls. Greater snow depth and longer duration have a negative effect on kid survival (Rideout 1974, Smith 1976). Severe winters have been associated with declines in several goat populations, including Southeast Alaska (Smith 1976, Wright 1977, Smith 1984).

Mainly adults are harvested, and harvest is generally considered additive to natural mortality (Kuck 1977, Smith 1986b, Hamel et al. 2006, Festa-Bianchet and Côte 2008). Goat populations appear to be highly susceptible to harvest (Festa-Bianchet et al. 1994, Côte et al. 2001), likely due to low recruitment and either-sex harvest (Voyer et al. 2003). Because of the variance in mortality and reproductive success between sex-age classes, changes in sex-age structure can strongly affect the population growth rate independently of other factors (Festa-Bianchet and Côte 2008). Overharvest has been associated with population declines in several native (Hebert and Turnbull 1977, Kuck 1977, Jamieson 1978, Toweill et al. 2004, Hamel et al. 2006) and nonnative (Varley 1995) goat populations throughout their range.

Harvest recommendations generally range from 2-5% of the total population or <5% of adults (Hebert and Turnbull 1977, Youds et al. 1980, Voyer et al. 2003). Gonzalez-Voyer et al. (2000) suggested that harvest of only 1-2 adult billies a year is sustainable for a population of 100 goats. Festa-Bianchet and Côte (2008) recommend a 1% harvest rate comprised mostly of males for native goat populations. Voyer et al. (2003) suggested establishing a total and female quota for harvest in each population, and closing the following season if the female quota is exceeded. In practice, most harvest is <4% of the population (Festa-Bianchet and Côte 2008). The Alaska Department of Fish and Game's management objective for Unit 5 is to maintain a guideline harvest not to exceed 6 points (males = 1 pt. and females = 2 pts.) per 100 goats observed (Barten 2008). The State also recommends that harvest should not be allowed in the

Nunatak Bench area until a population of at least 100 animals is observed for several consecutive years (Barten 2009, pers. comm.).

Survival Rates

Smith (1986b) reported that annual mortality rates were 29% for yearlings, 0-9% for 2-8 year olds, and 32% for goats older than 8 years old in Southeast Alaska. Prime age adults exhibited very low natural mortality rates (approximately 1%), but they suffered from high hunting mortality, whereas predation and other natural causes were the main source of mortality for yearlings and those older than 8 years old. Kid survival generally varies according to winter weather (Thompson 1981, Adams and Bailey 1982).

White et al. (2007) documented 15 mortalities out of 58 goats monitored for one year during an ongoing study of Southeast Alaskan goats. During the second year, 9 animals out of 67 monitored animals died of various natural causes (White and Barten 2008). Record snowfall during the study may have resulted in a higher than normal mortality rate. In a preliminary review of coastal Alaskan goat studies, ADF&G reported high survival during prime age years and lower survival during early and later years (White et al. 2008). Snow depth affects survival most during late winter (Feb-May), and sub-adults are affected differently by winter severity than adults and old animals. The highest proportion of mortalities occurred from March through May; however, the seasonality of mortalities differed depending on winter severity.

Dispersal and Genetics

It is likely that dispersal plays an important role in goat population dynamics, but it is not well understood and is difficult to document in research studies. Emigration appears to occur generally in July and August, and may contribute to a skewed adult sex ratio (Festa-Bianchet and Côte 2008). Schoen and Kirchhoff (1982) did not observe any emigration or immigration in a northern Southeast Alaska population, and concluded that repopulation of locally reduced herds may take many years.

Goats tend to exist in somewhat isolated sub-populations with limited genetic exchange between populations (Côte and Festa-Bianchet 2003). Theoretical arguments (Wilson 1975, in Smith and Raedeke 1982) supported by empirical data indicate that inbreeding in ungulates may affect population dynamics, specifically reducing juvenile survival and reproductive performance of adult females (Ralls et al. 1979). Low genetic variability may expose goats to higher risks of pathogens and parasites and demographic decline (Mainguy et al. 2007).

Habitat Condition and Trends

Little information is available regarding habitat conditions in this portion of Unit 5A. The U.S. Forest Service GIS layer “existing veg” details a portion of the Nunatak Bench area. According to this data source, 5% of the area is forested and 95% is non-forested. The forested area is approximately 76% black cottonwood; limited information on the remainder of the forested portion is available, other than that it is of low productivity. The non-forested area is predominantly rock (36%) and ice/snow fields (33%), followed by brush (non-alder 16%), alder brush (11%), and river fill (3%). Alpine and other habitat types make up the remainder of the area. Alpine areas support sedges, grasses, and forbs, with vegetation grading to low shrubs and Sitka spruce forests as elevation declines to stream valleys (USDA Forest Service 2005).

Forested winter range appears to be limited in extent in this area (White 2009, pers. comm.), increasing the goat’s vulnerability to deep snow loads. No extensive changes to habitat are known to have occurred prior to the population decline; therefore, it is likely that something other than habitat precipitated the

initial decline. Minimal suitable winter habitat may, however, contribute to the slow population recovery rate, particularly during heavy snow years.

Recent population indices

There were no efforts at routine surveys of goat populations in Unit 5A, prior to 2000. An aerial survey effort was initiated during the summer of 2000 in the Nunatak Bench area. Based on the subsequent aerial survey data, the Nunatak Bench goat population appears to have declined substantially, though not steadily, between 2000 and 2009 (**Table 1, Figure 1)**. After 82 goats were counted in 2000, only 48 goats were counted in 2001 (Barten 2001a), then 29 in 2002 (Barten 2002), and 43 in 2003 (Barten 2003). Based on these counts, there was a relatively stable population after the apparent decline from the 2000 count; however, this was followed by another apparent decline during 2005-2009. Most recently, 33 goats were observed in late September 2009 (Oehlers 2009). Barten (2008) reported that the Nunatak Bench population remains at a very low level and likely will not support a hunt for many years to come. Until aerial surveys enumerate at least 100 goats for several consecutive years, ADF&G recommends that harvest not be allowed in the Nunatak Bench area (Barten 2009, pers. comm.).

It is important to note that fluctuations in population surveys may be reflective of several factors more related to survey condition and timing than actual changes in the populations. Changes in the number of goats seen may reflect seasonal movements out of the survey area. Furthermore, the proportion of the actual population of goats observed, commonly referred to as "sightability," can differ between surveys, and is particularly dependent on weather conditions, observer experience, and aircraft type. Nevertheless, there does appear to be a downward population trend since regular surveys were initiated in 2000.

Surveys in the area adjacent to the Nunatak Bench, from Nunatak Fjord south to Harlequin Lake, indicate the population there has also declined in recent years (Oehlers 2009 and Oehlers and Henniger 2009). Alaska Department of Fish and Game closed this portion of Unit 5A to hunting of goats by Emergency Order in 2008 and 2009.

Harvest History

The earliest available harvest data are from 1986. An average of 3 goats was harvested annually in the Nunatak Bench area between 1986 and 2000 (under State regulations until 1995, and under State and Federal regulations combined from 1996-2000); Yakutat residents accounted for 54% of the harvest (**Figure 2;** ADF&G 2000). Yakutat residents make up the majority of successful goat hunters in Unit 5, including the Nunatak Bench, probably due to the cost and logistical difficulty of hunting goats in this area (Barten 2008).

Other Alternatives Considered

An alternative would be to delegate authority to the Yakutat District Ranger to close the season for conservation purposes. The goat population is not expected to be sufficient to support a harvest for several years; therefore, adoption of this alternative would facilitate management flexibility and responsiveness by allowing the Yakutat District Ranger to close the season annually until conditions warrant a season, without additional action from the Federal Subsistence Board.

Effects of the Proposal

If this proposal is adopted, goat hunting would continue to be closed to subsistence users in the Nunatak Bench area of Unit 5A. This area has been closed to harvest of goats under both State and Federal

Table 1. Number of goats observed during aerial surveys of the Nunatak Bench, 2000-2008 (Barten 2000, 2001a, 2002, 2003, 2005, 2006, 2007, Oehlers 2005, 2008, 2009, and White 2008).

Year	Month	Adults	Kids	Unk.	Total	Kid:100 adults	% kids	Goats /hr
2000	July	69	13		82	19	16	91
2000	August	40	6		46	15	13	52
2001	August	37	11		48	30	23	20
2001	September	37	2		39	5	5	54
2001	November			48	48			
2002	September	25	4		29	16	14	19
2003	September	29	14		43	48	33	40
2005	July	4			4			
2005	July	17	5	19	41			
2005	September	17	5		22			
2006	October	15	4		19	21	21	
2006	October	26	7		33	26	21	
2007	September	17	6		23	35		31
2008	August	9	3		12	33	25	9
2008	Sept	26	7		33	26	21	26
2008	October	32	8		40	25	20	18
2009	September	12	1		13	8	8	13
2009	September	27	6		33	22	18	28

regulations since 2001 due to conservation concerns. Prior to this closure, an average of three goats were harvested annually, with over half of the harvest by Federally qualified subsistence users. Because harvest was low prior to 2001 and harvest has not been allowed since then, subsistence users will be minimally affected by the adoption of this proposal. Non-Federally qualified hunters will not be affected by the adoption of this proposal because the State season has been closed since 2001. Goat populations have been demonstrated to take a long time to recover following a decline, and any harvest could further retard the recovery rate. Therefore, prohibiting harvest now is expected to promote future recovery of this population, increasing the possibility of a harvestable population to provide subsistence opportunities in the future.

The Board established a policy in 2007 that "closures will be reviewed by the Federal Subsistence Board no more than three years from the establishment of the closure and at least every three years thereafter." If the survey data indicates a population capable of sustaining a harvest, the season could be reopened by submitting a proposal through the Federal subsistence regulatory process.

If this proposal is not adopted, the delegation of authority language in the existing regulation should be modified to clearly allow the Yakutat District Ranger to close the entire season for conservation reasons.

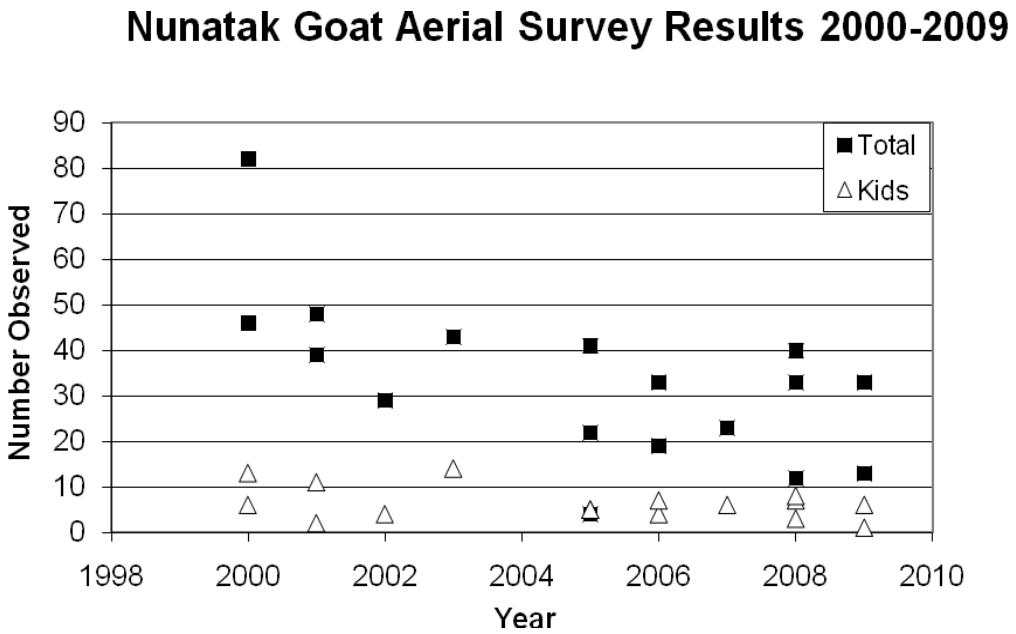


Figure 1. Number of goats observed during aerial surveys of the Nunatak Bench (Barten 2000, 2001, 2002, 2003, 2005, 2006, 2007, Oehlers 2005, 2008, 2009, and White 2008).

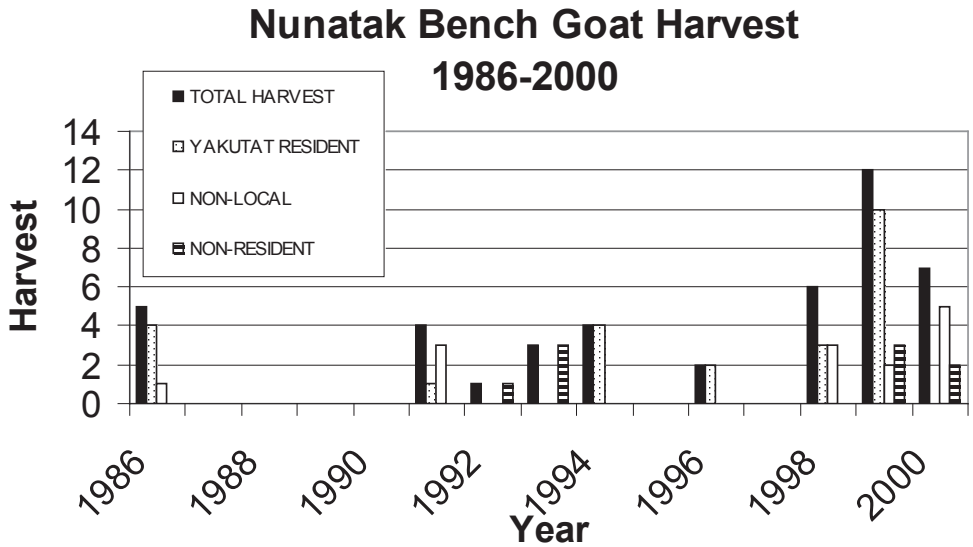


Figure 2. Reported harvest for Nunatak Bench area 1986-2000. Source: ADF&G 2000, Winfonet Database.

OSM CONCLUSION

Support Proposal WP10-15.

Justification

The goat population between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord has declined and remains at a low level that is insufficient to sustain any harvest on Federal public lands. Recent harsh winters have likely contributed to this decline. Since the population is not expected to increase for a number of years, Federal public lands should continue to be closed because of conservation concerns for the Unit 5A goat population. Harvest should not be allowed until a population of at least 100 animals is observed for several consecutive years (as recommended by ADF&G). Because the harvest of goats was low prior to 2001 and has not been allowed since then, subsistence users will be minimally affected by the adoption of this proposal. Closing the Federal season will promote recovery of this population, increasing the possibility of a harvest for Federally qualified subsistence users in the future. This closure would be reviewed by the Federal Subsistence Board no more than three years from the establishment of the closure and at least every three years thereafter. If the survey data indicates a population sufficient to sustain harvest, the season could be reopened by submitting a proposal through the Federal regulatory process.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-15. The Council determined that there is a conservation concern with goats in this area that requires regulatory action. Subsistence users have other opportunities to harvest goats. Since this is a closure, the issue would be revisited every three years.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-15

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-15
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-15: This proposal would close the federal subsistence goat hunting season in that portion of Unit 5A between Hubbard Glacier and West Nunatak Glacier on the north and east side of Nunatak Fjord.

Introduction: The area described in this proposal is known as Nunatak Bench in State of Alaska regulations. Based on aerial survey data, the goat population in this area began declining precipitously in about 2001. An aerial survey conducted in 2000 enumerated 82 goats, followed by 48 in 2001 and an average high count of 33 goats per year during 2005 through 2008. Reasons for the decline are likely related to hunting, but winter weather, predation, and disease may also have contributed. Due to low numbers observed during aerial surveys, the department closed this area to goat hunting by Emergency Order in 2001 and 2002. The hunt was closed under State regulations in 2002 and remains closed. Beginning in 2003, the department omitted this area from the Unit 5 mountain goat State registration permit (RG170). The department will keep this area closed until the population rebounds to a sustainable level.

Impact on Subsistence Users: Closing this area under federal regulations will have no impact on subsistence hunters at this time. Although this area was once the most sought after area to harvest goats for federal subsistence, no goats have been taken since 2000 due to federal subsistence season closures enacted in concert with State closures.

Opportunity Provided by State: The State closed this area to goat hunting in 2003 by removing it from the legal hunting area under registration permit RG170.

Conservation Issues: Adoption of this proposal will ensure that no goats are taken in this hunt area, which is necessary to allow this population of goats to rebound to a level that the Alaska Department of Fish and Game determines is sufficient to support a sustainable population.

Other Comments: Adoption of this proposal will eliminate annual requirement for the approval of a wildlife special action by the Federal Subsistence Board to close this hunt. Once the goat population rebounds, a proposal can be submitted to the Federal Subsistence Board to reopen the federal subsistence hunt.

Recommendation: Support.

WP10-16 Executive Summary	
General Description	Proposal WP10-16 requests that the harvest limit for moose in Unit 5A be modified from one bull per person to one bull per household. *Submitted by the Southeast Alaska Regional Advisory Council*
Proposed Regulation	**Unit 5A—Moose** *Unit 5A except Nunatak Bench—1 bull **per household** by joint State-Federal registration permit only**.** The season will be closed when 60 bulls have been taken from Unit 5A. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area. From Oct. 8–Oct. 21, Federal public lands are closed to taking of moose except by residents of Unit 5A hunting under these regulations.* — *Oct. 8–Nov. 15*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-16

ISSUES

Proposal WP10-16, submitted by the Southeast Alaska Regional Advisory Council (Council), requests that the harvest limit for moose in Unit 5A be modified from one bull per person to one bull per household.

DISCUSSION

The Council is requesting this action because it believes that it is necessary to prevent waste of moose and to promote sharing within the community of Yakutat. Concerns from the community have been brought to the Council's attention. The concerns are that one household is harvesting more moose than can be processed and preserved to prevent spoilage. Residents of the community have observed wasted moose meat. Council members have heard from residents that this pattern is neither customary nor compatible with community standards.

The Council is aware that the requirement to salvage the meat of ungulates, including moose, in Federal regulations (36 CFR Part 242.25(j) and 50 CFR Part 100.25(j)) does not apply to this situation because the spoiling occurred after the meat was removed from the field.

A review of the minutes of the Council meeting show that the Council's intent was to change the regulation only in the remainder area of Unit 5A (described in the regulations as Unit 5A except Nunatak Bench) (FWS 2009).

Existing Federal Regulation

Unit 5A—Moose	
Unit 5A except Nunatak Bench—1 bull by joint State-Federal registration permit only. The season will be closed when 60 bulls have been taken from Unit 5A. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area. From Oct. 8–Oct. 21, Federal public lands are closed to taking of moose except by residents of Unit 5A hunting under these regulations.	*Oct. 8–Nov. 15*

Proposed Federal Regulation

Unit 5A—Moose	
Unit 5A except Nunatak Bench—1 bull ***per household*** *by joint State-Federal registration permit only. The season will be closed when 60 bulls have been taken from Unit 5A. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area. From Oct. 8–Oct. 21, Federal public lands are closed to taking of moose except by residents of Unit 5A hunting under these regulations.*	*Oct. 8–Nov. 15*

Existing State Regulation

Unit 5A—Moose	*Resident and Nonresident*
Unit 5A except Nunatak Bench—1 bull by permit available in Douglas or Yakutat or by mail from Douglas beginning Aug. 17.	*Oct. 15–Nov. 15*

Note: Up to 55 bulls may be taken; however, no more than 25 bulls may be taken west of the Dangerous River

Extent of Federal Public Land

Federal public lands comprise approximately 98% of Unit 5A and consist of 66% USFS and 34% NPS lands (see **Unit 5 map**). Forest Service lands in Unit 5A are within the Tongass National Forest. Glacier Bay National Park is the majority of NPS land in the subunit, and the park is closed to all hunting. A small portion of NPS land is in the preserve, and Federal subsistence hunting regulations apply. Other NPS lands in Unit 5A are within the boundaries of Wrangell–St. Elias National Park.

The majority of State and private land in Unit 5A is located on a portion of the forelands surrounding the community, locally referred to as the "nine townships."

Customary and Traditional Use Determination

Residents of Unit 5A have a customary and traditional use determination to harvest moose in Unit 5A. Yakutat is the only community in Unit 5A.

Regulatory History

Season and Quota

The State moose hunting season in Unit 5A was closed from 1974 to1977 in response to low population numbers. This followed aggressive harvest strategies during the late 1960s (including cow hunts) as well as over browsing of the moose range and a series of severe winters. A Federal subsistence season was instituted in 1991, concurrent with the State season. From 1991 to the present, hunting on Federal public lands has been restricted to Yakutat residents during the first week of the combined Federal/State season. Since 1996, the Federal season has opened one week earlier than the State season, effectively limiting hunting on Federal public lands to Yakutat residents for 2 weeks prior to these lands being open to non-Federally qualified subsistence users. Since 1990, the State and Federal seasons have followed a guideline harvest of 60 bulls across all of Unit 5A, with the portion of Unit 5A west of the Dangerous River being closed when 30 bulls are taken in that area. In practice, the State and Federal seasons have been closed, once the quota is met, in a joint announcement by the Yakutat District Ranger and ADF&G.

In November 2004, the State issued Emergency Order (E.O.) 01-02-04 to close that portion of Unit 5A west of the Dangerous River when the harvest reached 28 moose. In November 2007, the State again issued an E.O. (01-08-07) to close that portion of Unit 5A west of the Dangerous River when the harvest reached 28 moose. In 2008, the State and the Federal Subsistence Board reduced the total harvest quota in Unit 5A from 60 to 50 bulls with a quota of 20 bulls west of the Dangerous River, in response to continued low bull:cow ratios (Barten 2008a). On October 20, 2008, the State issued E.O. 01-07-08 to close that portion of Unit 5A west of the Dangerous River when the harvest reached 20 moose. All State closures were concurrent with closures of the Federal subsistence season by the Yakutat District Ranger.

For the 2009 season, in response to improved bull:cow ratios estimates after the 2008 season, the State established a harvest quota of 55 moose, restricted to 25 bulls west of the Dangerous River. The Yakutat District Ranger reduced the Federal subsistence harvest quota consistent with that of the State, under temporary authority delegated by the Federal Subsistence Board resulting from a Special Action Request (WSA09-04). The quota was not reached and therefore the season was not closed early during the 2009 season.

In 2009, the Federal Subsistence Board delegated authority to the Yakutat District Ranger to establish the quota in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council and to close the season when the quota has been reached for the 2009 season by Special Action (WSA 09-04); consequently, the district ranger established the 2009 quota consistent with that of the State regulations.

Harvest Permit

Unit 5A moose hunting has been managed under a State registration permit system since 1978. The State and U.S. Forest Service began issuing a joint Federal/State registration permit for all moose hunters in Unit 5A during the 2004 season. This allows for better tracking of hunting effort and harvest and simplifies the permit application and reporting process for the hunters.

The request in the proposal is for a harvest limit of one bull per household by joint Federal/State registration permit. Only one instance of a household harvest limit, in contrast to an individual harvest limit, exists in Federal wildlife regulations. It is one elk per household by Federal registration permit in a portion of Unit 8. The harvest of elk is additionally restricted by a State draw permit for residents only and a State registration permit available in person beginning 18 days before the season. Instances of limiting permit distribution to one permit per household, in contrast to one moose per household, are more common. It occurs four times in Federal regulations: moose in Unit 6C, moose in Unit 13E, moose in Unit 16B, and moose in Unit 21B. In each of these instances the harvest of moose is restricted by a State Tier II permit, a State draw permit and a Federal draw permit, or a winter season that is closed to non-Federally qualified users. In all five of these instances described above, one with a per household harvest limit in Unit 8 and four in which a household is limited to one permit, harvesting opportunity was already being restricted due to conservation concerns before the Board adopted the per household harvest limit or limited permit distribution to one per household.

The proponent is requesting a harvest limit of one bull moose per household that would apply to Federally qualified users, in this case, residents of Yakutat. The joint Federal/State permit would be replaced by separate Federal and State permits unless the State of Alaska Board of Game adopted a similar harvest limit. There are no instances of household harvest limits in State wildlife regulations at this time. There are two instances in State wildlife regulations where the distribution of permits is limited to one per household: moose in Unit 20B and moose in Unit 22C. In both instances, the harvest of moose is restricted by a registration permit available in only a few communities on only one day of the year, or by limiting the number of registration permits that can be distributed. The conservation issues that exist for these hunts in Units 20B and 22C do not exist in Unit 5A at this time, and it is unlikely the Alaska Board of Game would adopt a regulation limiting all state residents to only to one bull per household or one permit per household to harvest moose in Unit 5A.

Biological Background

Moose were first documented in the Dry Bay area in the eastern section of Unit 5A in the late 1920s or early 1930s. The population expanded its range westward and peaked in the early 1960s at an estimated

2,000 animals, which is likely above the carrying capacity of the range (Barten 2006a). The population began declining and a combination of poor reproductive success, poor browse conditions, and severe winters in the early 1970s further depressed the population. The season was closed from 1974 to 1977, after which the population slowly increased to its present level of approximately 600-800 animals (Barten 2006a).

The State management direction for Unit 5A since 1989 has been to maintain a post-hunt moose population of 1,000 animals, annual harvest of 70 animals, and hunter success rate of 28% (Barten 2006a, 2009). Barten (2009) notes, however, that these objectives are out-dated and not currently realistic, and that a post-hunt moose population of 800 animals and annual harvest of 45-50 animals would be a more appropriate management objective. State management objectives for Unit 5A are to maintain a minimum bull:cow ratio of 25:100 (Barten 2008a). Recent surveys indicate a bull:cow ratio significantly below the State management objective (ranging from 11:100 to 34:100; Barten 2008b, Oehlers 2008a, b, c), particularly on the western forelands (that area between the mountains and the ocean west of the Dangerous River). A sufficient bull:cow ratio is necessary to ensure timely breeding of cows and to maximize productivity.

Habitat Conditions and Trends

Since moose first populated the forelands, habitat succession has likely decreased the quantity and quality of forage available for moose; however, new habitat is being formed through glacial isostatic rebound (Barten 2008a). Isostatic rebound is the gradual rising of the land surface because it is no longer weighted with glaciers; some land in the Yakutat area is rising as much as one inch per year.

ADF&G estimates that the current population "appears to be at the carrying capacity of the habitat" (Barten 2006a). Barten (2008a) clarified this statement to include other factors such as weather and predation that contribute to the range's carrying capacity. No formal habitat assessment has been conducted in Unit 5A; however, good body condition and high pregnancy and twinning rates indicate that the range is in good condition (ADF&G 2005, USFS 2005, Oehlers 2007).

Recent Population Indices

The most recent complete survey of the Yakutat Forelands moose population, in December 2007, resulted in an uncorrected count of 685 moose (Barten 2007). Findings of a sightability study on the Yakutat Forelands (Oehlers 2007) indicate that the 70% sightability of moose during winter aerial surveys is higher than previously estimated, and that prior population estimates using the 50% factor have been inflated. This result, however, does not conflict with reports of a stable population for the past 10 years.

Composition surveys between 2002 and 2007 indicate a bull:cow ratio ranging from 10:100 to 34:100 on the Yakutat Forelands (**Table 1**). The 2007 estimates should be considered minimum ratios since bulls had begun to cast their antlers; nevertheless, this information helps demonstrate a pattern of low bull:cow ratios, particularly on the western forelands. Harvest is generally higher on the western forelands because of accessibility, likely contributing to the lower bull:cow ratio. Furthermore, the age structure of bulls harvested west of the Dangerous River is skewed lower than those harvested east of the Dangerous River. The mean age of moose harvested west of the Dangerous River was 2.4 years for the past 5 years, with 70% between 1.5 and 2.5 years old, compared to a mean age of 3.2 years for bulls harvested east of the Dangerous River, with only 50% between 1.5 and 2.5 years old (Barten 2008a).

Following the harvest quota reduction in 2008, several composition surveys were conducted on the Yakutat Forelands. Federal biologists estimated a bull:cow ratio of 34:100 and 14:100 on the western

Table 1. Moose composition survey results for the Yakutat Forelands, 2005-2008 (Barten 2002, 2005, 2006b, 2007, Oehlers 2008a, b, c).

Month	Year	Survey Area	# Bulls	# Cows	# Calves	# Unknown	Total	Bull:cow
March	2002	Yakutat Forelands	28	146	21	0	195	19:100
November	2005	Eastern Forelands	33	166	17	0	216	20:100
November	2006	Western Forelands	12	119	11	0	142	10:100
December	2007	Western Forelands	24	21	21	200	266	11:100[1]
December	2007	Eastern Forelands	55	49	53	262	419	18:100[1]
November	2008	Western Forelands	23	67	4	0	94	34:100
December	2008	Western Forelands	24	166	31	0	221	14:100
December	2008	Eastern Forelands	23	100	4	2	139	23:100

[1] Minimum estimate.

forelands during November and December, respectively, and 23:100 on the eastern forelands during December. The December surveys are likely reflective of a proportion of bulls having dropped their antlers, and therefore should be considered a minimum estimate. Although these minimum bull:cow ratios are higher than previously reported, the December surveys indicate a continued lower ratio on the western side of the forelands.

Harvest History

The total annual harvest of moose in Unit 5A except Nunatak Bench ranged from 31 to 48 during 1999-2008, with a mean of 39. The harvest quota of 60 antlered bulls for the entirety of Unit 5A, except Nunatak Bench, has not been reached in the last 10 years. Harvest is generally higher west of the Dangerous River, primarily because of easy access. This area was closed by Emergency Order in 3 of the past 6 years when the quota was reached. Annual harvest of bulls west of the Dangerous River ranged from 19 to 31 bulls from 2003 to 2007, with a mean annual harvest of 25 animals, whereas harvest east of the Dangerous River ranged from 10 to 17 bulls during this period, with a mean annual harvest of 12 animals.

The majority of the moose harvest west of the Dangerous River occurs during the first 2 weeks of the combined Federal/State season (Oct. 8–21). There are two factors that favor Yakutat resident hunters: 1) only Yakutat residents are allowed to hunt during the first week (Oct. 8–14), and 2). Federal public lands are open to Yakutat residents on Oct. 8, but are closed to other hunters until Oct. 22. These two factors provide Yakutat residents with a better opportunity to harvest moose than hunters from outside Unit 5A. As a result, Yakutat residents took 85% (79 of 93) of the bulls harvested west of the Dangerous River during the 2003–2006 reporting period, with 72% of those taken during the first 2 weeks of the season (Barten 2006a). In 2008, Yakutat residents accounted for 63% (24 of 35) of the total harvest, and 80% (16 of 20) of the harvest west of the Dangerous River. Preliminary estimates indicate that 23 and 14 moose were harvested west and east of the Dangerous River, respectively, during 2009.

For the 5-year period 2004 to 2008, an average of 107 permits were used by residents of Yakutat. There were 97 hunters in 2007 and 101 hunters in 2008 (**Table 2**). In 2000 there were estimated to be 808 people living in 265 households in Yakutat (U.S. Census Bureau 2009).

Table 2. Yakutat residents hunting in the remainder area of Unit 5A (ADF&G 2009).

Year	Number of Hunters	Number of Moose Harvested
2008	101	24
2007	97	33
2006	99	23
2005	117	23
2004	119	30

Effects of the Proposal

If this proposal is adopted, a separate Federal permit would be required because the State harvest limit would remain one bull per person and the Federal harvest limit would change to one bull per household. The effects on Yakutat residents would be:

- All Yakutat hunters would continue to be eligible to harvest one bull per person from State and private lands the entire season starting Oct. 15.
- Yakutat hunters who choose not to participate in the early hunt Oct. 8 to Oct. 21 would continue to be eligible to harvest one bull per person from State, private, and Federal public lands the remainder of the hunting season.
- Yakutat hunters participating in the early hunt Oct. 8 to Oct. 21 would be limited to one bull per household from Federal public lands the entire hunting season.
- No member of a household that designated a hunter outside the household would be able to hunt for moose on Federal public lands.

The proposed action would not limit Yakutat residents to one bull per household and would be very difficult to administer and enforce. Responsible households could have only one hunter in the field at a time or hunters in the household would have to hunt together; otherwise, they would risk violating the regulation.

If this proposal is adopted, there would be no effect on non-Federally qualified hunters, and they would continue to be allowed to harvest one bull per person in Unit 5A except Nunatak Bench. If imposing a per household harvest limit on Yakutat residents decreased the harvest of moose during the early part of the season, more moose would be available for non-Federally qualified hunters.

If this proposal is not adopted, the harvest limit in Unit 5A except Nunatak bench would remain one bull per person with a joint Federal/State permit.

OSM CONCLUSION

Oppose Proposal WP10-16.

Justification

The moose harvest is controlled through harvest quotas in Unit 5A (except Nunatak bench). Reducing the harvest limit from one bull per person to one bull per household is not necessary to manage the moose population at this time. There is no conservation concern with the harvest of moose in Unit 5A since the harvest is managed with a quota that is established in proportion to the observed population.

The proposed regulation would restrict residents of Yakutat to address an issue with one family, and it would adversely affect households composed of extended families and multiple families. As a consequence, it has the potential to reduce the effectiveness of the early Federal only season, shifting moose harvests to non-Federally qualified hunters, and shifting moose harvests to non-Federal public lands surrounding the town of Yakutat. Furthermore, it would be detrimental to the successful, cooperative administration of the hunt. Presently the moose hunt in Unit 5A is successfully administered under a joint Federal/State permit. This proposal would require separate permits for Federal and State hunts and would increase the complexity of administering the hunt. Finally, the regulation would require increased and intrusive enforcement efforts to be effective.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-16. The Council determined that this proposal was an unnecessary restriction because this is a local issue and there should be a local solution. There are also technical issues with this proposal and hunters could continue to hunt with a one bull per person harvest limit under State rules. This proposal would not facilitate management of moose in Yakutat and would produce a conflict between Federal and State regulations.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-16

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-16: This proposal submitted by the Southeast Regional Advisory Council would limit the annual moose harvest limit in Unit 5A to one moose per household.

Introduction: This proposal was submitted to address a concern of Yakutat residents that a single family harvests a disproportionate number of bull moose during the Unit 5A moose hunt. This hunt is managed under a joint State/Federal registration permit (RM061). The Federal subsistence season opens October 8, and the State season opens October 15. The permit hunt area is divided into two moose management zones. One zone close to the community of Yakutat has better access by road and boat than the other area and is, therefore, more popular with subsistence moose hunters. This area has been managed with a quota of 30 bull moose since 1990, but in 2008 the quota was dropped to 20 and, in 2009, the quota was 25. With a population of 800+ people in Yakutat, these 20-30 moose are very important for subsistence. During recent years, a single family took multiple moose and, in some cases, five to six of the allowable quota, leaving hunters for other families with less opportunity.

Enforcement Issues: Determining who lives in the same household could be problematic for enforcement of this proposal unless some administrative solution requires listing all household members when acquiring a permit. Also, if more than one person per household can get a permit, there is the chance of two people from the same household taking a moose at the same time and, thereby, taking one illegal moose. If the permit is limited to one per household, all household members should be listed on the permit and should require the permit to be in possession when harvesting moose.

Other Comments: This proposal could be difficult to administer unless the proposal limits the permits to one per household. Another administrative option is to limit the number of permits per household. The State has discretionary authority to list this as a condition of a permit. Since this moose hunt is managed as a joint State/federal registration permit, parallel language is preferred. If adopted, hunters could hunt under State regulations to avoid the restrictions this federal proposal contains.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-12. The proposed change would make moose hunting regulations in Unit 5A more complicated. It does not make sense to change the harvest limit to address a problem with one person. There should be another way to address the wanton waste issue.

Wrangell-St. Elias National Park Subsistence Resource Commission

WP10-17 Executive Summary	
General Description	Proposal WP10-17 requests that authority be delegated to the U.S. Forest Service Yakutat District Ranger to establish the quota for moose in Unit 5A, except Nunatak Bench, and to close the season when the quota has been filled. This quota would be established in consultation with the Alaska Department of Fish and Game (ADF&G), the Yakutat District Ranger for Wrangell St. Elias and Glacier Bay National Park and Preserve, and the chair of the Council. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 5A — Moose** *Unit 5A, except Nunatak Bench—1 bull by joint State/Federal registration permit only.* ~~*The season will be closed when 60 bulls have been taken from the Unit. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area .*~~***The Yakutat District Ranger of the U. S. Forest Service is authorized to establish the quota, in consultation with ADF&G, the Yakutat District Ranger for Wrangell-St. Elias and Glacier Bay National Park and Preserve, and the chair of the Southeast Alaska Subsistence Regional Advisory Council, and to close the season by local announcement when the quota has been taken.*** *From Oct. 8–21, public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.* *Oct.8− Nov. 15*
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	**Support** but request confirmation that the delegated authority is to reduce the maximum harvest quota or to close if necessary to assure conservation of the moose population and does not include authority to increase the upper harvest quota.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-17

ISSUES

The Southeast Alaska Subsistence Regional Advisory Council (Council) submitted proposal WP10-17, which asks to delegate authority to the U.S. Forest Service Yakutat District Ranger to establish the quota for moose in Unit 5A, except Nunatak Bench, and to close the season when the quota has been filled. This quota would be established in consultation with the Alaska Department of Fish and Game (ADF&G), the Yakutat District Ranger for Wrangell St. Elias and Glacier Bay National Park and Preserve, and the chair of the Council.

DISCUSSION

The proponent states that the harvest quota in current regulation does not represent best management practices and is not sustainable. The proponent stated that this action is necessary to maintain a healthy moose population in Unit 5A. Federal managers share the conservation concerns expressed by the proponent and the State. It is not anticipated that the harvest quota would be increased in the foreseeable future above the level currently in regulation as a result of adoption of this proposal.

Board action on proposal WP10-22 may make this proposal moot. Proposal WP10-22 requests standardization of the in-season management of fish and wildlife in the Southeast region by removing specific references to in-season management authority in the Southeastern Alaska Area wildlife regulations. If this proposal is approved by the Federal Subsistence Board, in-season management authority to close, reopen or adjust Federal Subsistence seasons and to set harvest and possession limits for wildlife would be delegated by letter from the Board to a uniform set of fish and wildlife in-season managers.

Existing Federal Regulation

Unit 5A — Moose

Unit 5A, except Nunatak Bench—1 bull by joint State/Federal registration permit only. The season will be closed when 60 bulls have been taken from the Unit. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area. From Oct. 8–21, public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.	*Oct. 8− Nov. 15*

Proposed Federal Regulation

Unit 5A — Moose

*Unit 5A, except Nunatak Bench—1 bull by joint State/Federal registration permit only. ~~The season will be closed when 60 bulls have been taken from the Unit. The season will be closed in that portion west of the Dangerous River when 30 bulls have been taken in that area .~~**The Yakutat District Ranger of the U. S. Forest Service is authorized to establish the quota, in consultation with ADF&G, the Yakutat District Ranger for Wrangell-St. Elias and Glacier Bay National Park and Preserve, and the chair of the Southeast Alaska Subsistence Regional Advisory Council, and to close the season by local announcement when the quota has been taken.** From Oct. 8–21, public lands will be closed to taking of moose, except by residents of Unit 5A hunting under these regulations.*	*Oct. 8− Nov. 15*

Existing State Regulation

Unit 5A, except Nunatak Bench — Moose

*1 bull by registration permit only; up to 60 bulls may be taken; the commissioner may close the season in that portion west of the Dangerous River when 30 bulls have been taken from that area.**	*Oct. 15 −Nov. 15*

NOTE: For 2009 season, up to 55 bulls may be taken; however, no more than 25 bulls may be taken west of the Dangerous River*

Extent of Federal Public Lands

Federal public lands comprise approximately 98% of Unit 5A, with 64% of the Unit U.S. Forest Service (USFS) lands and 34% National Park Service lands. Federal public lands within Glacier Bay National Park are closed to subsistence use, while Glacier Bay National Preserve is open to subsistence use.

Customary and Traditional Use Determinations

Rural residents of Unit 5A have a positive customary and traditional use determination for moose in Unit 5A.

Regulatory History

The State and USFS began issuing a joint State and Federal permit for all moose hunters in Unit 5A during the 2004 season. This allowed better tracking of hunting effort and harvest and simplified the permit application and reporting process for the hunters. Since 1990, the State and Federal seasons have followed a guideline harvest of 60 bulls across all of Unit 5A, with the portion of Unit 5A west of the Dangerous River being closed when 30 bulls are taken in that area. The harvest quota information is included with the joint permit. State and Federal seasons have been closed, once the quota is met, in a joint announcement by the Yakutat District Ranger and ADF&G.

In November 2004, the State issued Emergency Order (E.O.) 01-02-04 to close that portion of Unit 5A west of the Dangerous River when the harvest reached 28 moose. In November 2007, the State again issued an E.O. (01-08-07) to close that portion of Unit 5A west of the Dangerous River when the harvest reached 28 moose. In 2008, the State and the Federal Subsistence Board reduced the total harvest quota in Unit 5A from 60 to 50 bulls with a quota of 20 bulls west of the Dangerous River, in response to continued low bull:cow ratios (Barten 2008). On October 20, 2008, the State issued E.O. 01-07-08 to close that portion of Unit 5A west of the Dangerous River when the harvest reached 20 moose. All State closures were concurrent with closures of the Federal subsistence season by the Yakutat District Ranger. For the 2009 season, in response to improved bull:cow ratios estimates after the 2008 season, the State established a harvest quota of 55 moose, restricted to 25 bulls west of the Dangerous River. The Yakutat District Ranger set the Federal subsistence harvest quota consistent with that of the State, under temporary authority delegated by the Federal Subsistence Board resulting from Special Action Request WSA09-04.

Biological Background

Please see WP10-16 for the biological background.

Harvest History

Please see WP10-16 for the harvest history.

Other Alternatives Considered

This proposal could be modified to limit the Yakutat District Ranger's authority to reduce the quota, while retaining the existing maximum quota of 60 moose, including 30 west of the Dangerous River, in addition to retaining the authority to close the season when the quota is met. This option is not recommended because granting authority to the Yakutat District Ranger to establish the quota, as requested in this proposal, allows flexibility and responsiveness to align quotas with the State if the moose population increases and allows quotas to be set higher than what is now limited by regulation. Consultation with the State will ensure appropriate harvest limits.

Another alternative would be to limit the Yakutat District Ranger's authority to close the season if there is no harvestable surplus, or when the established quota has been reached. Under this alternative, any changes to the current quota would be implemented by action of the Federal Subsistence Board. This alternative is not recommended, because it is anticipated that the harvest quota will need to be adjusted in the future, and allowing the Yakutat District Ranger to establish the quota, as requested in this proposal, will allow for establishment of the quota without additional action from the Federal Subsistence Board.

Effects of the Proposal

Adoption of this proposal will facilitate flexibility and responsiveness in managing this population, allowing the Yakutat District Ranger to determine the harvest quota for moose in Unit 5A in alignment with the State and close the season by local announcement when the quota has been taken without additional action from the Federal Subsistence Board. If, after consultation with ADF&G, the National Park Service, and the chair of the Council, a quota adjustment is considered necessary, the Yakutat District Ranger will be able to implement such an action, thus maintaining productivity and long-term subsistence opportunities. Quota adjustments during the last two seasons demonstrate that a static quota in regulation is not appropriate for management of this moose population. It is anticipated that the harvest quota will continue to be consistent between the State and Federal season, after the necessary consultation, and

indicated on the joint Federal/State permit. Furthermore, the season has been closed in a portion of the area during three of the past six seasons when the quota was reached. If this proposal is not adopted, the delegation of authority that is contained in this regulation may be addressed by Board action WP10-22.

OSM CONCLUSION

Support Proposal WP10-17.

Justification

The moose quota has been adjusted during the last two seasons in response to changes in the population of moose in Unit 5A. This demonstrates that a static quota in regulation is not appropriate for management of this moose population. Adoption of this proposal will facilitate management flexibility and responsiveness by allowing the Yakutat District Ranger, after consultation with ADF&G, the National Park Service, and the chair of the Council, to determine the harvest quota for moose and to close the season when the quota has been taken in Unit 5A without additional action from the Federal Subsistence Board. The intent of this proposal was to allow the Yakutat District Ranger to adjust the currently unsustainable harvest quota. Consequently, it is not anticipated that the harvest quota would be increased any time soon above the level currently in regulation. If this proposal is adopted, The Yakutat District Ranger is expected to consult with ADF&G and the other previously mentioned contacts regarding the quota, including consideration of an increase from the current quota if warranted by the population in the future. Consultation with ADF&G and the use of a joint Federal/State permit will ensure consistency between the Federal and State annual harvest limit.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-17. The Council determined that this proposal would benefit subsistence and non-subsistence uses by providing the in-season manager tools necessary for proper management of the moose in the Yakutat area. The harvest limit in regulations does not appear to be sustainable and must be reduced according to the health of the moose herd. This action will enhance communication between management agencies. It is the intent of the Council that this authority will be included with authorities that would be delegated to the in-season manager by letter as recommended in Proposal WP10-22.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-17

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The ISC would like to point out to the Board a few items concerning this proposal:

- Adopting this proposal would result in removal of the Federal quota from regulation. That quota serves as a harvest cap. Current harvest is below that cap.
- The upper bound of the Unit 5A moose quota in State regulation is set at 60 moose and can only be changed by action of the State Board of Game.
- A joint State-Federal moose harvest quota needs to be set annually because of the joint State-Federal harvest permit. That has been recent practice and has been working well.
- If this proposal is adopted by the Board, the ISC suggests including language in the delegation letter specifying a jointly established State-Federal harvest quota. The quota will need to be consistent with the upper bound in State regulation.
- Regulations currently in place provide a season preference for Federally-qualified rural residents. That preference would not change with adoption of this proposal.

Comments WP10-17
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-17: This proposal requests delegation of authority to the Yakutat District Ranger to determine the subsistence moose harvest quota for Unit 5A on an annual basis and to close this hunt in consultation with Alaska Department of Fish and Game and Southeast Regional Advisory Council chair when the quota is reached.

Introduction: During the past two hunting seasons, the Department lowered the harvest quota for bull moose on the west side of the Dangerous River due to low bull:cow ratios. This hunt is managed under a State/federal joint moose permit, so it is necessary for the federal season quota to be the same as that of the State. Adopting this proposal would streamline this process by delegating the authority to the District Ranger to make the decision to lower the quota and cooperate with Department management of the moose population within sustained yield principles. The Department supports the intent of this proposal to authorize the federal delegated official to close the federal moose season in a portion of Unit 5A for conservation purposes following consultation. The proposal requests the District Ranger be delegated authority "*to establish the quota,*" but the description suggests the proponent intended to request authority "*to reduce the quota*" when necessary to align the federal quota with a lowered State quota in years of low bull:cow ratios. The jointly managed moose hunt in this portion of Unit 5A is closed when 60 bulls are taken from Unit 5A, with the portion west of the Dangerous River closed when 30 bulls are taken in that area. Reductions in the quota in recent years necessitated special action by the Federal Subsistence Board in 2008 based on conservation concerns and a similar reduction in 2009. Authorizing the federal delegated official to close the federal season when the reduced quota is reached would streamline the process of closing the federal season.[1] The change in delegated authority should clarify it is not include authority to increase the quota in regulations of 60 bulls in Unit 5A with a maximum of 30 west of the Dangerous River.

Impact on Subsistence Users: None.

Opportunity Provided by State: The State of Alaska moose hunting season in Unit 5A (except in Nunatak Bench) is from October 15 through November 15 and is managed under a joint State/Federal moose permit.

Conservation Issues: This proposal will assist management of the moose herd by allowing the District Ranger to work in concert with the Department to assure the bull moose harvest is kept at a sustainable level.

Recommendation: Support but request confirmation that the delegated authority is to reduce the maximum harvest quota or to close if necessary to assure conservation of the moose population and does not include authority to increase the upper harvest quota.

[1] The current management authority of the Petersburg District Ranger exemplifies the intent of streamlining the federal process by authorizing the District Ranger to close the federal subsistence deer hunting season based on conservation concerns (harvest quota levels are expected to be reached), in consultation with the Department and the Southeast Regional Advisory Council.

WP10-18a Executive Summary	
General Description	Proposal WP10-18a requests the recognition of customary and traditional uses of moose in the Berners Bay drainage portion of Unit 1C for rural residents of Units 1C and 1D. This proposal was deferred from 2008 when it was numbered WP08-06. As was the case in 2008, this proposal is addressed in two analyses: WP10-18a addresses the customary and traditional use determination, and WP10-18b addresses the Federal season and harvest limit. *Submitted by Chuck Burkhardt of Gustavus*
Proposed Regulation	**Unit 1C Berners Bay Drainages—Moose** ~~*No Federal subsistence priority*~~ ***Rural residents of Unit 1C and 1D*** **Unit 1C Remainder—Moose** *All rural residents*
OSM Conclusion	**Take no action** unless WP10-11 is not adopted, then support.
Southeast Regional Council Recommendation	**No action taken**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-18a

ISSUES

Proposal WP10-18a, submitted by Chuck Burkhardt of Gustavus, requests the recognition of customary and traditional uses of moose in the Berners Bay drainage portion of Unit 1C for rural residents of Units 1C and 1D. This proposal was deferred from 2008 when it was numbered WP08-06. As was the case in 2008, this proposal is addressed in two analyses: WP10-18a addresses the customary and traditional use determination, and WP10-18b addresses the Federal season and harvest limit.

DISCUSSION

The Federal Subsistence Board (Board) has adopted a customary and traditional use determination for the Berners Bay drainage that does not allow a Federal subsistence priority for moose. When a proposal seeks to add a community to a customary and traditional use determination made by the Board, the analysis focuses on the community or communities identified in the proposal. In the proposal under consideration, the proponent requested the evaluation of the uses by the rural residents of Units 1C and 1D only, thus only the uses of residents in these subunits will be analyzed. Gustavus is the only rural community in Unit 1C. Skagway, Klukwan, and Haines are the rural communities in Unit 1D. These communities are the focus of this analysis. A significant factor affecting hunting effort along Berners Bay drainages is the heavily populated Juneau area (about 30,000 people). The Juneau area is a nonrural area in Federal Subsistence Management regulations. Juneau area residents are not eligible to harvest fish and wildlife under Federal subsistence regulations, and as a result the proposed customary and traditional use determination would not apply to Juneau area residents.

The Board has previously recognized the customary and traditional uses of moose by Unit 1D communities. The Board has not been asked to recognize the customary and traditional uses of moose by Gustavus.

Existing Federal Regulation

Unit 1C Berners Bay Drainages—Moose

No Federal subsistence priority

Unit 1C Remainder—Moose

All rural residents

Proposed Federal Regulation

Unit 1C Berners Bay Drainages—Moose

~~*No Federal subsistence priority*~~ ***Rural residents of Unit 1C and 1D***

Unit 1C Remainder—Moose

All rural residents

Extent of Federal Public Land

The Tongass National Forest comprises approximately 97% of the Berners Bay drainage (**Map 1)**

Regulatory History

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the Board adopted the customary and traditional use determinations from the State. The majority of the Berners Bay drainage was in the Juneau nonrural area established by the State, and the State did not allow subsistence uses in nonrural areas. As a result, the Board established a no Federal subsistence priority for moose within Berners Bay drainages. In 2002, Proposal WP02-14 requested that the Board remove the no Federal subsistence priority customary and traditional use determination for moose in the Berners Bay drainage. The Southeast Alaska Regional Advisory Council (Council) tabled the proposal until its spring 2003 meeting when staff would present information for a customary and traditional use determination in Unit 1C (SERAC 2002). However, before the next regulatory cycle the proponent withdrew the proposal (FWS 2003). In 2007, the proposal under consideration in this analysis was submitted (WP08-06). The Council requested the Board defer the proposal giving the Council the opportunity to submit its own proposal, WP10-11, requesting an evaluation of the customary and traditional uses of moose in Unit 1C by rural residents of all of Southeast Alaska, Units 1 through 5.

About 25 instances of no Federal subsistence priority exist in the Federal wildlife regulations. No Federal subsistence priority means that the Board has identified no customary and traditional uses of a resource in an area, and therefore, no Federal season or harvest limit can be adopted by the Board. Hunting may be allowed under State regulations. For Southeast Alaska, the four instances of no Federal subsistence priority are: residents of Hyder hunting brown bear in Unit 1A; residents of Gustavus hunting brown bear in Unit 1C; hunting for moose in the Berners Bay drainage of Unit 1C; and hunting for deer in Unit 1D.

Since the implementation of the Federal program in 1990, the Board has adopted two customary and traditional use determinations for moose in Southeast Alaska. One recognized uses in an area previously closed to Federal regulations, described as having no Federal subsistence priority, in Unit 1B (see WP96-04). The other reduced the pool of eligible hunters from all rural residents for a portion of Unit 3 (see WP96-10).

Community Characteristics

The proposal seeks to change the customary and traditional use determination for moose in the Berners Bay drainage from no Federal subsistence priority to the rural residents of Units 1C and 1D only. The communities under consideration in this analysis are Skagway, Klukwan, Haines, and Gustavus, roughly 3,600 people (**Table 1**).

Skagway, located in Unit 1D, is at the extreme northern end of Lynn Canal, roughly 15 miles north of Haines. The location of Skagway was once the site of a Chilkat Tlingit village, and other seasonal camps and smokehouses existed along the Skagway River (Betts et al. 1999, Goldschmidt and Haas 1998). Chilkat Tlingit controlled this area that includes what is known today as the Chilkoot Trail, the trade route over Chilkoot Pass to the Canadian Interior. Trade with the Canadian Interior was supervised by Tlingit into the twentieth century. Gold was discovered in the Klondike in the 1890s and the Chilkoot Trail was the most accessible route to the gold fields. A highway connects Skagway to the Canadian Interior.

Klukwan, located in Unit 1D, is situated on the Chilkat River, 22 road miles north of Haines at the northern end of Lynn Canal. Klukwan is a Chilkat Tlingit village of long standing and the principal town

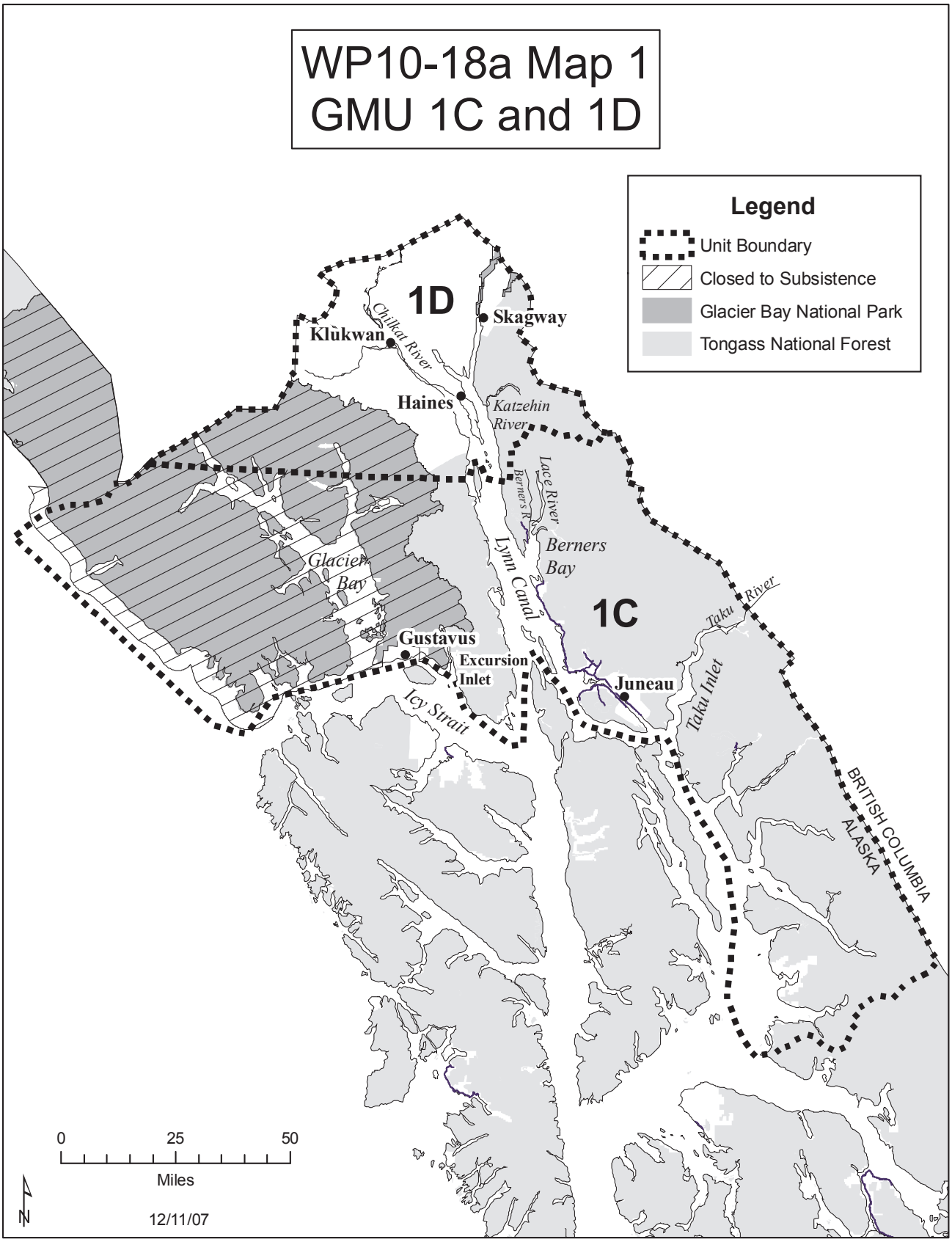
WP10-18a Map 1
GMU 1C and 1D
Legend
Unit Boundary
Closed to Subsistence
Glacier Bay National Park
Tongass National Forest
1D
1C
Skagway
Klukwan
Chilkat River
Haines
Katzehin River
Lace River
Berners R.
Berners Bay
Lynn Canal
Glacier Bay
Gustavus
Excursion Inlet
Icy Strait
Juneau
Taku River
Taku Inlet
BRITISH COLUMBIA
ALASKA
0
25
50
Miles
N
12/11/07

Table 1. Rural communities in Units 1C and 1D: population and number of households (U.S. Census Bureau 2009).

Community	2000 Population	2000 Number of Households
Skagway	862	401
Haines/Klukwan	2,392	991
Gustavus	429	199
Total	3,683	1,591

of the Chilkat Tlingit, whose territory generally includes the Chilkat River and its upper drainages and the Lynn Canal area to Berners Bay (Betts et al. 1999, Goldschmidt and Haas 1998). Several salmon canneries were located along Chilkat Inlet beginning in 1882. The nearby Dalton Trail was a route to the Canadian Interior used by many during the Klondike gold rush in the 1890s. However, the village has remained predominantly Tlingit. A highway connects Klukwan to Haines and the Canadian Interior.

Haines, located in Unit 1D, is situated at the mouth of the Chilkat River at the northern end of Lynn Canal, 80 air miles northwest of Juneau. Haines was originally occupied by Chilkat Tlingit who had villages located throughout the area. A United States military base opened in Haines in 1904 and operated through 1945 (Betts et al. 1999). Commercial fishing and logging activities added to the growth of Haines.

Gustavus is the only rural community in Unit 1C. Gustavus lies on the north shore of Icy Passage, and the surrounding area is called the forelands. Gustavus began as an agricultural homestead in 1914. It is surrounded by Glacier Bay National Park on three sides. Glacier Bay National Monument, part of the national park system, was established in 1925 and expanded in 1939. Hoonah Tlingit used the land and resources in the Gustavus area, as well as the lands and waters now inside the park (Schroeder and Kookesh 1990). A permanent community of primarily Hoonah Tlingit is located on Chichagof Island in Unit 4, across Icy Strait from Gustavus.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the following eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest that are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; (8) a pattern

of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR Part 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such customary and traditional use determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limitations or seasonal restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

Moose (*dzisk'w* in Tlingit) are recent arrivals in Southeast Alaska according to historical records (Brown 2004). The documented moose migrations into Southeast Alaska have been by way of river valley corridors from the Interior through the Coast Range. By the 1950s moose were present on all major ranges in Southeast Alaska. Prior to the migration of moose into hunting areas, moose skins and sinew were valued and traded, probably along with moose meat, by the Tlingit (Goldschmidt and Hass 1998, Kamenskii 1985 [1906], Oberg 1973). For example, Stikine Tlingit traded with Tahltan hunters in the Interior. Taku Tlingit were harvesting moose prior to 1946 from upriver areas. As soon as moose became available in Southeast Alaska, local hunters, both Native and non-Native, began utilizing this resource. Emmons (1991) lists among Tlingit crests that of moose for the Raven moiety and several Houses throughout Southeast Alaska are named after moose. In Unit 1C the first documented migration of moose was in 1962. On the Gustavus forelands, the first sightings of moose occurred in 1968. Fifteen moose calves were introduced to Berners Bay in 1958 and a supplemental release of six more calves occurred in 1960.

The use of river drainages in general to harvest wild resources in Southeast Alaska is well documented (cf. Davidson 1928, Goldschmidt and Haas 1998). Chilkat, Auk, and Taku Tlingit regularly used river drainages to access goat and bear and trap furbearers. After migrating into these areas, moose were also harvested. Cabins and smokehouses were often located on these routes where meat was preserved by smoking. Animals were hunted in the Chilkat River Valley, especially in the area of the Canadian Border, the Skagway River drainage and Taiyasanka Harbor, Chilkoot Lake, the Katzehin River drainage, and the Taku River drainage, mentioned above. Berners Bay (*Daxanáak* in Tlingit) was visited by both Chilkat Tlingit, from Skagway and Haines areas, and Auk Tlingit, from Juneau and Admiralty Island areas, to harvest wild resources during the late nineteenth and early twentieth centuries. In the nineteenth century, there were two year-round villages, seasonally occupied camps, and smokehouses located along Berners Bay drainages.

Further review of the pattern of use in Southeast Alaska indicates that, historically, moose hunting was undertaken during fall and occasionally winter or spring. Moose are generally considered to be in their prime prior to the fall rutting season.

Table 2, based on ADF&G's harvest permit database 1993–2007, is clear that most of the applicants for drawing permits for Berners Bay drainage moose (15,840 of 17,939 applicants, about 88%) were residents

Table 2. Applicants: Berners Bay drawing permit, cumulative 1993 - 2007 (ADF&G 2007).

Unit of Residence	Community	Number of applicants	Unit of Residence	Community	Number of applicants
	Nonresident	91	4	Pelican	27
	Residency unknown	4	4	Port Alexander	4
1A	Ketchikan	113	4	Sitka	409
1A	Metlakatla	9	4	Tenakee Springs	68
1A	Neets Bay	1	4	Whitestone logging camp	4
1A	Yes Bay	1	5	Yakutat	2
1B	Meyers Chuck	11	6C	Cordova	3
1C	Auke Bay	1,083	6D	Valdez	2
1C	Douglas	1,490	7	Seward	4
1C	**Gustavus**	19	8	Kodiak	43
1C	Hobart Bay	6	8	Port Lions	2
1C	Juneau	13,267	11	Copper Center	1
1C	Swanson Harbor	10	12	Tok	3
1C	Thorne Bay	5	13A	Glennallen	2
1D	**Haines/Klukwan**	544	14A	Wasilla Palmer Area	23
1D	**Skagway**	35	14C	Eagle River	5
2	Craig	38	14C	Anchorage	160
2	Kasaan	6	15A	Kenai	11
2	Klawock	1	15A	Sterling	1
2	Point Baker	1	15B	Soldotna	7
2	Port Protection	6	15C	Homer	3
2	Port St Nicholas	1	19C	Kasilof	2
3	Kake	2	20B	Eielson AFB	3
3	Petersburg	155	20B	Fairbanks	48
3	Wrangell	17	20B	North Pole	3
4	Angoon	13	20B	Two Rivers	3
4	Cube Cove	7	20D	Delta Junction	6
4	Elfin Cove	37	20E	Chicken	2
4	Funter Bay	4	22D	Savoonga	2
4	Gull Cove	2	22C	Nome	2
4	Hoonah	90	28	Barrow	15
	(*continue next column*)			TOTAL	17,939

of the nonrural Juneau area (with a population of about 30,000 people). During this same period, 35 applicants were from Skagway, 544 from Haines/Klukwan, and 19 from Gustavus. For all communities, during this 15-year period (1993–2007), on average, 1,196 people applied and 11 permits total were given out. The corresponding draw success rate was 1%.

The number of applicants from a community demonstrates that people were interested in using the area, but the actual level of interest in hunting moose in the Berners Bay drainage has not been documented.

From 1983 to 2002, residents of Skagway, Klukwan, Haines, and Gustavus obtained 11 State draw permits to hunt moose in the Berners Bay drainage. Seven hunters reported travelling by boat, one

reported use of a highway vehicle, and one reported use of an airboat (ADF&G 2009a). The State moose season in the Berners Bay drainage has not opened since 2007.

Patterns of sharing are a common characteristic of customary and traditional uses. A tradition of distribution and exchange continues as part of the great gift-giving associated with elaborate feasts and ceremonies, and between individuals and families at the everyday level (De Laguna 1990). These traditions of sharing are observed in contemporary patterns. Communities often have designated hunters or fishers for groups of relatives or neighbors. Household surveys of subsistence uses of resources conducted in Southeast Alaska indicate a pattern of sharing moose through giving and receiving (**Table 3)**. For example, many households in Skagway, Haines, Klukwan, and Gustavus indicated that they used moose even though no one in the community reported harvesting a moose. These households received moose from successful hunters in other communities. This illustrates cross-community sharing in Southeast Alaska.

Table 3. The estimated moose harvest in selected years based on household harvest surveys (ADF&G 2009b).

				% of Households that			
Community	Unit of Residence	Study Year	Estimated Harvest	Harvest	Use	Receive	Give
Skagway	1D	1987	0	0	14	15	0
Klukwan	1D	1983	84	13	27	15	6
Klukwan	1D	1987	23	4	45	30	3
Klukwan	1D	1996	68	8	67	61	7
Haines	1D	1983	4	9	24	16	6
Haines	1D	1987	0	0	30	42	4
Haines	1D	1996	2	7	65	59	11
Gustavus	1C	1987	0	0	15	14	0

While salmon continues to be the mainstay of the economy in most of Southeast Alaska, moose is an important part of wild resource harvests and uses. Hunting for large land mammals, including moose, goats, bears, and deer, is augmented and complemented by the seasonal round of collecting fish, hunting for other terrestrial and marine mammals, collecting intertidal resources, and harvesting plants from beaches, forests, and elsewhere (ADF&G 2009b).

As previously mentioned, the Board has recognized the customary and traditional uses of moose for residents of Unit 1D, including residents of Skagway, Haines, and Klukwan. The Board has not recognized Gustavus' customary and traditional uses of moose. However, Gustavus has demonstrated these uses as described by the eight factors. Since 1989 when the first open hunting season occurred at the Gustavus forelands, residents of Gustavus have harvested all or almost all of their moose from the forelands, adjacent to the community in Unit 1C, according to the ADF&G harvest database (ADF&G 2009a). Gustavus is a community of long standing, established in 1914. Additionally, the community exhibits characteristics of other rural communities, and fishing and hunting are central activities in the community (Wolfe and Walker 1987).

The rural residents of Units 1C and 1D have demonstrated customary and traditional uses of moose as described by the eight factors. The ability of residents of these communities to harvest moose in the

Berners Bay drainage has been hampered by the drawing permit process and, therefore, due to reasons beyond the control of the residents of these communities, few harvests by them from this area have been documented.

Effects of the Proposal

If this proposal is adopted, rural residents of Units 1C and 1D would be eligible to hunt moose on Federal public lands in the Berners Bay drainage area of Unit 1C under Federal subsistence wildlife regulations. There has been no open moose season in the Berners Bay drainage since 2007 due to conservation concerns, and it is not anticipated that a Federal or State season could open in 2010, and therefore, nonsubsistence uses would not be affected this year.

If this proposal is not adopted, rural residents would continue to be eligible to hunt moose in Berners Bay drainages only under State wildlife regulations and a State draw permit.

OSM CONCLUSION

Take no action on Proposal WP10-18a.

Justification

The Board is considering two proposals on this issue: Proposal WP10-11, which addresses moose in Unit 1C in its entirety, and Proposal WP10-18a, which concerns Berners Bay in Unit 1C. Proposal WP10-11 encompasses the request in WP10-18a. If the Board adopts Proposal WP10-11, and recognizes customary and tradional uses of moose in Berners Bay, then there would be no need to consider and take action on WP10-18a. However, the Board would need to consider and take action on WP10-18b in order to provide a season. If the Board does not adopt Proposal WP10-11, then it will need to consider and take action on WP10-18a, and the OSM Conclusion would be to support WP10-18a.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

No action taken on Proposal WP10-18a. The Council determined that because of action taken on Proposal WP10-11, it was unnecessary to take action on WP10-18a.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-18a

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-18A
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-18a (deferred proposal WP08-06): This proposal by Chuck Burkhardt of Gustavus would establish a customary and traditional use determination finding for rural residents of Game Management Units 1C and 1D for the moose population that occupies the Berners Bay drainage portion of Unit 1C—Berners Bay.

Customary and Traditional Use Determination: The federal staff analysis has insufficient evidence of customary and traditional use of the Berners Bay moose population by rural residents of Units 1C and 1D to support the proposed customary and traditional determination. Deficiencies in the record include:

- Most data in the analysis are for current applicants in the state drawing permit hunt and are not directly applicable to customary and traditional use.
- Of the available data, most are for Unit 1D, not Unit 1C where Berners Bay is located. Harvest data are not provided for the area in Unit 1C of the proposal.
- Very little, if anything, in the analysis portrays use of the specific moose population (Berners Bay in Unit 1C) by rural residents of Units 1C and 1D as required by §100.16(a) of the federal regulations.
- Very little, if anything, in the analysis assesses the eight regulatory factors as to use by rural residents of the area of the Berners Bay population.

Therefore, the information presented does not provide adequate evidence to support a positive finding of customary and traditional use of the Berners Bay moose population by the rural residents of Units 1C and 1D.

In fact, the Berners Bay moose population was not hunted customarily and traditionally by these rural residents. Rural residents in Units 1C and 1D have hunted and have been found to have customary and traditional uses of other moose populations.

The moose population in Berners Bay was established through a transplant 50 years ago and has provided very limited hunting opportunity, primarily to residents on the Juneau road system. Rural residents of Units 1C and 1D traditionally harvested wildlife in areas accessed more efficiently and closer to their residences than Berners Bay. Thus, a positive customary and traditional use determination will provide an indefensible preference to rural residents who historically hunted elsewhere, not in Berners Bay, and who have more readily accessible resources.

The Berners Bay portion of Unit 1C lies within the Juneau Nonsubsistence Area and, therefore, is not subject to a preference for subsistence hunting under state regulations. Because of the high level of interest in this hunt on this easily-accessible, small, recent population, hunting has been administered by drawing permit since 1993. During the period 1998 – 2006, the Department issued as many as 10 bull and 10 cow permits per year and as few as 7 bull and no cow permits. The average annual harvest during this period was 7 bulls and 4 cows (cow harvests were authorized only in 1998-2002 and in 2006). The fall 2007 hunt was closed due to low moose numbers resulting from winter mortality in 2006-07. It remains closed.

Comments WP10-18A
April 30, 2010; Page 1 of 2

Recommendation: Oppose. No evidence is presented to demonstrate that rural residents of Units 1C and 1D have a history of hunting the isolated moose population in Berners Bay or made a consistent effort on a community basis to obtain permits for the limited Berners Bay moose hunt to demonstrate a customary and traditional pattern of use. To the contrary, the federal staff analysis of residents' and/or communities' customary and traditional use of moose is based on the use of other moose populations by rural residents of Units 1C and 1D and not on moose in Berners Bay. Therefore, a finding of customary and traditional use cannot be justified.

WP10-18b Executive Summary	
General Description	Proposal WP10-18 requests the recognition of customary and traditional uses of moose in the drainages of Berners Bay in Unit 1C, for rural residents of Units 1C and 1D. It also requests establishment of a Federal season and harvest limit for moose in the Berners Bay drainages. This proposal was deferred from 2008, when it was numbered WP08-06. As was the case in 2008, this proposal is addressed in two analyses: WP10-18a addresses the customary and traditional use determination, and WP10-18b addresses the Federal season and harvest limit. *Submitted by Chuck Burkhardt of Gustavus*
Proposed Regulation	**Unit 1C — Moose** *Unit 1C — Berners Bay drainages* ~~*No open season*~~ ***Sept. 15–Oct. 15 — 1 bull, by Federal registration permit.***
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-18b

ISSUES

Proposal WP10-18, submitted by Chuck Burkhardt of Gustavus, requests the recognition of customary and traditional uses of moose in the drainages of Berners Bay in Unit 1C, for rural residents of Units 1C and 1D. It also requests establishment of a Federal season and harvest limit for moose in the Berners Bay drainages. This proposal was deferred from 2008, when it was numbered WP08-06. As was the case in 2008, this proposal is addressed in two analyses: WP10-18a addresses the customary and traditional use determination, and WP10-18b addresses the Federal season and harvest limit.

DISCUSSION

The proponent states that rural residents of Units 1C and 1D are being denied subsistence opportunity and that the current customary and traditional use designation of no Federal subsistence priority violates the letter, spirit, and intent of the Alaska National Interest Lands Conservation Act (ANILCA).

Existing Federal Regulation

Unit 1C — Moose	
Unit 1C — Berners Bay drainages.	*No open season*

Proposed Federal Regulation

Unit 1C — Moose	
Unit 1C — Berners Bay drainages ***— 1 bull, by Federal registration permit.***	*~~No open season~~* ***Sept. 15–Oct. 15***

Existing State Regulation

Unit 1C—Moose	
Unit 1C Berners Bay drainages	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 98% of Unit 1C. The U.S. Forest Service manages 63% (Tongass National Forest), and the National Park Service 35% (Glacier Bay National Park, closed to subsistence harvest). The Tongass National Forest comprises approximately 97% of the Berners Bay drainages (**Map 1).**

Customary and Traditional Use Determination

There is no Federal subsistence priority for moose in the Berners Bay drainages.

Regulatory History

Harvest regulations for moose in Unit 1C, Berners Bay are summarized in **Table 1.** The State has managed the hunt under a draw permit system since 1978, with the exception of 1985, when it was a Tier II hunt due to a change in State law. No permits were issued for the 2007, 2008, and 2009 seasons.

Table 1. State of Alaska and Federal moose hunting regulations for Unit 1C, Berners Bay drainages, since 1959. Updated from Schroeder 2005 (pers. comm.).

Year	Unit	Season Type	Season	Limit	Conditions and Limitations
1959	1C	Open	Sept 15-Oct 15	One	One bull, except Berners Bay drainages (closed)
1960-1961	1C	Open	Sept 15-Oct 15	One	One bull, except Berners Bay drainages (closed)
1962	1C	Open	Sept 15-Oct 15	One	One bull S. of Endicott-Sherman line; except Berners Bay drainages (closed)
1963-1964	1C	Open	Sept 1-Oct 15	One	One bull, North of the latitude of the Endicott
1965-1967	1C	Open	Sept 1-Oct 15	One	One moose, antlerless moose from 10/14 to 10/15 only
1968	1C	Open	Sept 1-Oct 15	One	One moose
1969-1970	1C	Open	Sept 1-Oct 15	One	One moose, closed after 50 antlerless moose are taken
1971-1973	1C	Open	Sept 15-Oct 15	One	Berners Bay drainages, one moose by permit only, up to 40 permits issued
1974	1C	Open	Sept 15-Oct 15	One	Berners Bay drainages, 50 moose by permit only
1975-1977	1C		No open season		Berners Bay drainages only
1978-1979	1C	Open	Sept 15-Oct 15	One	Berners Bay drainages, one bull by drawing permit, up to 20 permits issued
1980-1982	1C	Open	Sept 15-Oct 15	One	Berners Bay drainages, one bull by drawing permit, up to 25 permits issued
1983-1984	1C	Open	Sept 15-Oct 15	One	Berners Bay drainages, one antlerless moose by drawing permit, up to 15 permits issued
1985	1C	General	No open season		Berners Bay drainages
1985	1C	State Subsistence	Sept 15-Oct 15	One	Berners Bay drainages, one moose by Tier II permit, up to 15 permits may be issued
1986	1C	General	Sept 15-Oct 15	One	Berners Bay drainages, one moose by drawing permit, up to 7 permits issued
1987-1990	1C	General	Sept 15-Oct 15	One	Berners Bay drainages, one moose by drawing permit, up to 5 permits issued
1991-1992	1C	General	Sept 15-Oct 15	One	Berners Bay drainages, one moose by drawing permit, up to 10 permits issued
1993-2000	1C	General	Sept 15-Oct 16	One	Berners Bay drainages, one moose by drawing permit, up to 20 permits issued
2001-2007	1C	General	Sept 15-Oct 17	One	Berners Bay drainages, one moose by drawing permit, up to 30 drawing permits issued
2008-2009	1C	General	No open season		Berners Bay drainages
1991-2009	1C	Federal Subsistence	No open season		Berners Bay drainages

A similar proposal, WP02-14, was submitted to the Federal Subsistence Management Program in 2002. It is discussed in WP10-18a.

Biological Background

Berners Bay moose are an introduced population in a small, geographically isolated location. Fifteen moose calves from the Matanuska and Susitna Valleys were released in Berners Bay in 1958, and a supplemental release of 6 more calves occurred in 1960. This introduction was a cooperative effort by the ADF&G, FWS, Territorial Sportsmen, and the U.S. military (Nelson 1959, in Burris and McKnight 1973). The geography of the area allows for minimal immigration or emigration, and has limited habitat. Because of this, ADF&G has used a variety of harvest management strategies, changing the harvest from bulls only to bulls and cows, in an attempt to balance the herd's sex ratio and to keep the population size within the carrying capacity of the habitat. The use of a habitat capability model and moose browse surveys in the early 1980s helped develop the present management strategy of keeping the post-hunt population at no more than 90 moose observed during aerial surveys to assure the herd does not exceed a level the habitat can support (Barten 2008).

Population Information

As of 2006, the Berners Bay moose population appeared to be near the estimated carrying capacity of between 100 and 150 animals (Barten 2008). Subsequent surveys by White and Barten (2009, **Table 2)** indicate that the population has declined approximately 30% since 2006, which they attribute to harsh winter conditions resulting in poor spring body condition and moderate-low adult survival and pregnancy rates. Low calf survival rates (including summer predation mortality) are another factor in the population decline (White and Barten 2009). Moose in Berners Bay are subject to predation by wolves, brown bears, and black bears, but the amount has not been quantified. ADF&G has not issued any harvest permits for this hunt for the last three seasons (2007, 2008, and 2009) due to conservation concerns about the population. Population estimates are not available for surveys prior to 2006 because there were no collared moose to develop sightability correction factors. Prior to 2006, ADF&G assumed that 80-90 moose observed equated to a population within the estimated carrying capacity (Barten 2008). Survey results from 1990-2009 are included in **Table 3.** ADF&G uses the aerial survey results to determine the number of bull and cow moose draw permits issued. The low numbers of moose seen in the fall 2009 survey are similar to the last two fall surveys and indicate that harvest in 2010 is not recommended.

Habitat

Radio-collared moose in the Berners Bay area primarily use lowland areas close to the major rivers and do not utilize alpine areas (White and Barten 2009). The majority of the Berners Bay drainages (including the most important moose habitats) are managed by the USFS in an undeveloped condition.

Although, there is no current road access to the primary hunt area, the State of Alaska is in the design and permitting stages for the Juneau Access Road. This project, if completed, would provide highway access to the Berners Bay area, cross moose winter habitat (White and Barten 2009), and facilitate human access to the area. This highway could impact the Berners Bay moose population by reducing habitat, blocking migration, improving access for legal and illegal harvest, and causing moose-vehicle collisions (Bangs et al. 1989, Seiler et al. 2003, Seiler 2005). Currently, the Juneau road system accesses Berners Bay with a boat ramp on the south end at Echo Cove. The Echo Cove boat ramp is approximately 38 road miles from downtown Juneau and ten miles by water from the primary hunt area (see **WP10-18a, Map 1).**

Table 2. Population estimates for Berners Bay moose 2006-09 (White and Barten 2009, Scott 2010, pers. comm.).

Survey Year	Survey Date	Total Moose Seen	Total Marked Moose	Marked Moose Seen	Proportion Moose Observed	Population Estimate
2006	11/25/2006	85	31	22	0.71	119 ± 22
2006	1/11/2007	76	31	20	0.65	116 ± 25
2006	1/26/2007	69	31	16	0.52	131 ± 36
2006	2/13/2007	78	30	19	0.63	121 ± 27
2007	12/19/2007	59	30	17	0.57	102 ± 25
2007	1/7/2008	62	30	18	0.60	102 ± 23
2007	2/18/2008	41	28	13	0.46	86 ± 26
2007	2/23/2008	34	28	11	0.39	84 ± 29
2008	12/16/2008	33	32	12	0.38	85 ± 28
2008	2/17/2009	55	32	21	0.66	83 ± 15
2009	12/15/2009	51	33	22	0.65	78 ± 18

Harvest History

The first limited open moose hunting season in Berners Bay was held in 1963, when 4 bulls were harvested. Since that time, the annual harvest has ranged from 0 to 23 animals (Barten 2008). **Table 4** shows the numbers of draw permits issued and moose harvested from 1983 through 2009. The number of permits issued remained steady between 2003 and 2006. However, this is down from the previous ten years when between 15 and 20 permits were issued each year. Hunters that receive permits have a high success rate, ranging from 60% to 100% in any given year. The success rate is high because the narrow valley bottoms containing moose habitat concentrate moose along the river corridors that provide hunter access. The season has been closed since 2007 due to conservation concerns resulting from mortality during the last three winters.

Table 5 shows the Berners Bay moose harvest by community of residence for 1990 through 2006. **Tables 6 and 7** show the community of residence for applicants for the Berners Bay bull (hunt DM041) and antlerless (hunt DM042) harvest permits from 1993 through 2007. It is likely that many of the applicants for the bull hunt also apply for the antlerless hunt. By far, the majority of applicants and successful hunters come from the Juneau area. Haines shows a consistent number of applicants that exceeds the number of permits issued on a yearly basis. Gustavus and Skagway show fairly consistent low numbers of applicants. Thus, the demand for moose from the communities proposed for a positive customary and traditional use determination appears to be greater than the harvestable surplus.

Effects of the Proposal

Prior to addressing this proposal, the Federal Subsistence Board (Board) must first make a positive finding of customary and traditional use to identify who qualifies as Federally qualified users for harvest of Berners Bay moose. This issue is addressed in the analyses for proposals WP10-11 and WP10-18a. If the Board makes a positive customary and traditional use determination for Berners Bay moose, however, given the small moose population and limited harvestable surplus, it may be necessary to close Federal public lands to non-Federally qualified users. Additionally, it may be necessary to further limit the pool of Federally qualified users through an ANILCA section 804 analysis.

Adopting this proposal would establish a Federal subsistence harvest season in Berners Bay drainages in Unit 1C. The proposed season would run from September 15–October 15 and have a one bull harvest

Table 3. Survey data for the Berners Bay moose herd 1990-2009 (Barten 2008, 2010, pers. comm.; White and Barten 2009).

Survey Year	Survey Date	Bulls	Cows	Calves	Unknown	Total moose	Count time (hrs)	Bulls per 100F	Calves per 100F	Calves % in herd	Moose per hour
1990		14	53	18	0	85	2.6	26	34	21	33
1991		---	---	11	50	61	1.2	---	---	18	50
1992		14	61	8	0	83	2.8	23	13	10	29
1993		---	---	12	45	67	2.8	---	---	18	24
1994		17	45	13	0	75	2.0	38	29	17	38
1995						No Survey					
1996						No Survey					
1997		6	11	12	31	60	2.1	---	---	20	29
1998		14	9	10	37	70	2.6	---	---	14	27
1999		14	11	13	70	108	2.4	17	16	12	45
2000		---	10	12	57	79	2.4	---	---	15	33
2001		---	10	10	46	66	2.0	---	---	15	33
2002		---	4	4	50	58	2.2	---	---	7	26
2003		18	50	13	0	81	---	36	26	16	31
2004		---	---	12	74	86	---	---	---	14	26
2005		15	72	13	0	100	---	21	18	13	40
2006	11/11/2006	10	56	9	0	75	---	18	16	12	21
2006	11/25/2006	10	60	12	3	85	---	17	20	14	---
2006	1/11/2007	3	9	11	53	76	---	---	---	14	---
2006	1/26/2007	1	6	7	55	69	---	---	---	10	---
2006	2/13/2007	0	6	8	64	78	---	---	---	10	---
2007	12/19/2007	10	44	5	0	59	---	23	11	8	---
2007	1/7/2008	5	5	5	47	62	---	---	---	8	---
2007	2/18/2008	0	0	5	36	41	---	---	---	12	---
2007	2/23/2008	0	0	2	32	34	---	---	---	5	---
2008	12/16/2008	3	22	3	5	33	---	11	14	9	---
2008	2/17/2009	0	8	8	39	55	---	---	---	15	---
2009	12/15/2009	12	20	4	15	51	3.0	34	11	8	17

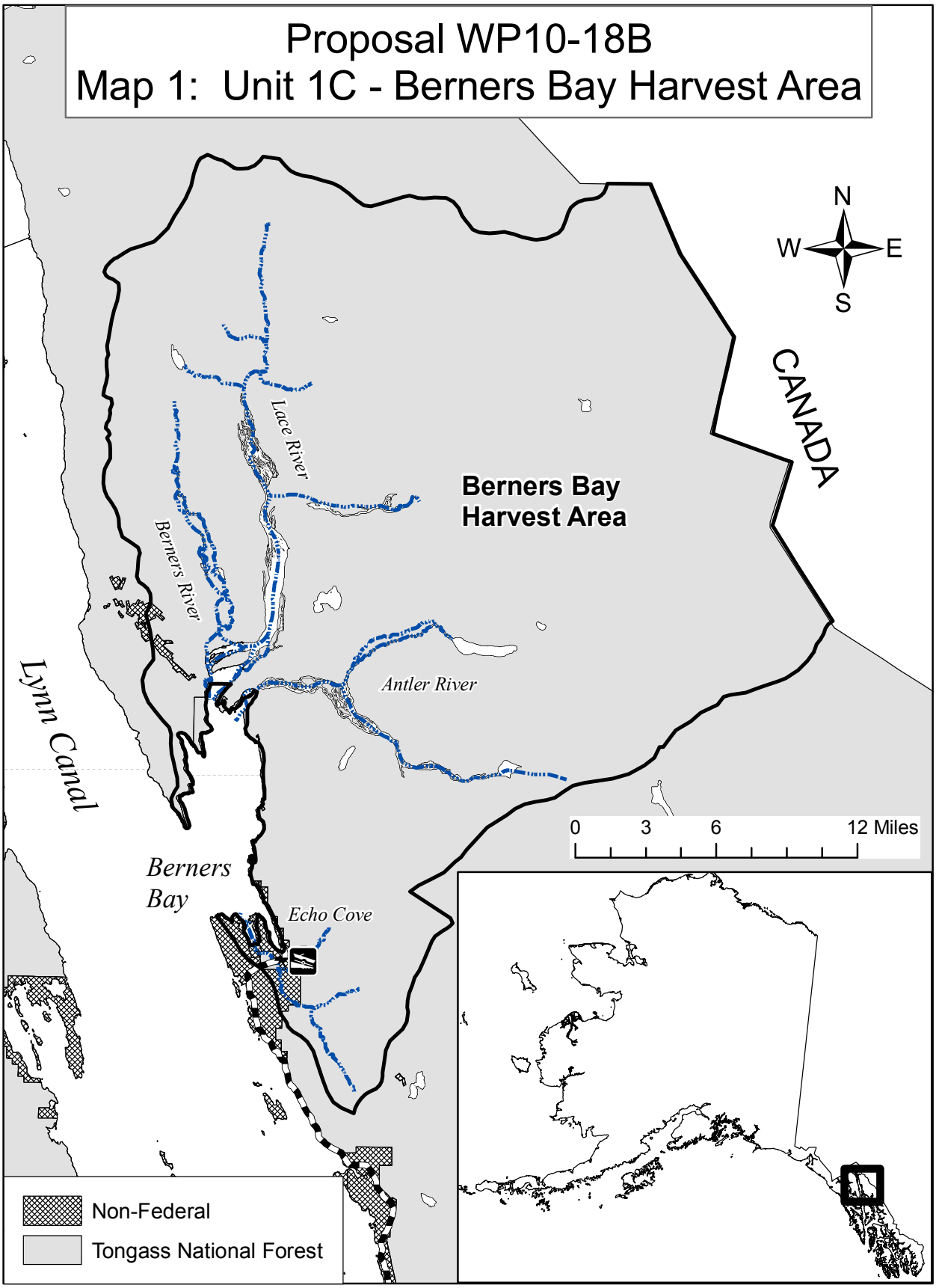
Proposal WP10-18B
Map 1: Unit 1C - Berners Bay Harvest Area
N
W
E
S
CANADA
Lace River
Berners River
Berners Bay Harvest Area
Antler River
Lynn Canal
Berners Bay
Echo Cove
0
3
6
12 Miles
Non-Federal
Tongass National Forest

Table 4. Number of permits issued and moose harvested in Unit 1C, Berners Bay 1983 through 2009 (ADF&G 2007a, 2007b; Haynes 2007, pers. comm., Barten 2008).

	Permits			Harvest			
Year	Bulls	Cows	Total	Bulls	Cows	Unknown	Total
1983	---	---	---	---	8	1	9
1984	---	---	---	1	13	0	14
1985	---	---	---	8	5	0	13
1986	---	---	---	5	0	0	5
1987	---	---	---	5	0	0	5
1988	---	---	---	4	0	0	4
1989	---	---	---	5	0	0	5
1990	---	---	5	5	0	0	5
1991	---	---	10	5	5	0	10
1992	---	---	10	5	4	0	9
1993	8	7	15	7	7	0	14
1994	8	7	15	8	6	0	14
1995	8	7	15	11	2	0	13
1996	9	8	17	7	7	0	14
1997	8	7	15	8	7	0	15
1998	8	7	15	8	7	0	15
1999	10	8	18	10	5	0	15
2000	10	10	20	8	7	0	15
2001	10	10	20	7	6	0	13
2002	8	7	15	5	4	0	9
2003	9	0	9	8	0	0	8
2004	8	0	8	6	0	0	6
2005	8	0	8	5	0	0	5
2006	6	2	8	5	2	0	7
2007	0	0	0	0	0	0	0
2008	0	0	0	0	0	0	0
2009	0	0	0	0	0	0	0

limit by Federal registration permit. Such a season would provide opportunity for Federally qualified rural residents to harvest moose on Federal public lands.

If harvest under a registration permit is allowed, permit stipulations limiting the day, time of day, or number of permit holders in the field at a given time, and requiring harvest reporting in a short period of time would be needed. Local in-season management authority for the Federal land manager would be necessary so that the season could be closed when the target harvest level is achieved. Without these or similar restrictions, a registration permit harvest season would likely result in over-harvest because of the remote nature of the hunt and high success rate. The moose population in this area is small and vulnerable, even at optimal population levels, and the harvest of even a few extra moose could result in a conservation concern.

Adoption of this proposal would not allow for the harvest of cow moose. ADF&G has used cow harvest to maintain herd composition and population levels within management goals. This is an important aspect of management for such a small population with limited habitat. Cow harvest permits would not be needed every year, but would depend on yearly population survey results.

Table 5. Residency of successful hunters in the Berners Bay portion of Unit 1C (State hunts DM041and DM042), from 1990 through 2007 (T. Cunning 2007, pers. comm., Barten 2008.).

Year	Residency											Total
	Anchorage	Angoon	Auke Bay	Douglas	Fairbanks	Haines	Juneau	Nome	Petersburg	Sitka	Non-resident	
1990							5					5
1991						1	9					10
1992							9					9
1993						1	13					14
1994						1	13					14
1995	1						11	1				13
1996							14					14
1997							13			1	1	15
1998			2	1		1	9		1	1		15
1999			2	2		1	10					15
2000			2	1	1		10		1			15
2001	1		3	1			7		1			13
2002				2		1	6					9
2003		1	1	1			5					8
2004				1			5					6
2005							5					5
2006			1				6					7
2007												0
Total	**2**	**1**	**11**	**9**	**1**	**6**	**150**	**1**	**3**	**2**	**1**	**187**

Table 6. Residency of applicants for the Unit 1C, Berners Bay, bull moose hunt (State hunt DM041) for the 1993/94 through 2007/08 regulatory years (T. Cunning 2007, pers. comm.). Only communities proposed for a positive customary and traditional use determination are individually labeled.

Year	Community						
	Excursion Inlet	Gustavus	Haines	Klukwan	Skagway	Other	Unknown
1993			6			595	55
1994		1	14			648	88
1995			28			748	68
1996			22		2	746	56
1997			19		5	586	30
1998			31		1	596	60
1999		1	38		4	864	
2000		1	31		2	882	
2001		1	32			800	
2002		1	28		2	795	
2003		5	19		3	746	
2004		2	16			720	
2005			12			597	
2006			15		2	507	
2007			7			458	

Table 7. Residency of applicants for the Unit 1C, Berners Bay, antlerless moose hunt (State hunt DM042) for the 1993/94 through 2007/08 regulatory years (T. Cunning 2007, pers. comm). Only communities proposed for a positive customary and traditional use determination are individually labeled.

	Community						
Year	Excursion Inlet	Gustavus	Haines	Klukwan	Skagway	Other	Unknown
1993			5			559	55
1994		1	13			608	90
1995			26			712	66
1996			19		1	669	53
1997			20		6	535	25
1998			20		1	539	55
1999		1	23	1		762	
2000		1	27		3	827	
2001		1	33			745	
2002		2	28		2	750	
2003						6	
2004							
2005							
2006		1	11		1	342	
2007							

OSM CONCLUSION

Oppose Proposal WP10-18b.

Justification

There is a conservation concern for the Berners Bay moose population. There has been a downward population trend since 2006 and recent surveys indicate that the moose population remains well below objectives. The ADF&G has not issued harvest permits since the 2006 season and, until the population can withstand harvest, a Federal season is not warranted.

If the Board recognizes a positive customary and traditional use determination for moose in this area, and if a Federal season is opened at some point in the future, an ANILCA Section 804 analysis would have to be conducted as the harvestable surplus is small and only limited opportunity is likely to be available.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-18b. The Council determined that it would be very difficult to administer a hunt for this small population of moose. Proposals that result in significant changes to subsistence regulations should be accompanied by evidence that the change is supported by more than one individual. Because of the substantial evidence presented regarding the concern for conservation of the moose population in Berners Bay, the Council did not think it appropriate to open a moose hunt in this area at this time.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-18b

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments on WP10-18b
April 30, 2008, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-18b: The proposal would establish a federal season and bag limit for moose by federal registration permit in the Berners Bay drainages of Unit 1C.

Introduction: The moose population in Berners Bay was established through a transplant 50 years ago and has provided a very limited hunting opportunity in each year that a season occurred. ANILCA clearly states its goal of protecting the "continued" subsistence use of fish and wildlife. Rural residents of Units 1C and 1D traditionally harvested fish and wildlife in locations accessed more efficiently and closer to their residences. If a federal season is established, the area will also likely be closed to non-federally qualified subsistence users for moose hunting. Such a closure will deprive Juneau residents, some of whom were previously rural residents who still maintain a subsistence way of life, the opportunity to hunt moose.

Opportunity Provided by State: The Berners Bay portion of Unit 1C lies within the Juneau Nonsubsistence Area and, therefore, is not open to subsistence hunting under state regulations. Moose were first introduced to the Berners Bay area with transplants from the Matanuska-Susitna Valley in 1958 and 1960. Because of the high level of interest in this hunt on this easily-accessible, small population, hunting has been administered by drawing permit since 1993 and is open to both residents and nonresidents during a September 15 – October 15 season. During the period 1998 – 2006, the Alaska Department of Fish and Game issued as many as 10 bull and 10 cow permits per year for this hunt and as few as 7 bull and no cow permits. The average annual harvest during this period was 7 bulls and 4 cows (cow harvests were authorized only in 1998-2002 and in 2006). The fall 2007 hunt was closed due to low moose numbers resulting from winter mortality in 2006-07 and remains closed due to conservation concerns.

Conservation Issues: The state administers drawing permit hunts, such as for the Berners Bay moose hunt, when participation must be limited for conservation purposes. Based on data collected from radio-collared cow moose in Berners Bay, the Alaska Department of Fish and Game estimates a mortality rate of nearly 20% of the cows during 2007-2008. Subsequent surveys indicate the population has continued to decline by 30% since 2006. The department estimates the population in 2009 to be approximately 78. The state management plan calls for a post-hunt count of 90 moose. Based on this information, no permits have been issued since 2007 and very conservative management of this moose population will be required for the next few years to allow it to recover enough to again sustain a harvest.

Other Comments: A federal season would result in unnecessary restrictions on non-federally qualified subsistence users, in violation of section 815 of ANILCA.

Recommendation: Oppose. The state hunt will likely not be opened for several more years. Authorizing moose harvest in the Berners Bay area is not supported by substantial evidence as necessary to provide for continued subsistence use, would violate ANILCA section 815, and would be inconsistent with recognized principles of wildlife conservation.

WP10-19 Executive Summary	
General Description	Proposal WP10-19 requests that the Federal subsistence season for hunting antlerless Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) in Unit 2, be changed from October 15 through December 31, to September 15 through October 15. *Submitted by D. J. O'Brien*
Proposed Regulation	**Unit 2 — Deer** *5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period ~~Oct. 15 – Dec.31,~~* ***Sept. 15 – Oct. 15.*** *You are required to report all harvests using a joint Federal/State harvest report. The Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.* — *July 24 – Dec. 31* *The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-19

ISSUES

Proposal WP10-19, submitted by D. J. O'Brien, requests that the Federal subsistence season for hunting antlerless Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) in Unit 2, be changed from October 15 through December 31, to September 15 through October 15.

DISCUSSION

The proponent expressed concern that the current Federal subsistence regulations in Unit 2 allows harvest of does that are likely to have been bred and are carrying the next year's fawn cohort. The proponent believes that by adjusting the season in which an antlerless deer may be harvested, a larger deer population will result, as recruitment in succeeding years would increase. The proponent acknowledges the antlerless deer season will be reduced for subsistence hunters, but believes over the years, both Federally qualified and non-Federally qualified hunters will benefit from greater overall deer populations.

The issues include: 1) whether there is a decline in the deer population in Unit 2, and if so, what role is played by the harvest of antlerless deer; 2) whether adopting the proposal would maintain, increase or decrease subsistence opportunity; and 3) whether adopting the proposal would negatively impact subsistence users or other uses of deer in Unit 2.

Since 1996, the Southeast Alaska Subsistence Regional Advisory Council (Council) and the Federal Subsistence Board (Board) have addressed 35 proposals requesting changes in deer hunting regulations for Unit 2. The antlerless deer hunt in Unit 2 has been deliberated several times in previous Federal subsistence regulatory cycles. In 2000, 2002, 2004 and 2007, the Board determined there were no overall population concerns requiring elimination or modification of the antlerless deer harvest in Unit 2.

In 2004, the Council initiated a cooperative planning process to address Unit 2 deer management and Federal harvest regulations. The planning process was conducted by a subcommittee of the Council, the Unit 2 Deer Planning Subcommittee (Subcommittee) which included hunters, users, and managers of deer. The Subcommittee presented its consensus recommendations to the Council in the Unit 2 Deer Management Final Report (Caulfield 2005). In April 2006, the Council submitted the Unit 2 Deer Planning Process (A Report from the Southeast Alaska Subsistence Regional Advisory Council to the Federal Subsistence Board). The Council recommended no major changes to Unit 2 deer harvest management for three to five years (2009 – 2011).

Existing Federal Regulation

Unit 2 — Deer

5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15 – Dec. 31. You are required to report all harvests using a joint Federal/State harvest report. The Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.	*July 24 – Dec. 31.*
The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally-qualified subsistence users hunting under these regulations.	

Proposed Federal Regulation

Unit 2 — Deer

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The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.	

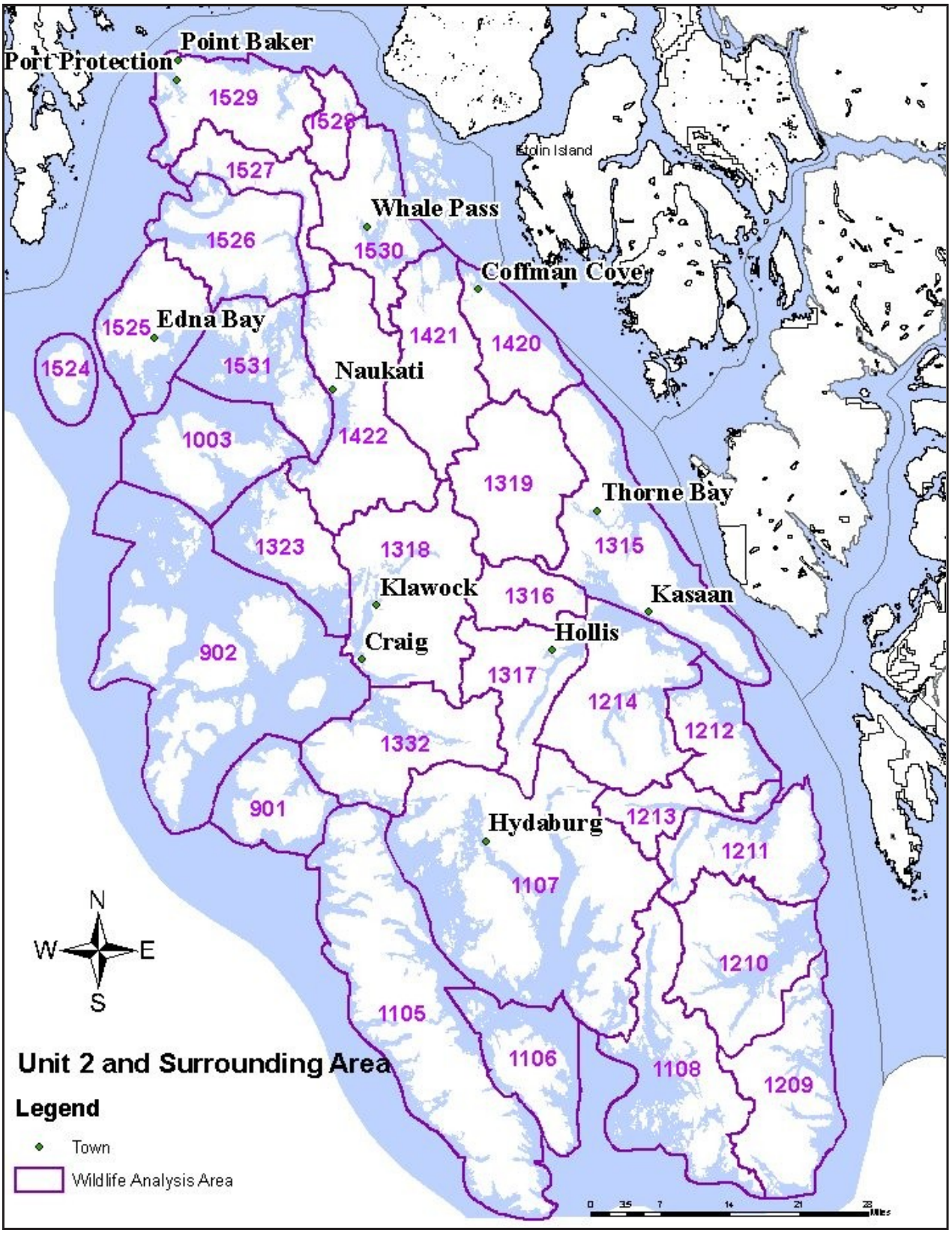
Existing State Regulations

Unit 2 — Deer

Four bucks	*Aug 1 – Dec 31.*

Extent of Federal Public Lands

Federal lands compromise approximately 85% of Unit 2 and consist mainly of USFS lands administered by the Tongass National Forest (**Map 1**).


Point Baker
Port Protection
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Etolin Island
Whale Pass
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Edna Bay
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1420
1524
1531
Naukati
1003
1422
1319
Thorne Bay
1323
1318
1315
Klawock
1316
Kasaan
Hollis
Craig
902
1317
1214
1212
1332
901
Hydaburg
1213
1211
1107
N
W
E
S
1210
1105
1106
1108
1209
Unit 2 and Surrounding Area
Legend
Town
Wildlife Analysis Area

Customary and Traditional Use Determination

Rural residents of Units 1A, 2, and 3 have a positive customary and traditional use determination to harvest deer in Unit 2.

Regulatory History

State hunting regulations permitted the harvest of antlerless deer from 1925 through 1978 (**Table 1**). Between 1978 and 1995, there was not a season for antlerless deer, except in 1987. There is currently no antlerless season in the State hunting regulations (ADF&G 2009a). The current Federal subsistence regulation which allows the harvest of one antlerless deer in Unit 2 was adopted in 1995.

The dates for antlerless deer seasons vary by unit in State and Federal regulations. Units 1C, 4, 6, and 8 allow for antlerless deer harvest in both State and Federal regulations, beginning Sept. 15 or Oct. 15 (depending upon Unit) and antlerless season continues through December 31. In Units 6 and 8, the Federal subsistence hunting regulations allow antlerless season to continue through Jan. 31. Current Federal subsistence regulations in Unit 2 allow Federally qualified hunters to harvest five deer with an option to take one antlerless deer as part of the five deer bag limit from Oct. 15 – Dec. 31.

Current Federal subsistence regulations define "Antlerless" as *any caribou, deer, elk, or moose not having visible antlers attached to the skull*.

Current Events Involving Species

Three recommendations provided in the Unit 2 Deer Management Final Report (2005) are currently ongoing on Prince of Wales Island (POW), which focus on Unit 2 deer management and subsistence information needs.

A preliminary study estimating deer abundance using DNA from fecal pellets was conducted in three POW watersheds from 2006 – 2008 (Person et al. 2009). Preliminary results are positive and substantiate that DNA from fecal deer pellets may provide a new tool for estimating populations in areas where visual counting is unfeasible. The hope is that this DNA mark-recapture methodology can be investigated further and expanded to provide cost effective estimates of deer abundance across POW and SE Alaska. The study extrapolated the average estimates of deer density from the three sample areas and estimated the deer populations on POW at 64,100 in 2006, 57,700 in 2007 and 44,500 in 2008 and in all of Unit 2 (including adjacent islands) at 93,200 in 2006, 83,930 in 2007, and 67,700 in 2008. This estimate indicated that the deer population declined approximately 30% from 2006. The study deducted the decline was most likely due to the prolonged snowy winters of 2006/07 and 2007/08.

The Craig Community Association (CCA) began a Unit 2 Subsistence Uses and Needs Study in May 2007. The research project involved four aspects of data gathering: 1) literature review; 2) key respondent interviews with mapping activities; 3) household and hunter surveys, and 4) documentation of the use of deer at community events. This study gathered hunting and use patterns of Federally qualified subsistence users and non-Federally qualified users to determine if there are any differences in use patterns. Surveys were completed in POW communities and the Ketchikan area. A draft report is anticipated in January 2010.

The joint USFS and ADF&G Unit 2 Deer Harvest Reporting Program began in 2005. Since that time, the Unit 2 deer harvest reporting rate has increased from approximately 42% to over 90%. Multiple strategies that have been implemented to achieve increased deer harvest reporting include: press releases requesting

Table 1. Regulatory History for Unit 2 Deer Hunting (State and Federal Subsistence Regulations)

Year	Type of Season	Season	Limit	Conditions and Limitations
1925	Open	15 Sep - 16 Dec	3	Bucks, 3” or greater antler growth
1925 - 1929	Open	01 Sep - 30 Nov	3	Bucks, 3” or greater antler growth
1930 - 1941	Open	20 Aug - 15 Nov	2	Bucks, 3” or greater antler growth
1942 - 1943	Resident	16 Sep - 15 Nov	2	Bucks, 3” or greater antler growth
1942 - 1943	Non-resident	16 Sep - 15 Nov	1	Bucks, 3” or greater antler growth
1944 - 1948	Resident	1 Sep - 07 Nov	2	Bucks, 3” or greater antler growth
1944 - 1948	Non-resident	01 Sep - 07 Nov	1	Bucks, 3” or greater antler growth
1949	Resident	01 Sep - 15 Nov	2	Bucks, 3” or greater antler growth
1949	Non-resident	01 Sep - 15 Nov	1	Bucks, 3” or greater antler growth
1950 - 1951	Resident	20 Aug-15 Nov	2	Bucks, 3” or greater antler growth
1950 - 1951	Non-resident	20 Aug-15 Nov	1	Bucks, 3” or greater antler growth
1952	Open	20 Aug - 22 Nov	2	Bucks, 3” or greater antler growth
1953 - 1954	Open	20 Aug - 22 Nov	3	Bucks, 3” or greater antler growth
1955	Open	20 Aug - 22 Nov	3	3 bucks or 2 bucks and one doe; bucks 3” or greater antler growth
1956	Open	20 Aug - 26 Nov	4	3 bucks or 2 bucks and one doe; does 11/13 –11/26
1957 - 1958	Open	20 Aug - 30 Nov	4	Does allowed 10/15-11/30
1959	Open	08 Aug - 30 Nov	4	4 bucks or 3 bucks and one doe or 2 bucks and 2 does; bucks only before 10/01
1960	Open	20 Aug - 15 Dec	4	4 bucks or 3 bucks and one doe; bucks only before 10/15 four bucks or 3 bucks and one doe or 2 bucks and 2 does; bucks only before 10/01
1961	Open	01 Aug - 30 Nov	4	Only 2 antlerless; antlerless only from 9/15-11/30
1962	Open	01 Aug - 15 Dec	4	Antlerless deer from 9/15-12/15 only
1963 - 1967	Open	01 Aug - 31 Dec	4	Antlerless deer from 9/15-12/15 only
1968	Open	01 Aug - 15 Dec	4	Antlerless deer from 9/15-12/15

1969 - 1971	Open	01 Aug - 31 Dec	4	Antlerless deer from 9/15-12/31 only
1972	Open	01 Aug - 31 Dec	3	Antlerless deer from 11/01-11/30
1973 - 1977	Open	01 Aug - 30 Nov	3	One antlerless deer from 11/01-11/30
1978 - 1984	Open	01 Aug - 30 Nov	3	Antlered deer
1985 - 1986	State Subsistence General	01 Aug - 30 Nov	3	3 antlered deer
1987	State Subsistence General	01 Aug - 30 Nov	3	3 antlered deer, 1 antlerless deer from 10/10-10/31
1988 - 1990	State and Fed Subsistence	01 Aug - 31 Dec	4	Antlered deer
1991 - 1994	State and Fed Subsistence	01 Aug - 31 Dec	4	Antlered deer
1995 - 2005	State	01 Aug - 31 Dec	4	4 buck deer
1995 - 2000	Fed Subsistence	01 Aug - 31 Dec	4	4 antlered deer. Not more than one may be antlerless deer; antlerless deer may be taken only during 10/15-12/31
2001 - 2002	Fed Subsistence	01 Aug - 31 Dec	4	4 antlered deer. Not more than one may be antlerless deer; antlerless deer may be taken only during 10/15-12/31
2003 - 2005	Fed Subsistence	24 Jul - 31 Dec	4	4 antlered deer. Not more than one may be antlerless deer; antlerless deer may be taken only during 10/15-12/31
2006 -2009	Fed Subsistence	24 July – 31 Dec	5	5 deer, however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15 – Dec. 31.

Unit 2 deer hunting harvest report forms in POW, Ketchikan, Wrangell, and Petersburg newspapers; flyers posted in all POW villages and on Inter-Island Ferry; radio spots on Ketchikan networks; three independent harvest report letters to non-respondents; one certified letter mailing to non-respondents, and telephone interviews.

During early 2010, the U. S. Forest Service (USFS), CCA, and Todd Brinkman (Institute of Arctic Biology, University of Alaska, Fairbanks) anticipate presenting summaries of the Brinkman DNA Study, Unit 2 Deer Use and Needs Study, and Unit 2 Deer Harvest Reporting Program in POW communities and Ketchikan, as recommended by Unit 2 Deer Management Report (Caulfield 2005).

Biological Background

Research conducted in Southeast Alaska indicates that high-volume, mature forests at lower elevations are needed to sustain deer populations during severe winters (Schoen and Kirchhoff 1985; Hanley and Rose 1987; Yeo and Peek 1992). Large, strong branches of mature stands intercept snow and maintain available forage. Productive, higher volume stands of old-growth forests support the largest biomass of herb and shrub forage (Alaback 1982). Deer populations are affected by the combination of deep-snow winters and large amounts of winter range converted to second-growth. Snow reduces or eliminates forage availability in young clearcuts. Closed canopy young-growth stands provide little forage in any season (Schoen and Kirchhoff 1990; Hanley et al. 1989). In Southeast Alaska, second-growth forests develop a closed canopy state after approximately 25-30 years which creates an understory with less deer forage for up to 200 years, or until understory development advances (Alaback 1984).

In Unit 2, the deer breeding season (or rut) peaks during late November. Most female deer breed during their second year of life and continue producing fawns annually until they are 10 or 12 years of age (Johnson 1987). Fawns are born in early June and typically weigh six to eight pounds at birth. The ratio of male and female fawns born each year is often assumed to be 50:50, however, Trainer et. al (1976) found male fawns made up 29-61% of the fetuses examined over several years of study.

If the deer population in Unit 2 has reached the carrying capacity of the available habitat, mortality may be considered compensatory and antlerless harvest can increase, because some portion of natural mortality can be captured in harvest (Erickson et al. 2003). At this time, most biologists believe predators, especially wolves and to some extent, black bears, not regulated hunting, prevent Unit 2 deer from reaching carrying capacity levels. Deer populations may be 30 – 40% lower on islands where wolves are present versus island where wolves are not present (Darimont, et al. 2004). If carrying capacity has not been reached or exceeded, a general rule is that deer herds increase if you shoot only bucks and the harvest of antlerless deer may be considered as additional mortality. However, there are trade-offs, if deer populations on POW remain below carrying capacity levels, deer are generally in better body condition, therefore, have greater potential to survive and produce healthy offspring.

For the purpose of this proposal, antlerless deer are defined as female deer of all age classes, all male deer less than one year old – commonly referred to as button bucks, buck fawns, or nubbin bucks, and a small percentage of male deer that are over one year old, but have very small, stunted, non-visible antler projections and are generally small in body size as well. Also, mature male deer typically begin to shed their antlers during December, which changes their status from antlered bucks to antlerless deer during this period, and may be harvested through December 31st.

Habitat Conditions and Trends

The Unit 2 Deer Management Report (Caulfield 2005) identified young growth forest management as a major deer management issue and described the potential to thin young growth forest stands to benefit deer and other wildlife. Studies during the 1980s, determined that pre-commercial thinning of 20-30 year of old stands did not appear to result in growth of understory shrubs and herbs that would benefit deer. However, Alaback (2003) suggested if thinning treatments are conducted to improve wildlife habitat, especially on poorer sites, it is crucial to concentrate on areas with a rich and diverse understory initially. In 2006, the USFS identified priority Wildlife Analysis Areas (WAAs) to focus young growth forest rehabilitation in areas that would provide the greatest benefit to deer by increasing the supply of deer forage.

Continued old-growth harvest activities and associated road development are expected to cause further fragmentation and isolation of deer winter range within Unit 2. This may concentrate deer in fewer and smaller wintering areas and make deer more susceptible to predation by wolves ((*Canis lupus ligoni*) (Person et al. 1996). In the long term, it is expected that Unit 2 deer populations will decline as old-growth winter habitat is lost and second-growth forests are unable to provide a substitute (Porter 2007, Mazza 2003, USDA 1997).

Deer Pellet Group Data Trends

There is currently no method available to accurately determine the deer population size in Unit 2. Southeast Alaska and in particular POW receives from 59 – 196 inches of annual rainfall, which translates to rapid and heavy growth of vegetation (National Weather Service 2008). The presence of the underbrush and dense forest canopy make it especially difficult to directly observe deer. Traditional techniques used to monitor deer populations do not work well in Unit 2. Deer pellet group surveys are used to routinely monitor deer population trends (Kirchoff and Pitcher 1988) in Southeast Alaska. To date, the most important and consistent method used to monitor the deer population is the hunter harvest information collected subsequent to the fall/winter hunting seasons. Even the most quantitative approach to analyzing deer harvest numbers, at best, provides only an index to changing trends in population, not reliable estimates of the absolute abundance of deer.

The USFS and ADF&G biologists have collected deer pellet group data since the early 1980s. This long-term monitoring effort was designed to provide an indication of overall deer population trends in the region. Average pellet group densities of less than one group per plot are considered low densities; one to two pellet groups per plot are considered medium, and greater than two pellet groups per plot are considered high (Kirchoff and White 2002). Recent deer pellet data suggests that deer populations in the unit remain stable, with some transects indicating levels of decreasing or increasing deer numbers. Pellet count surveys are basically trend indicators, as they provide information to give a sense for whether populations are up, down or stable. It remains unclear whether the data represents short or long-term trends.

In 2008, a study involving DNA analysis of surveyed deer fecal pellets from three watersheds was initiated on POW to estimate deer population abundance and monitor trends. The pilot project examined deer pellet groups in diverse habitats such as muskeg, low-volume old-growth, mid-volume old-growth, high volume old-growth, managed stands (<25 years old), and managed stands (>25 years old). Preliminary results substantiate that DNA from fecal deer pellets may provide a new tool for estimating populations in areas where visual counting is unfeasible. Southeast Alaska wildlife managers are hopeful the study can be expanded into a greater number of productive watersheds and evaluate the reliability of the current deer pellet group surveys for monitoring deer population trends.

Deer Winter Mortality Surveys

During the Spring of 2007 and 2009, USFS and ADF&G personnel conducted deer winter mortality transects on POW for Sitka black-tailed deer following the severe winters of 2006/2007 and 2008/2009. Thirteen deer mortality transects were completed in Unit 2 during late April and early May, 2007. The 13 transects totaled 13.0 miles of beach fringe walked and 1.2 deer carcasses were recorded per mile. Data collected during the 2009 winter mortality transects have not been evaluated at this time; however the preliminary results in Unit 2 appear similar to 2007.

Though snowfall levels were at 20 - 30 year highs during the winter of 2006/07 and slightly lower during the winter of 2008/09, the effects of winter malnutrition or starvation did not appear to cause extensive winter mortality. It appears that during the freeze, thaw, and warm weather breaks, many deer moved from poor winter habitat to more favorable microclimates and forage resources. Additional mortalities which may have occurred at higher elevations (above beach fringe) were not accounted for in this mortality protocol. As it is difficult to measure or estimate total losses from winter kill and little information is available regarding deer mortality following mild or normal winters, this information should not be expanded as a direct measurement of Unit 2 winter mortality. It is unknown if a greater number of deer survived, due to the populations being below carrying capacity levels or if the effects of winter malnutrition were expressed in reduced fawn crops.

Predation

In addition to habitat influences, wolf and black bear (*Ursus americanus*) predation can be significant factors addressing deer populations. Person et al. (1996) estimated the postdenning population of 250 -300 wolves on POW and a mean predation rate of 26 deer per wolf per year. Black bears are also present in high numbers in Unit 2 and are thought to be considerable predators during the early summer fawning periods. Preliminary black bear DNA studies are being conducted on POW. However, at this time, there are limited data on black bear populations and their magnitude of deer predation in Unit 2. Periodically, a severe winter combined with habitat changes and predation can contribute to population declines in localized areas.

Hunter Observations

Since 1996, the Council and the Board have received 35 proposals requesting changes in deer hunting regulations for Unit 2. Many subsistence proponents have maintained that they have had increasing difficulty in meeting subsistence needs for deer in Unit 2.

Brinkman (2006) conducted 88 face-to-face interviews with Alaskan residents with in-depth knowledge of deer hunting on POW. Information on three main topics was collected: 1) deer hunting patterns, 2) deer population trends, and 3) deer habitat and hunting access. Forty nine percent of the hunters interviewed perceived the time and effort needed to harvest a deer have remained the same over the last five years, whereas 36% perceived more time and effort, and 14% perceived that less time and effort were needed to harvest a deer. Hunters reported harvesting an average of four deer each year, which was equal to the number of deer required to meet the typical hunter's own household needs. However, this was less than the number required to meet both the average hunter's own household needs and the other households for which he or she provided deer.

Harvest History

While data on Unit 2 deer harvest is limited, the data has improved greatly since 2005 with the implementation of the joint USFS and ADF&G Unit 2 Deer Harvest Reporting Program. Since 2005, the deer harvest reporting rate has increased from approximately 42% to greater than 90% from all Unit 2 hunters.

In Unit 2, the majority of the deer harvest occurs in the WAAs on POW that have a high density of roads (Turek et al. 1998, Paul and Straugh 1999). Paul and Straugh (1999) reported the deer harvest in Unit 2 appears variable from year to year, but overall long-term trends have been relatively stable, with harvest ranging from 1800 (in 1987) to approximately 3300 (in 1995). In 2008, the reported overall deer harvest in Unit 2 was 3,367, which was above the reported mean deer harvest estimates of 2,635 during the past 10 years (**Figure 1**).

During the past 10 years, the reported antlerless deer harvest has ranged from a low of 75 to a high of 231 (**Figure 2**).

A total of 170 antlerless deer were reported harvested in 2008, which is 5.0% of the total reported deer harvest in Unit 2. Approximately 49% of the 2008 reported antlerless deer harvest occurred in five WAAs containing high density road systems on POW:

- 19% of the antlerless harvest in WAA 1422 (Staney Creek, Naukati, Sarkar)
- 9% in WAAs 1530 (Exchange Cove) and 1315 (Kasaan Penninsula, Thorne Bay)
- 6% of the antlerless harvest occurred in WAAs 1420 (Coffman Cove area) and 1319 (Thorne River area).

The remaining 51% of the antlerless harvest was distributed across the remaining 26 WAAs in Unit 2.

Unit 2 hunter success rates from 2003 – 2008 increased from the 10 year average (**Figure 3**). The number of hunter-days per unit deer harvest effort declined from the 10 year average during those years, which corresponds with and supports the slight increase in success rate. Harvest data from 2008 indicated a 71% hunter success rate and an average unit effort of 3.8 days per harvested deer. During the past 10 years, the average hunter success rate has been 61% with an average of 4.2 hunter days per harvested deer (**Figure 4**).

The number of hunters participating in the Unit 2 deer hunt has increased by approximately 22%, from 1,569 hunters in 2005 to 2,009 hunters in 2008. From 2005 to 2008, nonresident hunters increased by 52% (83 to 170), hunters living in Unit 1A by 43% (338 to 590), and hunters living within the unit by 11% (823 to 921) (**Figure 5**). There has been little increase of hunters from within Units 1C, 1D, 3, 4, or from hunters living in other areas of Alaska.

Reported deer harvest numbers in Unit 2 have increased by approximately 26%, from 2,484 in 2005 to 3,367 in 2008. The majority of the increase can be attributed to harvest by hunters residing in Units 1A and 2. Hunters from Unit 1A have increased their reported deer harvest by 33% (562 to 837), while hunters living on POW have increased their reported harvest by 16% (1507 to 1794) (**Figure 6**). During this period, hunters residing in Units 1C, 1D, 3, 4 or from other hunters living in other areas of Alaska have harvested less than 100 antlerless deer. During the past four years, Unit 2 and Unit 1A deer hunters have accounted for 87% of the reported harvest (62% and 25% respectively). Nonresidents of Alaska have

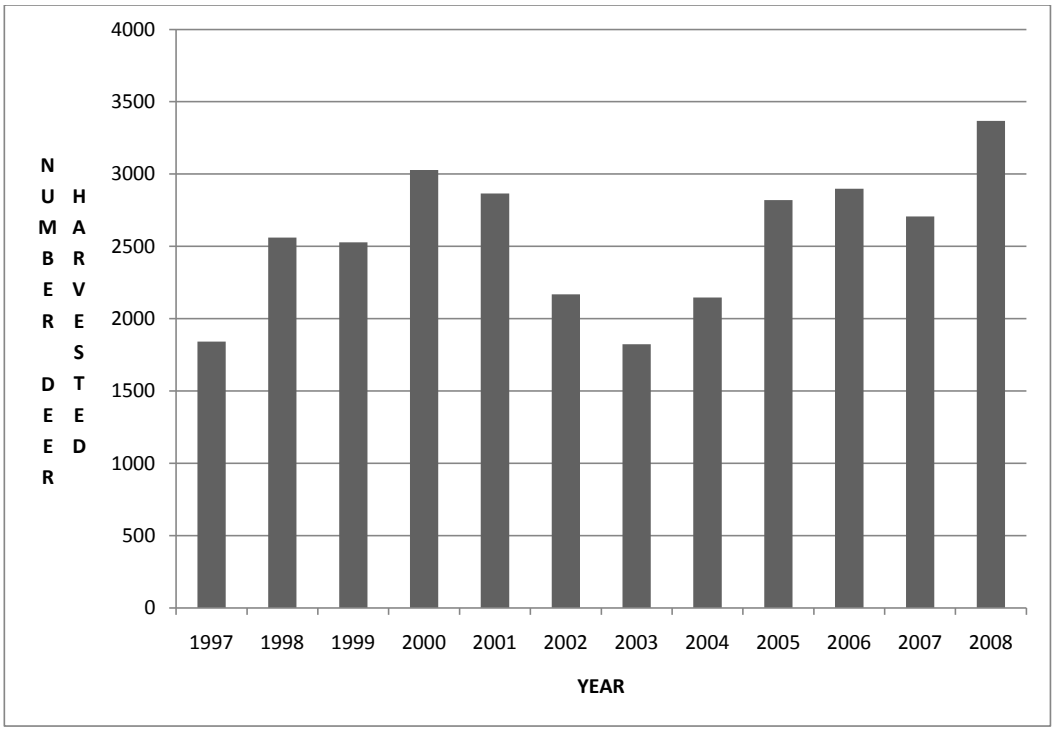

Figure 1. Harvest of Sitka black-tailed deer in Unit 2, 1997 – 2008 (ADF&G Winfonet 2009)

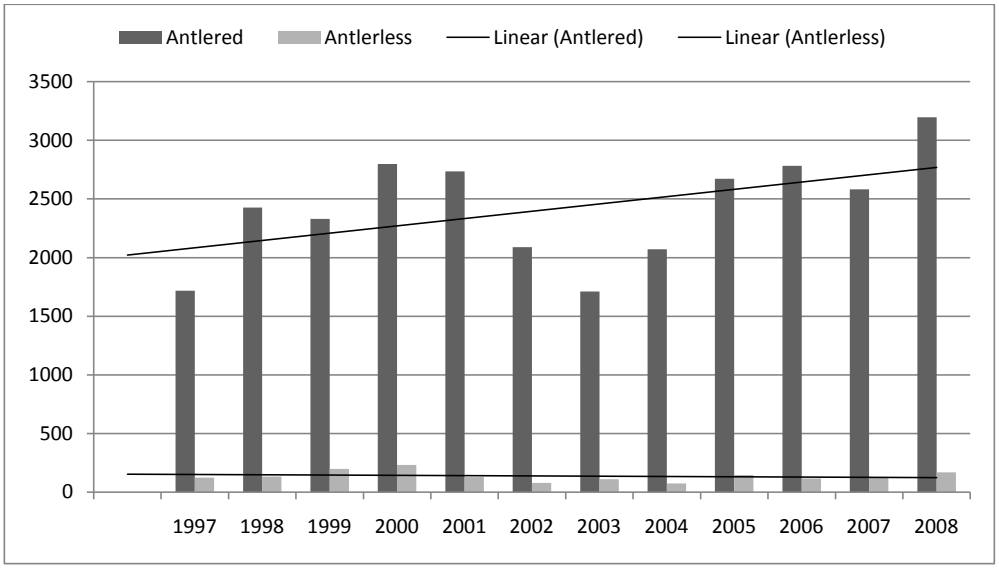

Figure 2. Harvest of antlered and antlerless Sitka black-tailed deer in Unit 2, 1997 – 2008 (ADF&G 2009).

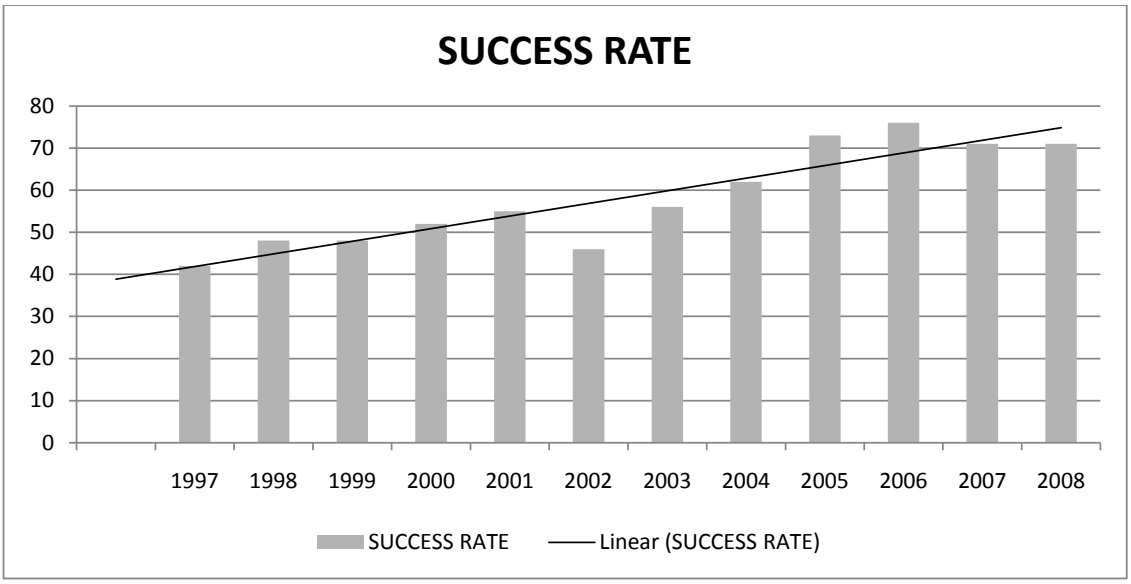

Figure 3. Hunter success rates for Sitka black-tailed deer in Unit 2, 1997 – 2008 (ADF&G 2009).

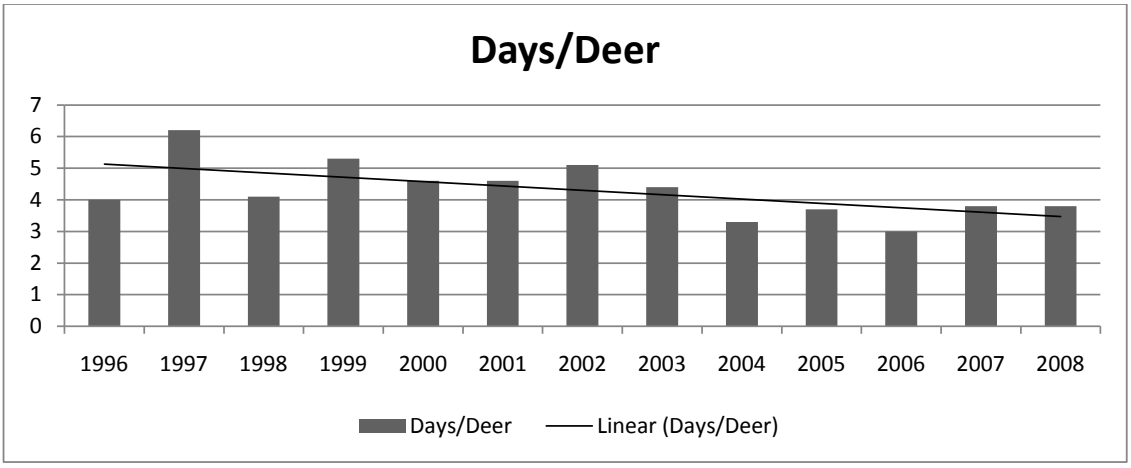

Figure 4. Hunter deer harvest effort for Sitka black-tailed deer in Unit 2, 1996 – 2008 (ADF&G 2009).

accounted for 3% of the reported harvest during these years. All other Units and Alaska residents have combined for the remaining 10% of the reported deer harvest during the past 4 years.

Unit 2 deer harvest reports (2005 – 07) indicate that most deer harvest occurs in November (45%) with percent deer harvest as follows: October (17%), August (16%), September (11%), July (7%), and December (4%) (**Figure 7**).

Mazza (2003) also found that approximately 32% of the GMU 2 hunters were from the City of Ketchikan. If the residents of POW were unable to meet their subsistence needs, the first likely regulatory measure would restrict the deer harvest by urban hunters. Mazza (2003) also found that non-residents of Alaska accounted for five percent or less of the GMU 2 hunters.

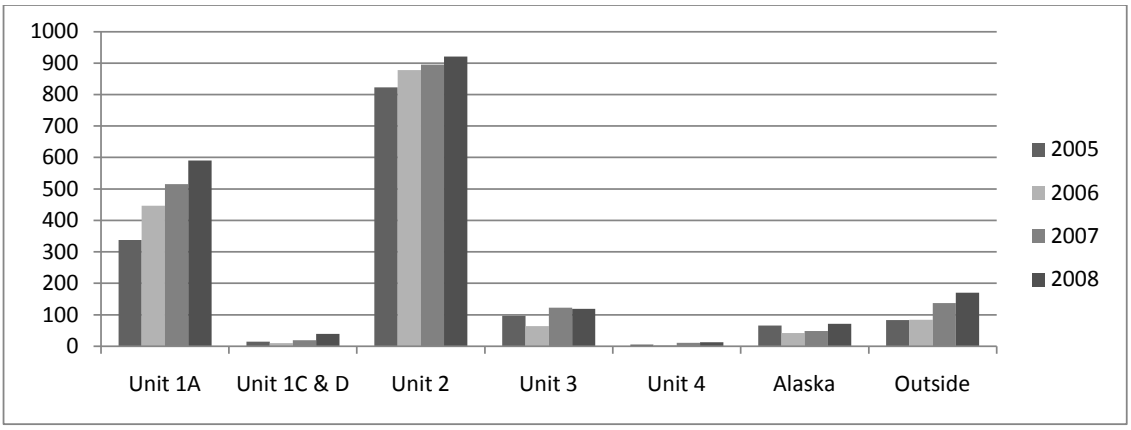

Figure 5. Number of hunters by residence unit, hunting in Unit 2, 2005 – 2008 (ADF&G 2009).

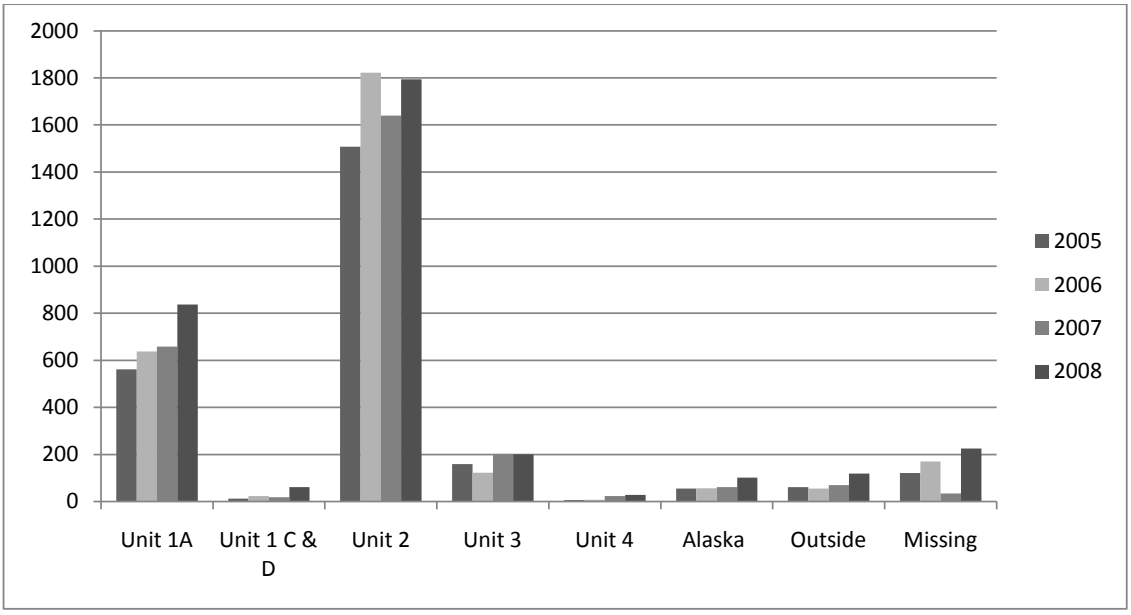

Figure 6. Deer harvest in Unit 2 by residence unit of hunter, 2005 – 2008 (ADF&G 2009).

From July through mid October, does are widely scattered and many remain at higher elevations, therefore, they are not as available to hunters. From November through late December, does become more available to hunters, as they migrate from higher elevations to the winter range and can be more easily accessed from the POW road system or boats. During the rutting season, does are very active and are easily called by hunters. It can be assumed that most adult does will be bred each year, therefore, harvesting an adult doe at any time of the deer season would result in the potential loss of next spring's fawn. Unit 2 Deer Harvest Reports indicate that from mid September through mid October, a smaller percentage of Federally qualified hunters pursue deer, therefore, it is likely that fewer female deer would be harvested during this time (September 15 – October 15).

The impact of antlerless harvest is important because adult does represent the reproductive segment and are therefore considered the most biologically important component of the population. The effect of antlerless harvest on population trend depends on percent of adult does harvested and recruitment of

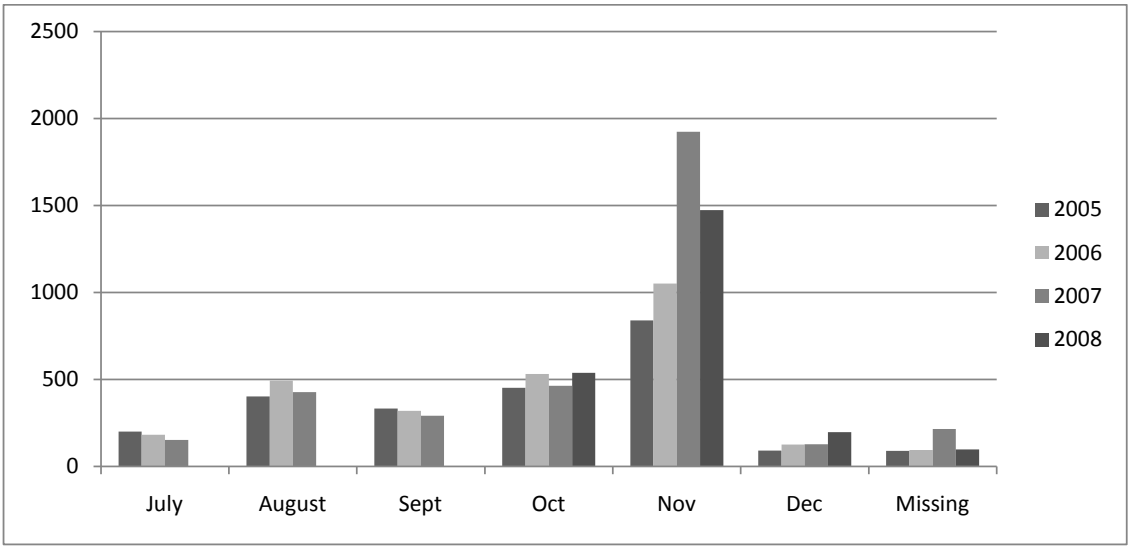

Figure 7. Deer harvest by month in Unit 2, 2005 – 2008 (ADF&G 2009).

fawns into the population (Erickson et al. 2003). Porter (2007) estimated the current deer population in Unit 2 at 55,000 animals. A harvest level of 10% of the deer herd within Unit 2 is thought to be sustainable on a long-term basis (Flynn and Suring 1993). By following this sustainable harvest equation, approximately 5,500 deer could be harvested annually in Unit 2. Person (2006, pers. comm.) estimated that up to 10% of the sustainable portion of the harvest may consist of antlerless deer. Therefore up to 550 antlerless deer may be harvested each year and maintain current populations. If the maximum annual harvest of antlerless deer has been 231(the maximum reported harvest number during the past 10 years), this equates from 42% of the allowable antlerless deer harvest, which is acceptable and amounts to less than one half of one percent of the total estimated population.

Other Alternative(s) Considered

From 2004 - 2005, a wide variety of alternatives were considered by the Subcommittee to address the persistent harvest regulation conflicts and varied regulatory proposals submitted by Federally qualified and non-Federally qualified Unit 2 deer hunters. The Subcommittee was directed to follow Title VIII requirements, which allows subsistence hunters to have a "meaningful" preference over non-subsistence hunters, while allowing for the balancing of subsistence, conservation, and non-subsistence hunting.

The Subcommittee considered many alternatives which dealt with deer conservation and subsistence competition issues (Caulfield 2005). One alternative considered was to eliminate or restrict the antlerless hunt in Unit 2. This alternative was eliminated and not addressed in detail by the Subcommittee (Caulfield 2005).

Effects of the Proposal

If this proposal was adopted it would provide Federally qualified subsistence hunters the opportunity to harvest an antlerless deer from September 15 – October 15, which would reduce the existing opportunity by 46 days. During the past 10 years, Unit 2 rural hunters have harvested a total of 1,383 antlerless deer which averages to 138 antlerless deer per year or 4.0% of the total annual reported deer harvest during 2008 (**Figure 3**). If this proposal is adopted, hunter opportunity would be reduced by 60% (77 days to 31 days), which would negatively affect Federally qualified users.

The harvest of antlerless deer (does) remains controversial, especially when combined with limited population information. Unit 2 deer harvest reports for 2008 indicate the highest deer harvest in ten years, as hunters experienced an increase in success rate and were more successful per hunter unit effort. This information must be used cautiously, but does not indicate a decline in the Unit 2 deer population.

OSM CONCLUSION

Oppose Proposal WP10-19.

Justification

Adoption of this proposal would result in reduced opportunity for Federally qualified subsistence users to harvest deer in Unit 2. While this proposal would positively affect the deer population, other variables such as weather patterns, road access, wolf and bear predation, illegal harvest, levels of enforcement, public education, and habitat changes are likely to affect the deer population and harvest levels more than seasonal modification of the antlerless season. Current deer pellet information indicates the deer population across Unit 2 is stable, with some areas suggesting decreasing or increasing deer populations. Persons et al. (2009) has suggested an estimated 30% decrease in the Unit 2 deer population may have occurred between 2006/08, most likely due to persistent harsh winter conditions. However, in 2008, Unit 2 hunters participated in one of the best deer harvest seasons during the past 10 years, in terms of deer numbers harvested, harvest success per hunter, and deer harvest per hunter unit effort.

The impact of antlerless harvest is important as adult does are considered the most biologically important component of the population. Unit 2 deer harvest reporting indicates less than ½ (42%) of the allowable antlerless deer are harvested, which is acceptable and amounts to less than one half of one percent of the total estimated deer population in Unit 2.

There are eligible subsistence hunters who object to antlerless deer harvest for a variety of reasons. If a proportion of hunters elect to not harvest antlerless deer, these additional deer may be available for other subsistence hunters or for population recruitment.

At this time, the reported harvest of antlerless deer in Unit 2 is within sustainable limits. At the present time, hunter success rate and unit effort per deer harvest do not indicate a decline in the deer population in Unit 2. Continued antlerless harvest can be an important tool to maintain opportunity and additional venison for subsistence hunters.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-19. There is no conservation concern with current harvest levels of doe deer in Unit 2. This proposal may adversely and unnecessarily affect subsistence users. The Council wanted to see more public support for a change in regulations of this magnitude.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-19

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-19
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-19: Reduce federal subsistence female deer hunting season dates in Game Management Unit 2 from October 15 through December 31 (2 ½ months) to September 15 through October 15 (1 month).

Introduction: The federal subsistence female deer hunting season in Unit 2 fluctuated over the past 10 years while the bag limit remained one female deer. Federally qualified hunters are allowed five deer total which can include one female. This proposal requests the female deer season be reduced by six weeks and change the start date to September 15 (one month earlier).

Impact on Subsistence Users: Adoption of this proposal would reduce federal subsistence user opportunity to harvest female deer by six weeks per year, but reasonable opportunity remains to fill the bag limit.

Opportunity Provided by State: Under State regulation, the harvest of antlerless deer in Unit 2 is prohibited. The State deer hunting season is August 1 through December 31. State bag limits have not changed since 1987, when the bag limit was increased from three antlered deer to four and the deer season extended from November 30 to December 31. In 1998, State regulation changed from four "antlered" deer to four "bucks." Currently, there are no plans to change State deer hunting regulations in Unit 2.

Conservation Issues: This proposal does not raise new conservation concerns. The current federal subsistence female deer season was established in mid October to help insure young of the year fawns are weaned and able to survive without the close association of the adult female. Harvesting adult females one month earlier would further compromise survival of young fawns. However, the proposed shorter female deer season could protect pregnant females and stimulate herd growth in high use hunting areas especially near Prince of Wales communities.

Recommendation: Neutral.

WP10-20 Executive Summary	
General Description	Proposal WP10-20 requests the closure of Federal public land in Unit 2 to the harvest of Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) by non-Federally qualified users be changed from August 1 through August 15 to July 24 through July 31. *Submitted by D. J. O'Brien*
Proposed Regulation	**Unit 2 — Deer** *5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15 – Dec. 31. You are required to report all harvests using a joint Federal/ State harvest report. The Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.* *The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from ~~Aug. 1to Aug. 15~~, **July 24 to July 31**, except by Federally qualified subsistence users hunting under these regulations.*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-20

ISSUES

Proposal WP10-20, submitted by D. J. O'Brien, requests the closure of Federal public land in Unit 2 to the harvest of Sitka black-tailed deer (*Odocoileus hemionus sitkensis*) by non-Federally qualified users be changed from August 1 through August 15 to July 24 through July 31.

DISCUSSION

The proponent believes that a meaningful preference for Federally qualified subsistence hunters can be provided, while at the same time reducing the closure to non-Federally qualified hunters on Federal Public lands from 23 to 8 days. The proponent also believes a meaningful preference is provided through additional opportunities provided to Federally qualified hunters, such as the ability to harvest five deer (of which one can be antlerless) and the use of Federal Designated Hunters.

The proponent states that the traditional deer season for non-subsistence hunters historically began on August 1, as proposed. The proponent believes this proposal would restore the traditional deer hunting season start date for non-qualified users and provide greater participation for junior hunters and families. The proponent believes the deer populations in Unit 2 were healthy and stable and continue to be so.

The two primary issues raised by this proposal include whether Unit 2 Federally qualified hunters are currently being provided a meaningful preference, as defined by the Alaska National Interest Lands Conservation Act (ANILCA) and to determine, if seasonal restrictions placed on non-Federally qualified hunters since 2004 are warranted. Since 1996, the Southeast Alaska Subsistence Regional Advisory Council (Council) and the Federal Subsistence Board (Board) have addressed 35 proposals requesting changes in deer hunting regulations for Unit 2. Prior to 2005, the majority of these proposals were submitted by Federally qualified hunters with concerns that subsistence deer hunters in Unit 2 were not able to harvest enough deer to meet their needs or were experiencing increasing difficulty in meeting their subsistence needs for deer in Unit 2. However, since 2005, the majority of the Federal regulatory proposals regarding Unit 2 deer have been submitted by affected hunters who live in Ketchikan, who are considered to be non-rural users. The subsistence priority for deer in Unit 2 remains contentious between Federally qualified users and non-Federally qualified users.

The controversial aspects of Unit 2 Federal deer regulations and management have been addressed in the past. In 2004, the Council initiated a cooperative planning process to address Unit 2 deer management and Federal harvest regulations. The planning process was conducted by an advisory subcommittee of the Council, which included hunters, users, and managers of deer. The Unit 2 Deer Planning Subcommittee (Subcommittee) presented their consensus advisory recommendations to the Council in the Unit 2 Deer Management Final Report (Caulfield 2005). In April 2006, the Council submitted the Unit 2 Deer Planning Process (A Report from the Southeast Alaska Subsistence Regional Advisory Council to the Federal Subsistence Board). The Council recommended no major changes to Unit 2 deer harvest management for three to five years (2009 – 2011).

Existing Federal Regulation

Unit 2 — Deer

5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15 – Dec. 31. You are required to report all harvests using a joint Federal/State harvest report. The Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.	*July 24 – Dec. 31*
The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.	

Proposed Federal Regulation

Unit 2 — Deer

5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15 – Dec. 31. You are required to report all harvests using a joint Federal/State harvest report. The Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.

*The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from ~~Aug. 1to Aug. 15~~, **July 24 to July 31**, except by Federally qualified subsistence users hunting under these regulations.*

Existing State Regulations

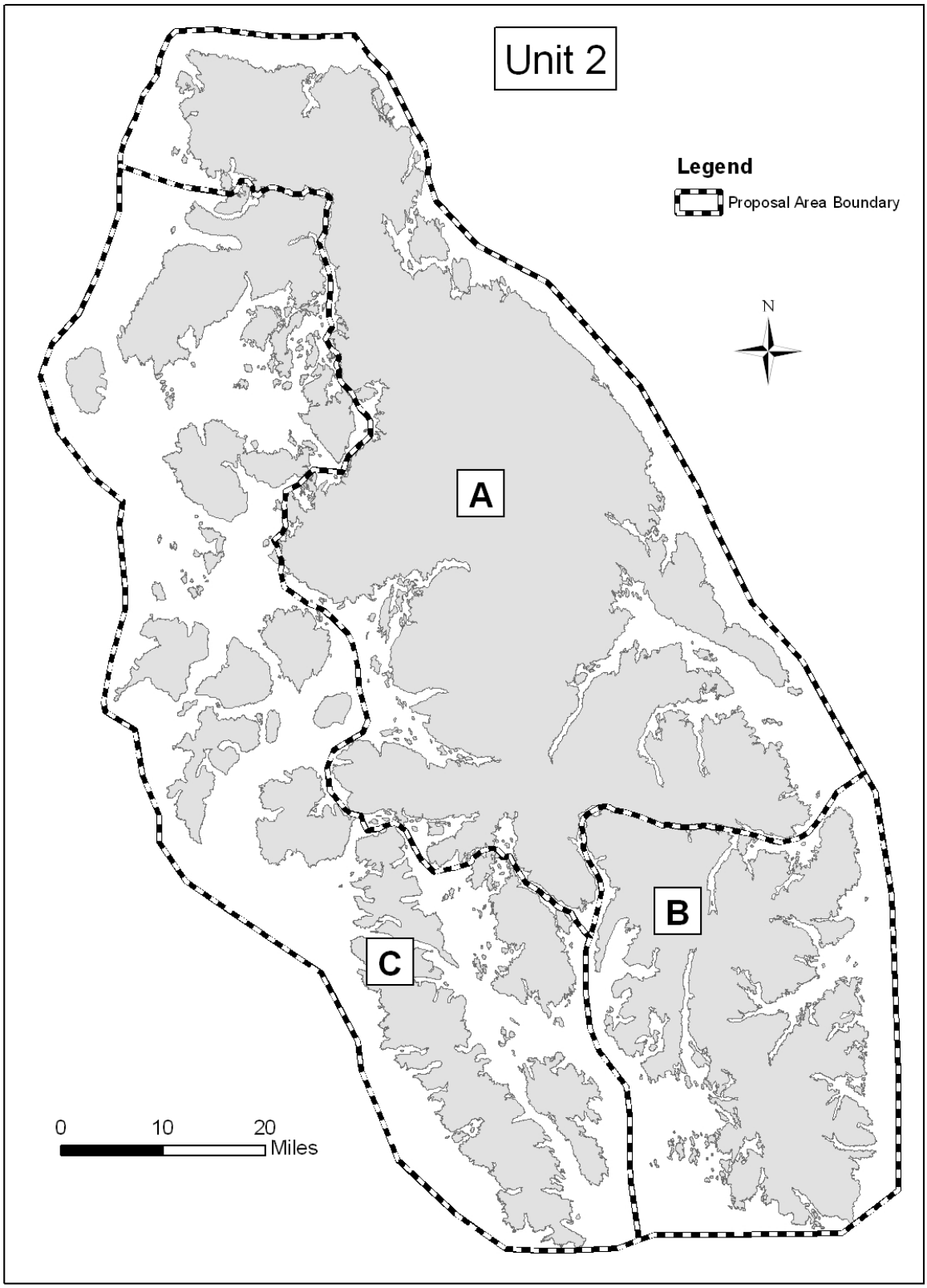
Unit 2 — Deer

Four bucks	*Aug. 1 – Dec. 31.*

Extent of Federal Public Lands

Federal lands compromise approximately 85% of Unit 2 and consist mainly of USFS lands administered by the Tongass National Forest (**Map 1**).

PROPOSAL WP10-20
MAP 1



Customary and Traditional Use Determination

Rural residents of Units 1A, 2, and 3 have a positive customary and traditional use determination to harvest deer in Unit 2.

Regulatory History

Prior to 1988, the State harvest limit and regulatory season was, for the most part, more limited. Alaska regulations permitted the harvest of antlerless deer from 1925 through 1978. From 1978 – 95, antlerless deer could not be legally harvested, except in 1987.

From 1988 – 2003, a four deer harvest limit and an August 1– December 31 season was in place under State regulations and since 1990, under Federal subsistence regulations (**Table 1**). Since 1995, Federal subsistence regulations have allowed Federally qualified subsistence users the opportunity to harvest one antlerless deer. Beginning the regulatory year 2003/2004, Federal subsistence regulations for Unit 2 deer hunting closed Federal public lands to deer hunting on Prince of Wales Island (POW) from August 1–21, except for Federally qualified subsistence users and opened the deer hunting season earlier, starting on July 24. The following Federal regulatory year, 2004/05, the closure of deer hunting to non-Federally qualified users on Federal public lands on POW was adjusted by seven days (reduced from August 1 – 21 to August 1 – 15). The 2006/07 Federal subsistence regulations were modified to allow Unit 2 rural residents to harvest five deer**.** The Federal subsistence regulations have remained unchanged since 2006/07.

Current Federal subsistence regulations provide Federally qualified subsistence hunters seven days of "exclusive" use of Unit 2 and not 23, as stated by the proponent for deer hunting (July 24 – 31). Beginning August 1st, Federal subsistence regulations allow non-rural hunters to hunt deer on Federal lands on the Southeast portion of Prince of Wales Island (land south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait and all Federal lands off Prince of Wales Island, which equates to all outside islands within Unit 2 (Areas B and C, **Map 2**). The proponent is correct in stating that Federally qualified hunters have the ability to harvest five deer (of which one can be antlerless) and the use of Federal Designated Hunters, whereas non-rural hunters are limited to four deer, all of which must be bucks. Non-rural hunters are allowed to Proxy hunt deer in Unit 2 under State regulations, but are not allowed to hunt under the Federal Designated Hunter Permit.

Current Events Involving Species

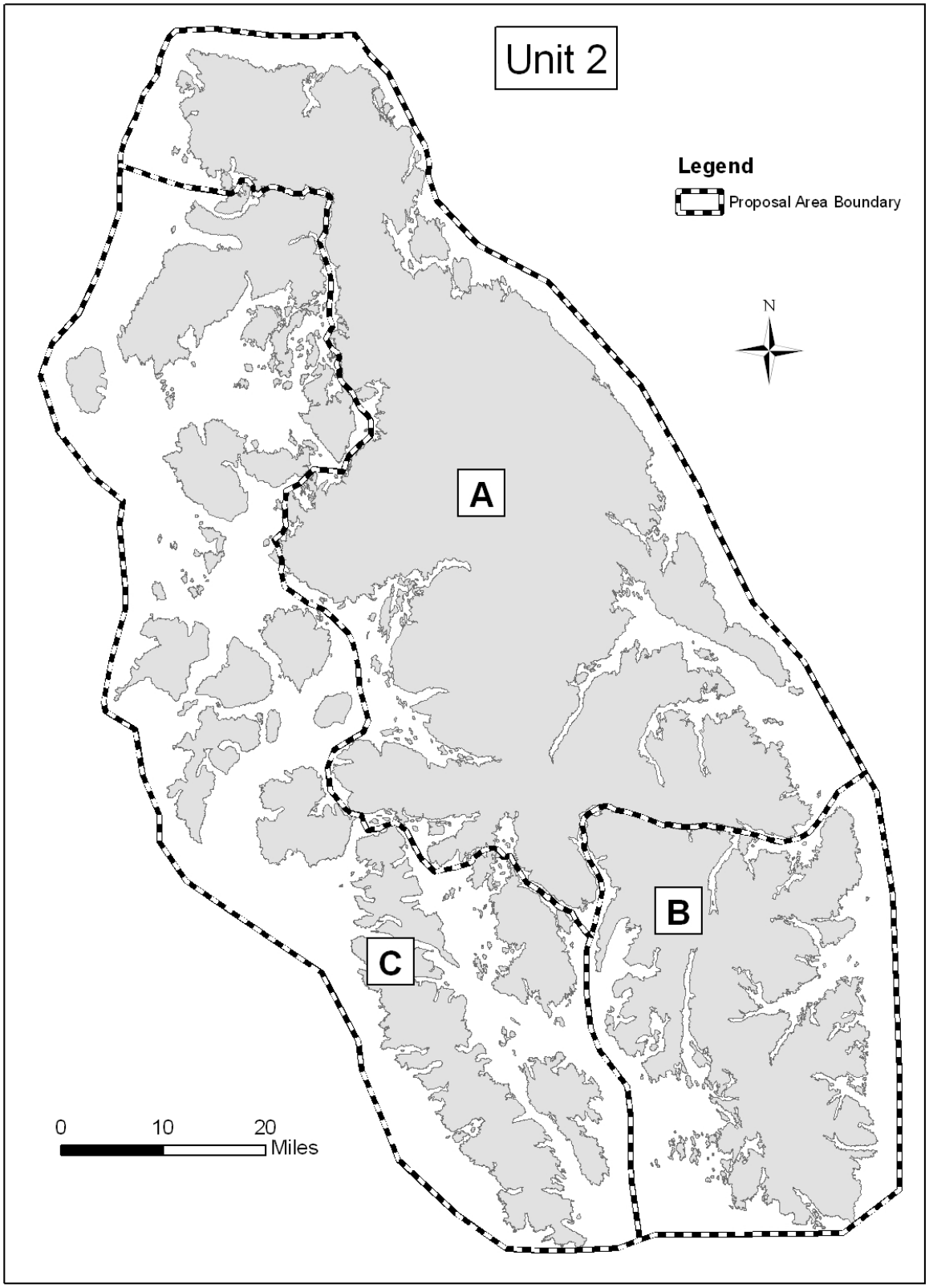
Three recommendations provided in the Unit 2 Deer Management Final Report (2005) are currently ongoing on Prince of Wales Island (POW), which focus on Unit 2 deer management and subsistence information needs.

A preliminary study estimating the abundance of Sitka black-tailed deer using DNA from fecal pellets was conducted in three POW watersheds from 2006 – 2008 (Person et al. 2009). Preliminary results are positive and substantiate that DNA from fecal deer pellets may provide a new tool for estimating populations in areas where visual counting is unfeasible. The hope is that this DNA mark-recapture methodology can be investigated further and expanded to provide cost effective estimates of deer abundance across POW and SE Alaska. The study extrapolated the average estimates of deer density from the three sample areas and estimated the deer populations on POW at 64,100 in 2006, 57,700 in 2007 and 44,500 in 2008 and in all of Unit 2 (including adjacent islands) at 93,200 in 2006, 83,930 in 2007, and 67,700 in 2008. This estimate indicated that the deer population declined approximately 30% from

Table 1. Regulatory History for Unit 2 Deer Hunting (State and Federal Subsistence Regulations)

Year	Type of Season	Season	Limit	Conditions and Limitations
1925	Open	15 Sep - 16 Dec	3	Bucks, 3” or greater antler growth
1925 - 1929	Open	01 Sep - 30 Nov	3	Bucks, 3” or greater antler growth
1930 - 1941	Open	20 Aug - 15 Nov	2	Bucks, 3” or greater antler growth
1942 - 1943	Resident	16 Sep - 15 Nov	2	Bucks, 3” or greater antler growth
1942 - 1943	Non-resident	16 Sep - 15 Nov	1	Bucks, 3” or greater antler growth
1944 - 1948	Resident	1 Sep - 07 Nov	2	Bucks, 3” or greater antler growth
1944 - 1948	Non-resident	01 Sep - 07 Nov	1	Bucks, 3” or greater antler growth
1949	Resident	01 Sep - 15 Nov	2	Bucks, 3” or greater antler growth
1949	Non-resident	01 Sep - 15 Nov	1	Bucks, 3” or greater antler growth
1950 - 1951	Resident	20 Aug-15 Nov	2	Bucks, 3” or greater antler growth
1950 - 1951	Non-resident	20 Aug-15 Nov	1	Bucks, 3” or greater antler growth
1952	Open	20 Aug - 22 Nov	2	Bucks, 3” or greater antler growth
1953 - 1954	Open	20 Aug - 22 Nov	3	Bucks, 3” or greater antler growth
1955	Open	20 Aug - 22 Nov	3	3 bucks or 2 bucks and one doe; bucks 3” or greater antler growth
1956	Open	20 Aug - 26 Nov	4	3 bucks or 2 bucks and one doe; does 11/13 –11/26
1957 - 1958	Open	20 Aug - 30 Nov	4	Does allowed 10/15-11/30
1959	Open	08 Aug - 30 Nov	4	4 bucks or 3 bucks and one doe or 2 bucks and 2 does; bucks only before 10/01
1960	Open	20 Aug - 15 Dec	4	4 bucks or 3 bucks and one doe; bucks only before 10/15 four bucks or 3 bucks and one doe or 2 bucks and 2 does; bucks only before 10/01
1961	Open	01 Aug - 30 Nov	4	Only 2 antlerless; antlerless only from 9/15-11/30
1962	Open	01 Aug - 15 Dec	4	Antlerless deer from 9/15-12/15 only
1963 - 1967	Open	01 Aug - 31 Dec	4	Antlerless deer from 9/15-12/15 only
1968	Open	01 Aug - 15 Dec	4	Antlerless deer from 9/15-12/15

PROPOSAL WP10-20
MAP 2



2006. The study deducted the decline was most likely due to the prolonged snowy winters of 2006/07 and 2007/08.

The Craig Community Association (CCA) began a Unit 2 Subsistence Uses and Needs Study in May 2007. The research project involved four aspects of data gathering: 1) literature review; 2) key respondent interviews with mapping activities; 3) household and hunter surveys, and 4) documentation of the use of deer at community events. This study gathered hunting and use patterns of Federally qualified subsistence users and non-Federally qualified users to determine if there are any differences in use patterns. Surveys were completed in POW communities and the Ketchikan area. A draft report is anticipated in January 2010.

The joint USFS and ADF&G Unit 2 Deer Harvest Reporting Program began in 2005. Since that time, the Unit 2 deer harvest reporting rate has increased from approximately 42% to over 90%. Multiple strategies that have been implemented to achieve increased deer harvest reporting include: press releases requesting Unit 2 deer hunting harvest report forms in POW, Ketchikan, Wrangell, and Petersburg newspapers; flyers posted in all POW villages and on Inter-Island Ferry; radio spots on Ketchikan networks; three independent harvest report letters to non-respondents; one certified letter mailing to non-respondents, and telephone interviews.

During early 2010, the U. S. Forest Service (USFS), CCA, and Todd Brinkman (Institute of Arctic Biology, University of Alaska, Fairbanks) anticipate presenting summaries of the Brinkman DNA Study, Unit 2 Deer Use and Needs Study, and Unit 2 Deer Harvest Reporting Program in POW communities and Ketchikan, as recommended by Unit 2 Deer Management Report (Caulfield 2005).

Biological Background

Please refer to the full biological background provided in analysis WP10-19.

Harvest History

Please refer to the harvest history provided in analysis WP10-19.

Other Alternative(s) Considered

From 2004 – 2005, a wide variety of alternatives were considered by the Subcommittee to address the persistent harvest regulation conflicts and varied regulatory proposals submitted by Federally qualified and non-Federally qualified Unit 2 deer hunters. The Subcommittee was directed to follow Title VIII requirements, which allows subsistence hunters to have a “meaningful” preference over non-subsistence hunters, while allowing for the balancing of subsistence, conservation, and non-subsistence hunting. The Subcommittee considered many alternatives which dealt with deer conservation and subsistence competition issues (Caulfield 2005). One alternative considered was to eliminate or restrict the antlerless hunt in Unit 2. This alternative was eliminated and not addressed in detail by the Subcommittee (Caulfield 2005).

The consensus resolution (between the Subcommittee’s rural and non-rural members) recommended that the deer hunting season for non-Federally qualified hunters open August 1st on the Southeast portion of POW. These are the public lands south of the West Arm of Cholmondeley Sound or draining eastward into Clarence Strait (Area B, **Map 2**). The Subcommittee also recommended to allow deer hunting on all Unit 2 outside islands to non-Federally qualified hunters beginning August 1st (Area C, **Map 2**).

This alternative allows non-rural residents to begin harvesting deer in Unit 2 on August 1st in Wildlife Analysis Units (WAAs) numbers 1525, 1526, 1531, 5015, 1524, 1003, 902, 901, 1105, 1106, 1211, 1210, 1209, 1108, and the eastern ½ of 1107, including Sukkwan Island (**Map 1**). However, most of these WAAs are not accessible by the POW road system and can only be accessed by boat or airplane. The Subcommittee did not want these areas to be considered Subunits to Unit 2, but only to apply to deer harvest regulations (**Map 2**).

The Subcommittee considered many other alternatives, which dealt with deer conservation and subsistence competition issues (Caulfield 2005):

1. establishing a one-month closure of Federal public land on POW to non-rural hunters
2. reducing the harvest limit for non-rural hunters
3. eliminating or restricting the antlerless hunt and researching the status of customary and traditional uses in Unit 2
4. increasing bag limit for rural residents from four to six
5. requiring registration permits for non-rural hunters
6. defining subsistence need in regulatory content

Effects of the Proposal

If this proposal is adopted it would allow non-Federally qualified subsistence users the opportunity to harvest deer two weeks earlier in Unit 2 (**Map 1**). This opportunity may result in an increased participation by non-Federally qualified subsistence users and may result in an increase in Unit 2 deer harvest. For example, during the 2008 deer hunt, 518 (78%) of the residents of Unit 1A (mostly Ketchikan residents) that hunted deer, reported hunting deer in Unit 2, while only 141 (22%) reported hunting in Units1A, 1C, 3 or 4. Therefore, opening all Federal lands in Unit 2 to non-rural deer hunters beginning August 1 should increase both opportunity and deer harvest for non-rural residents. Opening the closed area portion of POW Federal lands by two weeks to non-Federally qualified users may result in greater competition for Federally qualified subsistence users.

Unit 2 deer harvest data suggests that during August, most hunters (76%) tend to concentrate their efforts along the POW road system. In the past, the extensive road system on POW helped to geographically distribute hunters. However, the POW Access Travel Management Plan (ATM) (USFS 2009); proposes to reduce the existing motorized access in 25 of the 31 Unit 2 Wildlife Analysis Areas by approximately 42%. The ATM will be implemented over the next five to ten years (depending upon funding), and states that, "impacts to subsistence users are anticipated, which limits access to the resource and increases competition for the resource in Unit 2 (this finding applies primarily to deer, furbearers, and firewood).

Brinkmann (2005) reported that experienced POW deer hunters preferred muskeg systems, clear-cuts, old-growth, and alpine systems for hunting. Approximately 94% of the clear-cut areas that are connected to POW roads have already transitioned into second growth timber stands and have less value to subsistence deer hunters. Therefore, an increase in non-rural hunters may negatively affect rural hunters, when combined with a 42% reduction in available motorized roads and reduction in available (remaining 6%) clear-cuts. These effects would concentrate hunters greater than does the current conditions in Unit 2.

The current deer pellet information indicates the deer population across Unit 2 is stable, with localized areas having decreasing or increasing deer populations. Persons et al. (2009) has suggested an estimated 30% decrease in the Unit 2 deer population may have occurred between 2006/08, most likely due to persistent harsh winter conditions. However, in 2008, Unit 2 hunters participated in one of the best deer harvest seasons during the past 10 years, in terms of deer numbers harvested, harvest success per hunter, and deer harvest per hunter unit effort.

During the past four years, Unit 2 deer harvest reporting data indicates a 22% increase in hunter pressure and a 26% increase in deer harvest. Unit 2 is also experiencing changes due to reduced road access and declining available deer hunting habitat, which collectively combine to negatively affect Federally qualified hunters.

OSM CONCLUSION

Oppose Proposal WP10-20.

Justification

Adoption of this proposal may result in an increase in competition and reduced opportunity for Federally qualified deer hunters in Unit 2. During the past four years, Unit 2 deer harvest reporting data indicates a 22% increase in hunter pressure and a 26% increase in deer harvest. Unit 2 is also experiencing changes due to reduced road access (potential 42% reduction) and declining available deer hunting habitat (only 6% of clearcuts remain "huntable"), which collectively combine to adversely affect Federally qualified hunters. Current Federal subsistence regulations provide deer hunting opportunities for non-rural hunters beginning August 1 on all Unit 2 outside islands and in the West Arm of Cholmondeley Sound. All Federal public lands open to non-Federally qualified hunters in Unit 2, beginning August 16.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-20. The Council has made a commitment to not change regulations regarding Unit 2 deer until after the 2011 season. Additional information is needed to determine whether the closure dates are appropriate or necessary to provide for a preference. The Council believes that it is still difficult for qualified users to meet subsistence needs for deer in Unit 2.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-20

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

7omments WP10-20
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-20: This proposal would remove the closure of federal public lands in Unit 2 for deer hunting by non-federally qualified users to a beginning date of August 1 from the present date of August 16.

Introduction: This proposal would reopen federal public lands in Unit 2 to allow non-federally qualified users to hunt deer beginning August 1 instead of August 16. Federal subsistence regulations were changed in 2005 to close federal public lands in Unit 2 to deer hunting by non-federally qualified users August 1 through August 15 and open the deer season on federal lands for federally qualified hunters on July 24, providing three weeks of hunting before non-federally qualified hunters can hunt on federal lands. The federal subsistence deer harvest limit is five deer of which one may be antlerless, while the state harvest limit is four bucks.

Impact on Subsistence Users: Although the State season begins on August 1, only federally qualified subsistence users can hunt on most federal land in Unit 2 during the federal season beginning July 24 through August 15 due to the closure of federal lands to non-federally qualified deer hunters. If this proposal is adopted, federally qualified subsistence hunters would still have an 8-day hunting period before the State season begins August 1 and would maintain the more liberal federal bag limit. Retaining the three week closure is not necessary to provide a meaningful preference for federal subsistence on federal public lands.

Opportunity Provided by State: Under State regulation, the deer hunting season in Unit 2 is August 1 through December 31, with an annual bag limit of four bucks.

Conservation Issues: This proposed regulation does not raise conservation concerns. The deer population in Unit 2 appears to be healthy, stable, and able to support additional hunting pressure this proposal would provide. The closure of federal public lands to non-federally qualified deer hunters during August 1 through August 15 cannot be justified for conservation purposes.

Other Comments: The extended three-weeks that federal lands are closed to non-federally qualified users while also authorizing a larger bag limit for federally qualified users is inconsistent with the Federal Subsistence Board closure policy.

Recent Forest Service planning for Access and Travel Management proposes to close many duplicative roads and trails. The plan was designed not to limit access but to resolve issues of maintaining duplicative roads. Roads that maintain access throughout the island were retained while roads that duplicated access were closed, so the closures are not expected to impact subsistence opportunity.

Recommendation: Oppose. The Department supports the Southeast Regional Advisory Council commitment made through extensive workgroup deliberations over several years with the agencies and public to not change regulations regarding Unit 2 deer until after the 2011 season. At that time, the federal closure for two weeks of the state season should be removed to be consistent with the Federal Subsistence Board closure policy.

WP10-21 Executive Summary	
General Description	Proposal WP10-21 requests that deer harvest on Federal public lands of the Northeast Chichagof Controlled Use Area (NECCUA) in Unit 4 be restricted to residents of Hoonah. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 4 — Deer** *6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.* — *Aug. 1–Jan. 31* ***Federal public lands of Chichagof Island north of Tenakee Inlet and east of the drainage divide from the northwest point of Gull Cove to Port Frederick Portage, including all drainages into Port Frederick and Mud Bay are closed to the taking of deer except by residents of Hoonah.*** — *Aug. 1–Jan. 31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Support** Proposal WP10-21 **with modification**. The modified regulation would read: **Unit 4 — Deer** *6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.* — *Aug. 1–Jan. 31* ***Federal public lands of Chichagof Island north of Tenakee Inlet and east of the drainage divide from the northwest point of Gull Cove to Port Frederick Portage, including all drainages into Port Frederick and Mud Bay, are closed to the taking of deer except by residents of Game Creek, Hoonah, Tenakee Springs, Whitestone Camp, and Gustavus.*** — *Aug. 1–Jan. 31*
Interagency Staff Committee Comments	The Interagency Staff Committee (ISC) found sufficient rationale for both the Council's recommendation (support with modification) and for the OSM Conclusion (oppose). *See full comments following the analysis.*
ADF&G Comments	**Oppose**
Written Public Comments	**2 Oppose**

STAFF ANALYSIS
WP10-21

ISSUES

Proposal WP10-21, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that deer harvest on Federal public lands of the Northeast Chichagof Controlled Use Area (NECCUA) in Unit 4 be restricted to residents of Hoonah.

DISCUSSION

The proponent believes that the NECCUA should be closed to non-Federally qualified users and further that the pool of Federally qualified users allowed to hunt deer in the NECCUA be restricted to residents of Hoonah. The proponent states that conservation concerns regarding the deer population in this area prompted this request.

There are two other proposals requesting deer season or harvest restrictions in Unit 4. Proposal WP10-13 requests that the doe harvest season be closed on January 15 within a portion of Unit 4. Proposal WP10-14 requests the closure of Federal public lands in a portion of Unit 4 to the harvest of female deer by non-Federally qualified users in December.

The Federal Subsistence Board (Board) has established a closure policy, based on ANILCA, which includes conditions that must be met in order to exclude non-Federally qualified users. The two conditions that apply in the situation covered by this proposal include: 1) when a population is not sufficient to provide for both Federally qualified subsistence users and other users, and 2) when necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users. These conditions are addressed in the analysis below.

The Section 804 analysis below is presented in the event that the Board reaches the conclusion that conservation concerns mandate closure of Federal public lands to non-Federally qualified users, and further, that the pool of Federally qualified users must be further restricted.

Existing Federal Regulation

Unit 4 — Deer

6 deer; however, antlerless deer may be taken only from Sept. 15–Jan. 31.	*Aug. 1–Jan. 31*

Proposed Federal Regulation

Unit 4 — Deer

6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.	*Aug. 1–Jan. 31*
Federal public lands of Chichagof Island north of Tenakee Inlet and east of the drainage divide from the northwest point of Gull Cove to Port Frederick Portage, including all drainages into Port Frederick and Mud Bay are closed to the taking of deer except by residents of Hoonah.	*Aug. 1–Jan. 31*

Existing State Regulation

Unit 4 — Deer

Chichagof Island east of Port Frederick and north of Tenakee Inlet including all drainages into Tenakee Inlet.		
3 deer total:	*Bucks*	*Aug. 1–Sept. 14*
	Any deer	*Sept. 15–Dec. 31*
Remainder.		
4 deer total:	*Bucks*	*Aug. 1–Sept. 14*
	Any deer	*Sept. 15–Dec. 31*

Extent of Federal Public Lands

Federal public lands comprise 84% of the NECCUA and are managed by the U.S. Forest Service (USFS) as part of the Tongass National Forest (the NECCUA is comprised of Major Hunt Areas X35 and X42[1] shown **Map 1**).

Customary and Traditional Use Determinations

Rural residents of Unit 4, Kake, Gustavus, Haines, Petersburg, Point Baker, Klukwan, Port Protection, Wrangell, and Yakutat have a customary and traditional use determination for deer in Unit 4.

Regulatory History

The Board and the Alaska Department of Fish and Game (ADF&G) have closed the NECCUA to the harvest of female deer by all hunters for all or portions of regulatory years 2007/08, 2008/09, and 2009/10. Additionally, all of Unit 4 was closed to doe harvest for a portion of 2007/08 (**Table 2** in WP10-14). These closures were in response to a series of deep snow winters in southeast Alaska that reduced the deer population and caused concerns about the status of the population and how long it will take to recover.

A more complete discussion of these emergency actions and the regulatory history for Unit 4 deer can be found in the analysis for Proposal WP10-14.

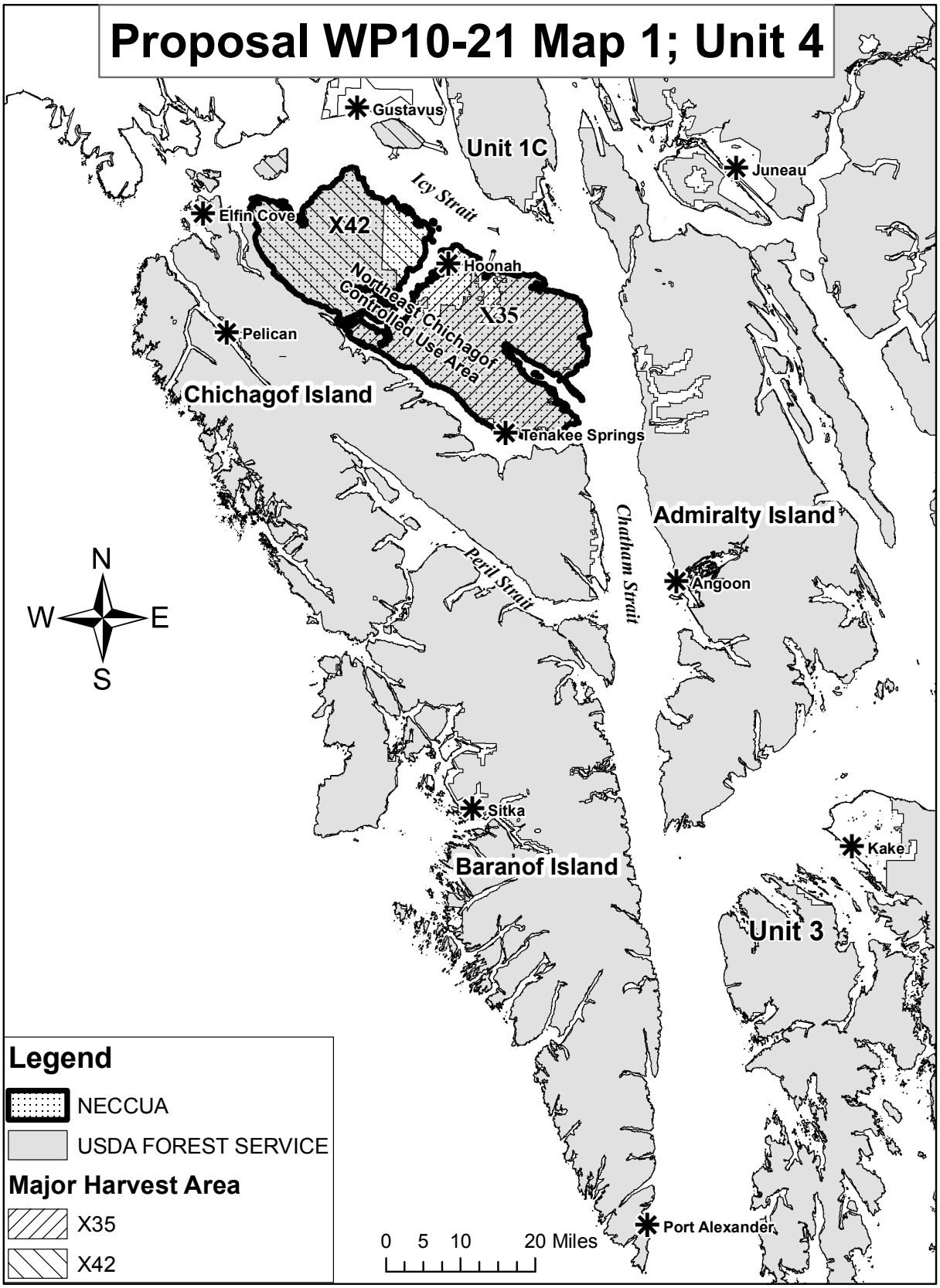
Current Events

Current events pertaining to Unit 4 deer are discussed in the analysis for Proposal WP10-14.

Biological Background

The available information clearly shows that the deer population in Unit 4 has declined since 2006. This is a recurring cycle for deer in southeast Alaska after deep snow winters. Deer populations can recover

[1] Major X42 also includes Lemesurier and Pleasant Islands in Icy Straits that are not part of the NECCUA. Staff were not able to separate information concerning the islands from X42.


Proposal WP10-21 Map 1; Unit 4
Gustavus
Unit 1C
Juneau
Icy Strait
Elfin Cove
X42
Hoonah
Northeast Chichagof Controlled Use Area
X35
Pelican
Chichagof Island
Tenakee Springs
Admiralty Island
Chatham Strait
Peril Strait
Angoon
N
W
E
S
Sitka
Kake
Baranof Island
Unit 3
Port Alexander
0 5 10 20 Miles
Legend
NECCUA
USDA FOREST SERVICE
Major Harvest Area
X35
X42

quickly with mild winters; historically within about five years. Surviving deer appear to be in good shape and despite late snows the last two springs, winter mortality appears to be substantially reduced compared to the winter of 2006–07 (Mooney 2008 and 2009, pers. comm.). The available data suggest that the Unit 4 deer population is not depressed to the point that all harvest needs to be eliminated, but at current estimated population levels harvest of does will reduce recruitment and extend the length of time before the deer population recovers to near 2006 levels.

A more complete discussion of the biological background that provides the basis for this summary is presented in the analysis for proposal WP10-14.

Harvest History

The general harvest history for deer in the NECCUA is presented in the analysis for Proposal WP10-14.

Table 1 summarizes harvest and effort information for the NECCUA obtained through the ADF&G deer harvest survey for Hoonah residents, all other Federally qualified subsistence users, and non-Federally qualified users within the NECCUA from 1997–2007 (McCoy 2009, pers. com.). In 2007, the season following the first deep snow winter, the number of deer harvested and the number of hunters decreased, while the effort per deer harvested increased. From 1997 to 2007, Hoonah residents harvested the most deer in the NECCUA, followed by non-Federally qualified users, and other Federally qualified subsistence users harvested the fewest. Table 5 (in WP10-14) illustrates the percent change in these harvest parameters in 2007 compared to the previous 10 years. Higher effort per deer harvested is a normal consequence of depressed populations and restrictions on doe harvest. These indicators should improve as the deer population recovers.

Table 9 (in WP10-14) shows the 2009 estimated population level and harvest pressure indicators for the NECCUA. The estimated harvest rates are below the 27% allowable harvest rate estimated by McCullough (2001) for mule deer. It is also below the 8%–14% combined doe harvest and wolf predation rate on the doe population for which Person (2004) documented a 7% per year population increase on Prince of Wales Island (POW). However, the POW deer population increase occurred with a 30%–35% recruitment rate. The recruitment rate for the NECCUA is unknown, but was likely well below 30% the last 3 years.

Section 804 Analysis

Whenever a proposal to change Federal regulations seeks a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource, an analysis must be done in accordance with Section 804 of ANILCA. Section 804 of ANILCA mandates that the taking on public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes. Section 804 further requires that whenever it is necessary to restrict the taking of populations of fish and wildlife on such lands for subsistence uses in order to protect the continued viability of such populations or to continue such uses, such a priority shall be implemented through appropriate limitations. These limitations are based on the application of three criteria, including customary and direct dependence upon the populations as the mainstay of livelihood, local residency, and the availability of alternative resources. As noted at the beginning of this analysis, before considering the Section 804 portion of this analysis the Board must first determine that it is necessary to close the NECCUA to non-Federally qualified users for deer harvesting.

The following 19 communities, roughly 21,000 people (**Table 2**; U.S. Census 2009), are included in the existing customary and traditional use determination for deer in Unit 4: Angoon, Cube Cove, Elfin Cove,

Table 1. Deer harvest and effort in the Northeast Chichagof Island Controlled Use Area by user group from 1997-2007 (McCoy 2009, pers. comm).

	Major Harvest Area X35: NE Chichagof Island				Major Harvest Area X42: Icy Strait			
Year	Total Hunters	Total Deer	Deer per Hunter	Days per Deer	Total Hunters	Total Deer	Deer per Hunter	Days per Deer
Hoonah								
1997	135	422	3.1	2.7	51	118	2.3	1.7
1998	162	357	2.2	2.5	57	65	1.1	4.5
1999	219	417	1.9	2.3	73	159	2.2	1.6
2000	155	534	3.4	3.3	54	209	3.9	2.3
2001	218	451	2.1	3.2	30	120	4.0	1.9
2002	165	523	3.2	2.9	46	93	2.0	2.1
2003	92	328	3.6	1.6	76	202	2.7	1.0
2004	166	454	2.7	2.6	49	178	3.6	0.7
2005	165	572	3.5	1.4	69	139	2.0	2.7
2006	104	296	2.8	1.8	80	256	3.2	1.8
2007	95	77	0.8	5.5	27	14	0.5	14.2
Total	1,676	4,431	2.6	2.5	612	1,553	2.5	2.0
Average	152	403	2.6		56	141	2.5	
Percent of Total		35%				12%		
Federally Qualifed Users Except Hoonah								
1997	118	203	1.7	2.2	71	87	1.2	2.3
1998	75	130	1.7	1.9	68	164	2.4	1.4
1999	64	156	2.4	2.7	42	74	1.8	2.5
2000	85	98	1.2	5.4	72	64	0.9	3.4
2001	81	199	2.5	2.7	41	34	0.8	2.9
2002	49	69	1.4	4.8	50	104	2.1	3.0
2003	55	138	2.5	2.1	62	85	1.4	2.6
2004	18	29	1.6	1.2	58	103	1.8	3.0
2005	55	190	3.5	1.1	74	154	2.1	2.2
2006	58	84	1.4	6.2	46	102	2.2	1.7
2007	42	45	1.1	3.6	15	8	0.5	9.1
Total	700	1,341	1.9	2.8	599	979	1.6	2.4
Average	64	122	1.9		54	89	1.6	
Percent of Total		10%				8%		
Non-Federally Qualified Users								
1997	150	189	1.3	3.6	42	72	1.7	2.9
1998	164	430	2.6	2.2	14	19	1.4	4.3
1999	229	361	1.6	4.0	32	49	1.5	2.6
2000	251	358	1.4	3.1	38	77	2.0	3.6
2001	169	240	1.4	3.6	72	123	1.7	2.9
2002	247	354	1.4	3.7	56	61	1.1	2.7
2003	227	503	2.2	2.3	65	180	2.8	1.7
2004	178	440	2.5	2.2	47	83	1.8	2.6
2005	219	399	1.8	2.4	48	85	1.8	2.2
2006	173	287	1.7	2.9	73	150	2.1	2.5
2007	67	17	0.3	19.5	33	8	0.2	16.8
Total	2,074	3,578	1.7	2.9	520	907	1.7	2.7
Average	189	325	1.7		47	82	1.7	
Percent of Total		28%				7%		

Table 2. The popualtion and the number of households in communities whose residents are Federally qualified to harvest deer in the NECCUA, 2000 (U.S. Census 2000).

Community	Number of People	Number of Households
Angoon	572	184
Elfin Cove	32	15
Game Creek	35	10
Gustavus	429	199
Haines/Klukwan	2,392	991
Hoonah	860	300
Kake	710	246
Pelican	163	70
Petersburg	3,224	1,240
Point Baker	35	13
Port Protection	63	31
Sitka	8,835	3,278
Tenakee Springs	104	59
Whitestone Camp	116	45
Wrangell	2,308	907
Yakutat	808	265
TOTAL	20,686	7,853

Funter Bay, Game Creek, Gustavus, Haines, Hoonah, Kake, Klukwan, Pelican, Petersburg, Point Baker, Port Alexander, Port Protection, Sitka, Tenakee Springs, Whitestone Camp, Wrangell, and Yakutat. The communities located in the affected area are Game Creek, Hoonah, Tenakee Springs, and Whitestone Camp. Published subsistence studies of the communities included in the customary and traditional use determination for deer in Unit 4 include: Betts et al. in prep, Cohen 1988, George and Kookesh 1982, George and Bosworth 1988, Gmelch et al. 1983, Kookesh and Leghorn 1986, Mills and Firman 1986, Schroeder and Kookesh 1990, and Smythe 1988. Another source of information is the ADF&G deer hunter survey conducted each year for Southeast Alaska (ADF&G 1998–2004). The following paragraphs address the three criteria as they relate to each of the communities.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

For the period 1997–2003, both Angoon and Hoonah have small sample returns, usually fewer than 10% of the deer harvest ticket holders (ADF&G 1998–2004). However, these data provide an idea about the relative participation and where hunting occurs by these communities. Deer hunter survey data (**Table 3**) indicates that residents of five communities (Game Creek, Gustavus, Hoonah, Tenakee Springs, and Whitestone Camp) primarily focused their deer harvesting efforts in the NECCUA, which includes Major Hunt Areas (Majors) X35 and X42. Four of these communities (Game Creek, Hoonah, Tenakee Springs, and Whitestone Camp) are located within the boundaries of the NECCUA; the fifth, Gustavus, is located in Unit 1C across Icy Strait. Deer harvested in the NECCUA represented between 36% and 100% of the total estimated deer harvested by these five communities from 1997–2003, higher than any of the other 14 communities. The percentage of the total deer harvest represented by the NECCUA deer harvest for each of these communities is as follows: Game Creek (100%), Gustavus (76%), Hoonah (94%), Tenakee

Table 3. The estimated deer harvest by Federally qualified users, cumulative 1997-2003 (ADF&G 1998-2004).

	Southeast Alaska		Major Hunt Area X35: NE Chichagof Island		Major Hunt Area X42: Icy Strait	
Community	**Number of Hunters**	**Number Harvested**	**Number of Hunters**	**Number Harvested**	**Number of Hunters**	**Number Harvested**
Game Creek	57	94	27	40	36	54
Gustavus	383	416	45	47	288	269
Hoonah	1,757	4,217	1,246	3,003	544	966
Tenakee Springs	278	591	160	212	0	0
Whitestone Camp	184	292	174	264	23	19
Angoon	464	1,255	7	7	13	26
Cube Cove	120	330	0	0	0	0
Elfin Cove	138	295	3	9	4	0
Funter Bay	7	22	2	6	0	0
Haines/Klukwan	799	1,522	138	326	89	142
Kake	792	1,189	0	0	0	0
Pelican	310	790	0	0	6	6
Petersburg	4,649	4,866	21	17	8	4
Point Baker	101	168	0	0	0	0
Port Alexander	99	223	0	0	0	0
Port Protection	58	77	0	0	0	0
Sitka	8,831	18,540	85	88	48	61
Wrangell	3,267	3,859	6	6	0	0
Yakutat	244	149	0	0	5	29
TOTAL	21,436	36,916	1,914	4,025	1,058	1,570

Bold=community in NECCUA.

Note: the Major Hunt Areas X35 and X42 together comprise the NECCUA.

Springs (36%), and Whitestone Camp (97%). Of these five communities, only Tenakee Springs reported harvesting less than 50% of its harvest from the NECCUA. The remainder of its harvest was reported to be taken in the Major on the south shore of Tenakee Inlet, outside the NECCUA.

2. Local Residency—Proximity to the Resource

As mentioned previously, four communities (Game Creek, Hoonah, Tenakee Springs, and Whitestone Camp) that are included in the customary and traditional use determination for deer in Unit 4 are located within the NECCUA. Three communities, Game Creek, Hoonah, and Whitestone Camp, are located adjacent to one another. Tenakee Springs is located on Tenakee Inlet at the southern boundary of the NECCUA.

The other communities in Unit 4 are Angoon, Funter Bay, and Cube Cove on Admiralty Island; Elfin Cove and Pelican on north Chichagof Island; Sitka on west Baranof Island; and Port Alexander on south Baranof Island. Of these communities, Elfin Cove and Pelican are nearest to the NECCUA.

The remaining Federally qualified users are residents of the communities of Gustavus in Unit 1C and directly across Icy Strait from the NECCUA; Haines and Klukwan in Unit 1D; Port Protection and Port Baker on POW Island in Unit 2; Kake, Petersburg, and Wrangell in Unit 3; and Yakutat in Unit 5A.

3. Availability of Alternative Resources

All of the communities in the customary and traditional use determination for deer in the NECCUA have subsistence-based economies. The wild resources used vary according to geographic location of the community and species availability.

There is no open season for deer in Unit 1D. Haines and Klukwan residents must go to another management unit to harvest deer. The ADF&G deer hunter survey indicates residents of these communities harvest deer in many different areas, located in several management units (ADF&G 1998–2004). Gustavus is located on a foreland that is a popular moose hunting area, but deer are scarce there. Port Protection and Point Baker are located in Unit 2 and are adjacent to prime deer habitat. A huntable population of deer exists near Kake, Petersburg, and Wrangell in Unit 3. A population of deer exists also in Unit 5A where Yakutat is located.

Summary of Section 804 Analysis

While 19 communities are included in the customary and traditional use determination for deer in the NECCUA, the residents of the area—including residents of Game Creek, Hoonah, Tenakee Springs, and Whitestone Camp—and Gustavus have exhibited the highest level of dependence on and are closest in proximity to the deer population in the NECCUA. This finding is based on the total hunting effort and harvest of deer in Southeast Alaska by each community and the percentage of the hunting effort and harvest of deer reported in the NECCUA. While the residents of communities that are in the NECCUA and Gustavus have not always reported that the majority of their harvest of deer took place in the NECCUA, their level of hunting effort in the NECCUA is highest of all Federally qualified users residing in 19 communities. In addition, most of the hunters living outside of the NECCUA have other deer populations available to them, in Units 2, 3, and 5A.

The residents of communities located within the boundary of the NECCUA and Gustavus have exhibited the highest levels of reliance on the deer in the area. Deer harvest on Federal public lands in the NECCUA should be restricted to the residents of the area including residents of Game Creek, Hoonah, Tenakee Springs, and Whitestone Camp; and Gustavus.

Effects of the Proposal

If this proposal is adopted, Federal public lands in the NECCUA would be closed to the harvest of deer by non-Federally qualified users as well as residents of some other communities included in the customary and traditional use determination for deer. These communities include Angoon, Cube Cove, Elfin Cove, Funter Bay, Haines, Kake, Klukwan, Pelican, Petersburg, Point Baker, Port Alexander, Port Protection, Sitka, Wrangell, and Yakutat.

If this proposal is adopted, competition to harvest deer in the NECCUA would decrease. Measures of hunter success and efficiency (deer per hunter and days per deer) may improve for Hoonah residents, but they will not likely approach pre-2007 levels until the deer population recovers.

Adopting this proposal would not limit doe harvest by Federally qualified subsistence users. Emergency closures on doe harvest may still need to be implemented until the Board, ADF&G, Council, and local communities agree that the deer population has sufficiently recovered.

Adopting this proposal would reduce management flexibility compared to existing in-season management authority. Federal managers and the ADF&G have, emergency action authority to quickly close the NECCUA as problems become evident, but Federal in-season managers cannot include additional users without regulatory proposals, which are on a two year cycle. The agencies have worked with local residents and the Council to implement appropriate closures during the last three seasons. History suggests the decline in the deer population will be temporary and the population should recover to levels sufficient for doe harvest in about three to five years assuming more typical winter snowfall. The most recent winter (2009-10) was mild with limited snow accumulation at lower elevations. As an example, a similar series of severe winters occurred in the late 1980s which resulted in the Board adopting restrictive regulations for the 1992/93 and 1993/94 seasons. The original Federal regulations were restored for the 1994/95 season.

If this proposal is not adopted, all users would continue to be eligible to hunt deer in the NECCUA. Emergency closures on doe harvest would likely need to be implemented until the Board, ADF&G, Council, and local communities agree that the deer population has sufficiently recovered.

OSM CONCLUSION

Oppose Proposal WP10-21

Justification

The proposed exclusion of non-Federally qualified users must meet the conditions set by the Board for closing Federal public lands to non-Federally qualified users. The two conditions that apply in the situation covered by this proposal include: 1) when a population is not sufficient to provide for both Federally qualified subsistence users and other users, and 2) when necessary to ensure the continuation of subsistence uses by Federally qualified subsistence users.

Existing population and harvest information indicate that the deer population in the NECCUA has declined substantially but is sufficient to provide for continued harvest of bucks. Federal and State management programs have worked with local communities and the Council since 2006 to monitor the deer population and implement temporary doe harvest restrictions using existing authorities that should maximize deer population productivity and reduce the recovery period. Deer population information suggests that doe harvest at this time will reduce deer productivity and temporary closures on doe harvest may still need to be implemented until the Board, ADF&G, Council, and local communities agree that the deer population has sufficiently recovered.

History has repeatedly shown that deep snow winters cycle with low snow winters which allow the population to recover within three to five years. Restricting eligibility to harvest deer in the NECCUA may be unnecessary because harvest does not regulate the deer population and current harvest rates appear to be within acceptable limits for population growth, assuming more usual winter weather returns.

Population recovery, which is dependent on winter snow conditions, is expected to have a greater effect on subsistence users' harvest success than limiting other users.

Further, adopting this proposal would reduce management flexibility compared to existing in-season management authority. The Board has existing authority to reduce seasons, harvest limits, or eligible users in the NECCUA in order to maintain a healthy deer population and provide a priority for subsistence users. It is appropriate to use this authority during the historically short-term period of the low deer population cycle. Thus, the Board has existing options and it does not appear that adopting this proposal is necessary to ensure the continuation of subsistence uses.

If the Board determines that the pool of Federally qualified users must be reduced, the preliminary staff conclusion would be to adopt the results of the Section 804 analysis and restrict deer hunting in the NECCUA to residents of the area and Gustavus.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-21 **with modification**. The Council determined that this proposal was a necessary restriction on subsistence and non-subsistence uses because residents of this area have limited other opportunities to obtain subsistence food. The Council acknowledges there may be sufficient buck deer available for a minimal harvest by qualified and non-qualified users. However, that level of harvest does not provide for the continuation of subsistence use by local users. The most recent estimates of harvest indicated that local residents are only taking 20 % of their average subsistence harvest. Until the population rebuilds, the use of deer in this area must be restricted to local users. The closure will be reviewed in three years and regulatory changes can be made if conditions warrant. This action is not a restriction, in a practical sense, to other qualified users or non-subsistence users since residents of Juneau and other qualified subsistence communities must travel to hunt in the NECCUA. There are many better hunting opportunities available to them in other areas with a similar amount of effort.

The modified regulation would read:

Unit 4 — Deer	
6 deer; however, female deer may be taken only from Sept. 15–Jan. 31.	*Aug. 1–Jan. 31*
Federal public lands of Chichagof Island north of Tenakee Inlet and east of the drainage divide from the northwest point of Gull Cove to Port Frederick Portage, including all drainages into Port Frederick and Mud Bay, are closed to the taking of deer except by residents of Game Creek, Hoonah, Tenakee Springs, Whitestone Camp, and Gustavus.	*Aug. 1–Jan. 31*

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-21

The Interagency Staff Committee (ISC) found sufficient rationale for both the Council's recommendation (support with modification) and for the OSM Conclusion (oppose). The ISC suggests that there could be other regulatory action adopted and suggest the following additional information for consideration:

Unless there are additional severe winters, it is likely that the deer population will be recovered enough to allow hunting under current regulations (including doe hunts) within five years. This will occur with or without implementation of this proposed closure. Therefore, an option could be to sunset this closure at the end of the current two-year cycle (June 2012), thus providing a subsistence use priority only in the near term while populations are expected to be low.

- Historically, Haines / Klukwan have used the proposed closure area for about one-third of their deer harvest. This area is one of the closest to Haines / Klukwan where deer are available. The Board could choose to include Haines / Klukwan in the "804" list of communities. The Board has received public comment recommending this action after the Regional Advisory Council meeting.
- Another option would be to close the hunt to non-federally qualified users but leave it open to all federally qualified users.

Comments WP10-21
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-21: This proposal would close federal public lands of the Northeast Chichigof Controlled Use Area (NECCUA) to deer hunting except by residents of Hoonah, with total closure to non-federally qualified users and all other federally qualified users.

Introduction: The original proposal was submitted by the Southeast Regional Advisory Council to address a conservation concern for deer on NECCUA, stating that there are not enough deer in this area to share outside the community of Hoonah and implied that this action to further restrict eligibility is necessary under ANILCA Section 804. The Council subsequently supported an amendment to expand the communities whose residents could federal subsistence deer hunt in the NECCUA on federal lands to include: Game Creek, Hoonah, Tenakee Springs, Whitestone Camp, and Gustavus. The Council selected these communities based upon an 804 analysis completed by federal staff for proposal WP10-14 which requests closure of federal lands in NECCUA to the harvest of female deer by non-federally qualified users during December.

The federal subsistence deer hunting season in NECCUA is August 1 through January 31, and the bag limit is six deer of which antlerless deer may only be taken September 15 through January 31 (one month longer than the State season and more liberal sex and harvest limit). Over three hunting seasons, the Department implemented female deer closures in this area by emergency orders: EO 01-06-07, EO 1-13-07, EO 01-03-08, and EO 01-02-09. The Forest Service worked in consultation with the Federal Subsistence Board and Department to enact similar federal subsistence closures through Wildlife Special Actions: WSA07-05, WSA 07-07, 7-BD-05-08, 7-BD-05-09, and WSA 09-10. These efforts were necessary for the reproductive portion of this deer population to remain intact and begin to recover. These actions show a shared responsibility between State and federal managers to address a conservation concern.

Impact on Subsistence Users: If adopted as amended by the Council, federally qualified subsistence hunters from Hoonah, Game Creek, Tenakee Springs, Whitestone Camp, and Gustavus would benefit from exclusive deer hunting rights on federal public lands in this area. Federal public lands would be closed to other federally qualified subsistence users and non-federally qualified hunters, so adoption of the original or amended proposal will impact non-federally qualified users, including state regulated subsistence hunters.

Opportunity Provided by State: The State deer season in NECCUA is August 1 through December 31, and the bag limit is three deer in portions of NECCUA and four in the remainder of GMU 4, in which either sex deer may be harvested from September 15 through December 31.

Conservation Issues: Closures to hunting female deer are necessary in order to provide sufficient reproduction for population recovery. Even if hunting is limited to Hoonah hunters, the deer population would remain at low levels if female deer continue to be harvested during periods of low deer abundance. The federal subsistence bag limit of six deer was established at a time of peak population abundance and should be reduced during lower population trends.

Comments WP10-21
April 30, 2010; Page 2 of 2

Recommendation: Oppose. Federal and State management programs have worked with local communities and the Council since 2006 to monitor the deer population and implement closures to harvest of female deer to improve deer population recovery. This cooperative approach assures flexibility to meet the cyclic deer population needs as well as provide state and federal subsistence and nonsubsistence uses. Adoption of this proposal is not necessary to provide for conservation or for continuation of subsistence uses.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-21. Our Fish and Game A.C. has been informed by the ADF&G that the S. E. Regional Subsistence Council has made a proposal to be heard at your May Board meeting in Anchorage that would take away Haines/Kluckwan and Skagway's access to our traditional subsistence food source in cutting us off from our traditional deer hunting on N. E. Chichaogof Island. It is well documented in your federal literature that Haines/Kluckwan is recognized as one of the 14 communities recognized as rural in regards to that N.E. Chichaogof deer hunt and the residents of Skagway also have traditionally hunted deer there for generations. It is our contention that the S. E. Regional Council was in error in making this proposal to limit the hunting privilages On N.E. Chichaogof to those few communities of Hoonah, Tenekee Springs, Whitestone Logging Camp, Game Creek, and Gustavus.

They were in error in several ways. First of all both State and Federal wildlife managers do not agree that this drastic step was necessary to conserve the resource. Secondly, even if it were deemed necessary to limit the hunt to Federally recognized rural communities, which neither State nor Federal wildlife professionals have agreed that it is: Then, that step was skipped by the Regional Council. They went to a more draconian program that limited the hunt to only people living on the Island, except Gustavis. And what is their rational for that? Gustavis is not on the Island and gets to share in the subsistence resource but, not Haines/Kluckwan with equal rural status and history of subsistence use and also not Skagway in a similar shared history? There is no logic to that. You cannot say that Gustavis, Haines/Kluckwan and Skagway are not similarly situated in regards to being off the island and federally recognized rural communities with equal histories of subsistence use. Third, Whitestone Camp is an abandoned logging camp previously occupied by loggers from Oregon and Washington. The S.E. Regional Council gives an abandoned camp more subsistence preference than recognized rural users of Haines/Kluckwan and Skagway? It is absurd.

We request, that first, you follow the recommendations of the ADF&G and your own biologists and not limit the hunt to rural only communities. Second that if it is deemed necessary to limit the hunt to only Federally recognized rural communities, that all Federally recognized rural communities be granted equal access and that Skagway be added to that list along with Haines/Kluckwan. Third, that If, it is determined by your board that you would limit access to only some of the Federally recognized rural communities with subsistence use history of the N.E, Chichaogof deer herd, that you add Haines/Kluckwan and Skagway to the list of communities so favored.

Mike Saunders, Secretary, Upper Lynn Canal Fish and Game Advisory Committee

Oppose Proposal WP10-21. I am contacting you to comment on Proposal WP10-21, the one about making deer hunting on parts of Chichagof Island open to only those that live in the area. Please do not do that. For years I (my home is in Haines) have hunted that place for deer along with other friends and family members. We have done well in the past and know that when the snow conditions get bad the deer suffer. If you want to do something for the population of deer, do not keep me out of the area restrict the hunt to bucks only during bad conditions. I have seen what late season "subsistence hunts" do to deer. A lot of these hunts happen late in the season after snow pushes deer down to lower elevations along the beaches. After the horns drop many doe deer are shot and most are carrying next years fawns. Please keep the hunt open to all in the rural towns like it has been in past but protect the does when times are bad.

Robert Jensen, Haines, AK

WP10-22 Executive Summary	
General Description	Proposal WP10-22 requests the Board standardize the in-season management of fish and wildlife in the Southeast Region by delegating authority for in-season management of all wildlife species in the Southeastern Alaska and Yakutat Areas. Although specific regulatory language is not provided in the proposal, the intention is to provide authority to close, reopen or adjust Federal Subsistence seasons and to set harvest and possession limits for all wildlife to a uniform set of fish and wildlife in-season managers. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*See the analysis for the proposed regulation language.*
OSM Conclusion	**Support** Proposal WP10-22 **with modification** to delegate in-season management for wildlife on a species by species basis, by letter, to the same managers as presently identified in regulation.
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found this proposal to be very complicated, from the administrative perspective. At this point, it makes sense to implement the proposal for delegations that are currently in regulation, as suggested by the OSM Conclusion. *See full comments following the analysis.*
ADF&G Comments	**Oppose**
Written Public Comments	**1 Support** **Support** Proposal WP10-22 **with modification** as described in the OSM Conclusion

STAFF ANALYSIS
WP10-22

ISSUES

Proposal WP10-22, submitted by the Southeast Alaska Subsistence Regional Advisory Council, requests the Board standardize the in-season management of fish and wildlife in the Southeast Region by delegating authority for in-season management of all wildlife species in the Southeastern Alaska and Yakutat Areas. Although specific regulatory language is not provided in the proposal, the intention is to provide authority to close, reopen or adjust Federal Subsistence seasons and to set harvest and possession limits for all wildlife to a uniform set of fish and wildlife in-season managers.

DISCUSSION

In the Southeast Alaska Region, there are 10 delegations of authority for wildlife in Federal regulations and seven delegations for wildlife by letter from the Board. The Councils proposal would be implemented by the Federal Subsistence Board using their delegation authority described in Federal regulations (*§ __.10* (d)(6)) to provide management authority to in-season managers for all wildlife in Units 1–5. The delegated officials for wildlife would be the same six Federal delegated officials that currently have in-season authority for fish in those areas. No additional regulations need to be adopted.

Existing Federal Regulations

§ __.26(n)(1) Unit 1B Deer: 2 antlered deer. The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.	*Aug. 1–Dec. 31*
§ __.26 (n)(1) Unit 1B Moose: 1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler, by State registration permit only. The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.	*Sept. 15–Oct. 15*
§ __.26 (n)(2) Unit 2 Deer: 5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15—Federal/State harvest report. The Tongass National Forest Supervisor is authorized to reduce the harvest to 4 deer based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council. The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.	*July 24–Dec. 31*

§ __.26 (n)(2) Unit 2 Wolf: 5 wolves. The Tongass National Forest Supervisor (or designee) may close the Federal hunting and trapping season in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council, when the combined Federal-State harvest quota is reached.	*Sept. 1–Mar. 31*
§ __.26 (n)(3) Unit 3 Deer: Mitkof, Woewodski, and Butterworth Islands—1 antlered deer. The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.	*Oct. 15–Oct. 31*
Unit 3—remainder—2 antlered deer. *The Petersburg District Ranger is authorized to open the December season by announcement, or close any portion of the entire season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.*	*Aug. 1–Nov. 30* *Dec. 1–Dec. 31 season to be announced.*
§ __.26 (n)(3) Unit 3 Moose; 1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only. The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.	*Sept. 15–Oct. 15*
§ __.26(n)(4)(ii)(D) Unit 4 Brown Bear: (B) Five Federal registration permits will be issued by the Sitka or Hoonah District Ranger for the taking of brown bear for educational purposes associated with teaching customary and traditional subsistence harvest and use practices. *Any bear taken under an educational permit does not count in an individual's one bear every four regulatory years limit*	*Season not restricted*
§__.26(n)(5) Unit 5A Goat: that area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord—1 goat by Federal registration permit. The U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the harvest quota prior to the season. A minimum of two goats in the harvest quota will be reserved for Federally qualified subsistence users. The season will be closed by local announcement from the U.S. Forest Service Yakutat District Ranger when the quota has been taken. The harvest quota and season announcements will be made in consultation with The National Park Service and local residents.	*Aug. 1–Jan. 31*
Unit 5A—remainder—1 goat by Federal registration permit. The U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the harvest quota prior to the season. A minimum of four goats in the harvest quota will be reserved for Federally qualified subsistence users. The season will be closed by local announcement when the quota has been taken. The harvest quota and season announcements will be made in consultation with The National Park Service and local residents.	*Aug. 1–Jan. 31*

Other Relevant Federal Regulations

§ __.10 Federal Subsistence Board. (d)(6) The Board may delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board.

§ __.19 Special actions. (a) The Board may restrict, close, or reopen the taking of fish and wildlife for non-subsistence uses on public lands when necessary to assure the continued viability of a particular fish or wildlife population, to continue subsistence uses of a fish or wildlife population, or for reasons of public safety or administration.

(b) The Board may open, close, or restrict subsistence uses of a particular fish or wildlife population on public lands to assure the continued viability of a fish or wildlife population, to continue subsistence uses of a fish or wildlife population, or for reasons of public safety or administration.

(c) The Board will accept a request for a change in seasons, methods and means, harvest limits and/or restrictions on harvest under this § 100.19 only if there are extenuating circumstances necessitating a regulatory change before the next annual subpart D proposal cycle. Extenuating circumstances include unusual and significant changes in resource abundance or unusual conditions affecting harvest opportunities that could not reasonably have been anticipated and that potentially could have significant adverse effects on the health of fish and wildlife populations or subsistence uses.

(d) In an emergency situation, the Board may immediately open, close, liberalize, or restrict subsistence uses of fish and wildlife on public lands, or close or restrict non-subsistence uses of fish and wildlife on public lands, if necessary to assure the continued viability of a fish or wildlife population, to continue subsistence uses of fish or wildlife, or for public safety reasons. Prior to implementing an emergency action, the Board shall consult with the State. The emergency action shall be effective when directed by the Board, may not exceed 60 days, and may not be extended unless it is determined by the Board, after notice and public hearing, that such action should be extended.

(e) After consultation with the State, the appropriate Regional Advisory Council(s), and adequate notice and public hearing, the Board may make or direct a temporary change to close, open, or adjust the seasons, to modify the harvest limits, or to modify the methods and means of harvest for subsistence uses of fish and wildlife populations on public lands.

Proposed Federal Regulation

The proposal submitted by the Council reads:

"References in regulation for in-season management for deer, wolves, moose and bears would be removed from wildlife regulations. In-season management authority to close, reopen or adjust Federal Subsistence seasons and to set harvest and possession limits for wildlife would be delegated by letter from the Board to a uniform set of fish and wildlife in-season managers."

Suggested regulatory implementation includes deleting regulatory delegations as follows:

§ __.26 (n)(1) Unit 1B Deer: 2 antlered deer. ~~The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.~~	*Aug. 1–Dec. 31*
§ __.26 (n)(1) Unit 1B Moose: 1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler, by State registration permit only. ~~The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.~~	*Sept. 15–Oct. 15*
§ __.26 (n)(2) Unit 2 Deer: 5 deer; however, no more than one may be an antlerless deer. Antlerless deer may be taken only during the period Oct. 15—Federal/State harvest report. The ***harvest limit may be reduced*** *~~Tongass National Forest Supervisor is authorized to reduce the harvest~~ to 4 deer based on conservation concerns~~, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council~~. The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.*	*July 24–Dec. 31*
§ __.26 (n)(2) Unit 2 Wolf: 5 wolves. The ~~Tongass National Forest Supervisor (or designee) may close the~~ Federal hunting and trapping season ***may be closed*** *~~in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council,~~ when the combined Federal-State harvest quota is reached.*	*Sept. 1–Mar. 31*
§ __.26 (n)(3) Unit 3 Deer: Mitkof, Woewodski, and Butterworth Islands—1 antlered deer. ~~The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.~~	*Oct. 15–Oct. 31*
Unit 3—remainder—2 antlered deer.	*Aug. 1–Nov. 30*
~~The Petersburg District Ranger is authorized to open the December season by announcement, or close any portion of the entire season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council.~~	*Dec. 1–Dec. 31 season to be announced.*

§ __.26 (n)(3) Unit 3 Moose; 1 antlered bull with spike-fork or 50-inch antlers or 3 or more brow tines on either antler by State registration permit only. ~~The Petersburg District Ranger is authorized to close the season based on conservation concerns, in consultation with ADF&G and the Chair of the Southeast Alaska Subsistence Regional Advisory Council.~~	*Sept. 15–Oct. 15*
§ __.26(n)(4)(ii)(D) Unit 4 Brown Bear: (B) Five Federal registration permits will be issued ~~by the Sitka or Hoonah District Ranger~~ for the taking of brown bear for educational purposes associated with teaching customary and traditional subsistence harvest and use practices. Any bear taken under an educational permit does not count in an individual's one bear every four regulatory years limit	*Season not restricted*
*§__.26(n)(5) Unit 5A Goat: that area between the Hubbard Glacier and the West Nunatak Glacier on the north and east sides of Nunatak Fjord—1 goat by Federal registration permit. The ~~U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the~~ harvest quota **will be announced** prior to the season. A minimum of two goats in the harvest quota will be reserved for Federally qualified subsistence users. ~~The season will be closed by local announcement from the U.S. Forest Service Yakutat District Ranger when the quota has been taken. The harvest quota and season announcements will be made in consultation with The National Park Service and local residents.~~*	*Aug. 1–Jan. 31*
*Unit 5A—remainder—1 goat by Federal registration permit. The ~~U.S. Forest Service Yakutat District Ranger and ADF&G will jointly announce the~~ harvest quota **will be announced** prior to the season. A minimum of four goats in the harvest quota will be reserved for Federally qualified subsistence users. ~~The season will be closed by local announcement when the quota has been taken. The harvest quota and season announcements will be made in consultation with The National Park Service and local residents.~~*	*Aug. 1–Jan. 31*

Existing State Regulation

Alaska Statute Sec. 16.05.060. Emergency orders.

___(a) This chapter does not limit the power of the commissioner or an authorized designee, when circumstances require, to summarily open or close seasons or areas or to change weekly closed periods on fish or game by means of emergency orders.

Extent of Federal Public Lands

The Southeast Region is composed of Units 1–5. The Region includes all of the Tongass National Forest, all of the Glacier Bay National Park and Preserve and the southeast portion of the Wrangell-St. Elias National Park and Preserve. Approximately 95% of the lands are Federal public lands although there is no subsistence use allowed within the Glacier Bay National Park.

Customary and Traditional Use Determinations

Customary and traditional use determinations for wildlife in the Southeastern Alaska and Yakutat Areas vary between no Federal subsistence priority and all rural Alaska residents according to species and location.

Regulatory History

Since inception of the Federal subsistence program, the Board has adopted a number of regulatory proposals, which has resulted in 11 instances where management authority for a wildlife species was delegated to local managers by regulation in Southeast Alaska. There have also been seven instances where the Board delegated authority for the management of a wildlife species in Southeast Alaska by letter **(Table 1)**.

Effects of the Proposal

Adopting this proposal would result in a slightly smaller group of positions with delegated authority for wildlife than what are currently found in regulation (6 rather than 8). However, the function of the subsistence management program in the Southeastern Alaska and Yakutat Areas would be enhanced because management of fish and wildlife would be the responsibility of a standardized group with the specialized training necessary to comply with subsistence policies, protocols and regulations. The infrastructure for this type of delegation is already in place for the management of fisheries and it would work much the same way for wildlife, as staff is already in place. Wildlife and fisheries biologists are located on each Ranger District to supply information on local conditions. Oversight is provided by a Tongass National Forest subsistence program leader, a Council coordinator and extensive support staff. The current staff is familiar with the in-season management process and has written three wildlife special actions and four fisheries special actions in 2008 and eight special actions for wildlife and five for fish in 2009 **(Table 2)**.

The Alaska Department of Fish and Game is organized where there are generally six area management biologists for commercial fisheries, sport fisheries and wildlife within the Southeast and Yakutat Region. Each of these individuals resides in communities within his area of responsibility and has delegated management authority according to State statue. A parallel Federal management structure would facilitate cooperation in data gathering and facilitate communication between Federal and State managers.

The number of instances where authority for wildlife has been delegated has been increasing and there are now six Units, five species and eight positions with delegated authority included either in regulation or by letter **(Table 3)**. If this proposal is adopted, it would help to limit the number of individuals with delegated authority and would standardize who has the authority in the each portion of the Unit.

There is a delegated official for fish for each of the six management areas within the entire Southeastern Alaska and Yakutat Areas **(Table 4).**

Adoption of this proposal would reduce complexity and inconsistencies within the current wildlife regulations for the Southeastern Alaska Area. The lack of detail in regulatory delegations has produced uncertainty and ambiguity in implementing the direction of the Board. An advantage of delegating by letter is the ability of the Board to provide more detailed direction to in-season mangers than can be efficiently provide through regulation. The Board also has more flexibility to amend instructions to in-season managers by delegation letter. The current system of delegating authority for wildlife on a

Table 1. Delegated authorities for wildlife in the Southeastern Alaska and Yakutat Areas.

Source of Authority	**Position of Authority**	**Delegated Authority**
§ __.26(n)(1)	Petersburg District Ranger	Close the moose season in Unit 1B
§ __.26(n)(1)	Petersburg District Ranger	To close the deer season in Unit 1B
§ __.26(n)(2)	Tongass Forest Supervisor	Close the wolf hunting and trapping seasons when quota is reached in Unit 2
§ __.26(n)(2)	Tongass Forest Supervisor	Reduce limit to 4 deer in Unit 2
§ __.26(n)(3)	Petersburg District Ranger	To close the moose season in Unit 3
§ __.26(n)(3)	Petersburg District Ranger	To close the deer season in Unit 3 Mitkof, Woewodski, and Butterworth Islands
§ __.26(n)(3)	Petersburg District Ranger	To close the deer season in Unit 3 remainder
§ __.26(n)(4)(ii)(D)	FS District Ranger	Issue 5 permits for taking brown bear for educational purposes in Unit 4
§__.26(n)(5)	Yakutat District Ranger	Announce harvest quota for goat in Unit 5(A) Nunatak Bench and 5(A) remainder and
§ _.26(n)(5)	Yakutat District Ranger	Close Unit 5A moose season when harvest quota is reached
§ _.26(n)(5)	National Park Service	Close Unit 5B moose season when harvest quota is reached
Letter from the Board Chairman, dated October 2008	Sitka District Ranger	To issue special actions when necessary to assure the conservation of deer in Unit 4
Letter from the Board Chairman, dated October 2008	Juneau District Ranger	To issue special actions when necessary to assure the conservation of deer in Unit 4
Letter from the Board Chairman, dated October 2008	Hoonah District Ranger	To issue special actions when necessary to assure the conservation of deer in Unit 4
Letter from the Board Chairman, dated March 2004	Petersburg District Ranger	To annually issue a Federal registration permit to the Organized Village of Kake to harvest one deer in Unit 3 for their annual culture camp
Letter from the Board Chairman, dated March 2004	Sitka District Ranger	To annually issue a Federal registration permit to Southeast Alaska Indian Cultural Center (SEAICC) to harvest three male goats in Unit 4 for use in cultural and educational activities at the Sitka National Historic Park.
Letter from the Board Chairman, dated March 2004	Sitka District Ranger	Annually issue a Federal registration permit to the North American Traditional Indian Value Enrichment, Inc. (N.A.T.I.V.E., Inc) to harvest one deer per camp in Unit 4 and/or 24 Coho salmon for their annual culture camp.
Letter from the Board Chairman, dated October 2008	District Ranger, Admiralty Island National Monument	To issue special actions when necessary to assure the conservation of deer in Unit 4

Table 2. Summary of Federal Subsistence Special Actions for Fish and Wildlife in the Southeastern Alaska Area; Regulatory Years 2008 and 2009.

2008-2009 Regulatory Year for Fish and Wildlife

Special Action Number	Area & Species Affected	Summary of Action	Authorized By
WSA 7-BD-05-08	Unit 4 NECCUA Deer	Closed the Northeast Chichagof Controlled Use Area (NECCUA) to the taking of female deer from October 2, 2008 through January 31, 2009.	USFS Hoonah District Ranger via authority delegated by the Federal Subsistence Board
WSA08-05	Unit 5A Moose	Changed the Moose quotas for Unit 5A except Nunatak Bench, when **50** (60) bulls have been taken from the Unit. The season would be closed in that portion west of the Dangerous River when **20** (30) bulls have been taken in that area.	Federal Subsistence Board
WSA08-11	Unit 3 Marten	Closed Federal public lands in Unit 3, Kuiu Island only, to trapping or taking of marten from December 12 through February 9.	Federal Subsistence Board
FSA 7-EU-01-08	Unit 1 Unuk River Eulachon	Closed the Unuk River to the taking of Eulachon starting February 26, 2008 for 60 days for conservation.	USFS Ketchikan District Ranger via authority delegated by the FSB
FSA 7-RS-02-08	District 6 Hatchery Creek Sockeye Salmon	Closed Hatchery Creek drainage to the taking of sockeye salmon from July 10 to July 31, 2008. Beginning August 1, 2008, the drainage was re-opened to allow subsistence harvest of coho salmon. Gear was limited to rod and reel or dip net. Any sockeye caught had to be immediately returned to the water unharmed.	USFS Craig District Ranger via authority delegated by the FSB
FSA 7-RS-03-08	District 13 Redoubt Lake Sockeye Salmon	Closed Redoubt Lake to the harvest of sockeye salmon from July 18 through September 17, 2008 due to low escapement in compliance with the Redoubt Lake Sockeye Salmon Management Plan.	USFS Sitka District Ranger via authority delegated by the FSB
FSA 7-RS-04-08	District 2 Karta River Sockeye Salmon	Closed the Karta River drainage to the taking of sockeye salmon beginning August 1, Federally qualified users could fish for other salmon with rod and reel or dip net gear. Any sockeye caught had to be immediately released.	USFS Craig District Ranger via authority delegated by the FSB

2009-2010 Regulatory Year for Fish and Wildlife

Special Action Number	Area & Species Affected	Summary of Action	Authorized By
WSA09-01	Units 1B and 3 and a Portion of Unit 1C Moose	Amended the definition of a legally harvested moose in Units 1B and 3 and the portion of Unit 1C south of Point Hobart to include moose with two brow tines on each antler.	Federal Subsistence Board
WSA09-02	Unit 5A Goat	Closed the August 1, 2009 through January 31, 2010 Federal goat hunting season in the portion of Unit 5A known as the Nunatak Bench.	Federal Subsistence Board
WSA09-03	Unit 3 Marten	Closed Federal public lands in Unit 3, Kuiu Island only, to trapping or taking of marten from December 1, 2009 through February 15, 2010.	Federal Subsistence Board
WSA09-04	Unit 5A Moose	Delegated authority to the USFS Yakutat District Ranger to establish the quota for moose in Unit 5A, except Nunatak Bench, in consultation with the Alaska Department of Fish and Game (ADF&G) and the Chair of the Southeast Alaska Subsistence Regional Advisory Council, and to	Federal Subsistence Board

		close the season when the quota has been reached.	
SA 7-MO-06-09	Unit 5A Moose	Reduced the bull moose harvest quota from 60 to 55 in Unit 5A and from 30 to 25 on Federal public lands west of the Dangerous River, except the Nunatak Bench for the 2009 season, October 8-November 15.	USFS Yakutat District Ranger via authority delegated by the Federal Subsistence Board
WSA09-05	Unit 4 Deer	Closed the Federal public lands of Unit 4 draining into Chatham Strait, Peril Strait and Icy Strait, including Tenakee Inlet, to the harvest of female deer by non-federally qualified users for the month of December, 2009.	NOT APPROVED Federal Subsistence Board
SA 7-BD-05-09	Unit 4 Deer	Closed the Federal public lands of the Northeast Chichagof Controlled Use Area of Unit 4 to the taking of female deer from September 14, to November 13, 2009.	USFS Hoonah and Sitka District Rangers via authority delegated by the Federal Subsistence Board
WSA09-10	Unit 4 Deer	Closed the Federal public lands of Unit 4, Northeast Chichagof Controlled Use Area (NECCUA), to the harvest of female deer from November 14, 2009 through December 31, 2009.	Federal Subsistence Board
FSA 7-EU-01-09	Section 1D Unuk River Eulachon	Closed the Unuk River to the taking of Eulachon starting February 22, until April 23, 2009	USFS Ketchikan District Ranger via authority delegated by the Federal Subsistence Board
FSA09-03	Section 3B Klawock River Sockeye Salmon	Extended the season closing date for the Federal subsistence sockeye salmon fishery in the Klawock River from July 31 to August 7, 2009.	Federal Subsistence Board
FSA 7-RS-02-09	District 6 Hatchery Creek Sockeye Salmon	Reduced the limit for sockeye salmon in the Hatchery Creek drainage to 3 sockeye per day and set an annual limit of 9 sockeye salmon from June 1, until June 28, 2009 Closed a portion of the Hatchery Creek drainage, from 100 feet upstream of the upper falls to 100 feet downstream of the lower falls, to all Federal subsistence fishing, closed the remainder of the drainage to the harvest of sockeye salmon and restricted fishing gear to rod and reel and dip net from June 29 to July 31, 2009.	USFS Craig District Ranger via authority delegated by the Federal Subsistence Board
FSA 7-RS-03-09	District 6 Hatchery Creek Sockeye Salmon	Closed a portion of the Hatchery Creek drainage, from 100 feet upstream of the upper falls to 100 feet downstream of the lower falls, to all Federal subsistence fishing, closed the remainder of the drainage to the harvest of sockeye salmon and restricted fishing gear to rod and reel and dip net from June 20 until July 31, 2009.	USFS Craig District Ranger via authority delegated by the Federal Subsistence Board
FSA 7-RS-04-09	District 6 Hatchery Creek Sockeye Salmon	Closed a portion of the Hatchery Creek drainage, from 100 feet upstream of the upper falls to 100 feet downstream of the lower falls, to all Federal subsistence fishing, closed the remainder of the drainage to the harvest of sockeye salmon and restricted fishing gear to rod and reel and dip net from August 1 until August 16, 2009.	USFS Craig District Ranger via authority delegated by the Federal Subsistence Board

Table 3. Delegated in-season management authority for wildlife in the Southeastern Alaska and Yakutat Areas.

Area	Species	Delegated Official	Authority Delegated
Unit 1B	Deer	Petersburg District Ranger	To close the season based on conservation concerns, in consultation with ADF&G and the chair of the Southeast Alaska Subsistence Regional Advisory Council (SESRAC)
Unit 1B	Moose	Petersburg District Ranger	To close the season based on conservation concerns, in consultation with ADF&G and the chair of the SESRAC.
Unit 2	Deer	Tongass Forest Supervisor	To reduce the harvest to 4 deer (from 5) based on conservation concerns, in consultation with ADF&G and the chair of the SESRAC.
Unit 2	Wolf	Tongass Forest Supervisor	To close the Federal hunting and trapping season, in consultation with ADF&G and the chair of the SESRAC when the combined Federal-State harvest quota is reached.
Unit 3	Deer	Petersburg District Ranger	To close the season on Mitkof, Woewodski and Butterworth Islands based on conservation concerns, in consultation with ADF&G and the chair of the SESRAC. To open the December season by announcement, or to close any portion of the entire season for the remainder of Unit 3 based on conservation concerns, in consultation with ADF&G and the chair of the SESRAC.
Unit 3	Moose	Petersburg District Ranger	To close the season based on conservation concerns, in consultation with ADF&G and the chair of the SESRAC.
Unit 4	Deer	Admiralty, Hoonah, Juneau and Sitka District Rangers	To close, re-open, or adjust the Federal season and to set harvest and possession limits within the limits set by regulation and to close Federal lands to all users.
Unit 4	Bear	Sitka and Hoonah District Rangers	To issue up to five Federal Registration Permits for educational purposes associated with teaching customary and traditional practices.
Unit 4	Goat	Sitka District Ranger	To issue up to three Federal Registration Permits to the Sitka Tribe of Alaska or the Southeast Alaska Indian Cultural Center for Cultural and Educational purposes.
Unit 5A	Goat	Yakutat District Ranger	To close the season when the quota has been reached.
Unit 5A	Moose	Yakutat District Ranger	To close the season when five moose have been taken from the Nunatak Bench. For the remainder of Unit 5A, except Nunatak Bench- to close the season when 60 bulls have been taken form Unit 5 A and to close that portion west of the Dangerous River when 30 bulls have been taken from that are.
Unit 5B	Moose	National Park Service	To close the season when 25 antlered bulls have been taken.

Table 4. Federal Delegated Officials for in-season management authority for fish in the Southeastern Alaska and Yakutat Areas.

Area	Species	Delegated Official	Authority Delegated
Yakutat; the Yakutat Ranger District, portions of the Wrangell-St. Elias National Park and Preserve and Glacier Bay National Preserve	All fish	Yakutat District Ranger	To issue Special Actions not to exceed 60 days to open or close fishing periods or areas, to specify methods and means, set permit conditions and to set harvest and possession limits for Federal subsistence fisheries.
Baranof and Chichagof Islands, mainland of Icy Straits; the Sitka and Hoonah Ranger Districts	All fish	Sitka District Ranger	Same as Yakutat
Admiralty Island and Northern Southeast inside waters; the Juneau and Admiralty Ranger Districts	All fish	Juneau District Ranger	Same as Yakutat
Prince of Wales and Associated Islands; the Craig and Thorne Bay Ranger Districts	All fish	Craig District Ranger	Same as Yakutat
Kuiu, Kupreanof, Zarembo, Etolin, and Wrangell Islands, Stikine River, and Central Southeast inside waters; the Petersburg and Wrangell Ranger Districts	All fish	Petersburg District Ranger	Same as Yakutat
Revillagigedo, Gravina, and Duke Islands, and Southern Southeast inside waters; the Ketchikan/Misty Fjords Ranger District	All fish	Ketchikan/Misty Fjords District Ranger	Same as Yakutat

case by case basis may be outdated and changes to increase efficiencies and effectiveness should be investigated.

Without regard to the final decision regarding how the Board chooses to delegate authority to managers; the staff realizes that public awareness of in-season authorities would be improved if a table of managers and their delegated authorities would be included in the subsistence wildlife regulations booklet.

The single exception to the proposed delegation occurs in Unit 5B where the current in-season manager for moose is the National Park Service Ranger and the manager of fish in that area is the Forest Service Ranger. Letters of delegation for both fish and wildlife should include a protocol for joint management of wildlife and fish in Unit 5A and 5B.

Although this proposal could be considered housekeeping, there remains some uncertainty in the need for delegation of authority for wildlife above what is currently provided by the Board. The proposal asks for authority to close, reopen or adjust Federal subsistence seasons and to set harvest and possession limits for all wildlife. Until there is a situation identified that requires expanded authority, the first step in changing the delegation process should be to provide the same delegations as already established by the Board to the current in-season managers for wildlife with the same constraints. It should be noted that the regulatory changes required in both the original proposal and the OSM Conclusion result in the same proposed regulations. The only difference between the original proposal and the OSM Conclusion would be the content of the letters of delegation from the subsistence Board.

OSM CONCLUSION

Support Proposal WP10-22 **with modification** to delegate in-season management for wildlife on a species by species basis, by letter, to the same managers as presently identified in regulation.

Justification

The current system of delegated authorities is the result of a long history of public process and should only be amended through an appropriate public process. Removing the references to positions in area specific regulations could be considered housekeeping provided that the information regarding the delegations is made readily available to the public in the wildlife regulatory booklet. Adopting this proposal, as modified, will provide a rational first step in standardizing in-season management authorities as requested by the Council.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-22. The intent of the Council is to have the Board delegate the same in-season management authority for all wildlife to the same in-season managers that have that authority for fish in those areas. The Council supports the current in-season management protocols and believes this action will result in better communication with the ADF&G and subsistence users. The proposal would benefit subsistence users by encouraging management expertise in local managers. Subsistence users would benefit when the same person responsible for land management decisions effecting subsistence resources is also responsible for managing and providing a priority to subsistence uses.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-22

The Interagency Staff Committee (ISC) found this proposal to be very complicated, from the administrative perspective. At this point, it makes sense to implement the proposal for delegations that are currently in regulation, as suggested by the OSM Conclusion. The Board could also direct staff to consider additional action on this proposal for future regulatory cycles. The ISC suggests that in Southeast Alaska the Board adopt proposals consistent with the intent of the Council's action in future regulatory proposals that include delegations (such as is being considered in WP10-17).

Comments WP10-22
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-22: The Southeast Subsistence Regional Advisory Council proposal would delegate all of the Federal Subsistence Board's authority to open, close, and restrict hunting and trapping through in-season letters of authority to federal land managers in Game Management Units 1-5.

Discussion: The Southeast Regional Advisory Council proposes the Federal Subsistence Board grant the Southeast federal land managers their board authority for inseason management of federal subsistence hunting and trapping seasons to close, open, or change federal subsistence seasons and adjust federal harvest and possession limits. Currently, only certain federal land managers in Southeast Alaska are delegated specific inseason management authorities for identified federal subsistence hunts. The Council Chair stated their desire for granting the federal land managers some authority at the April 29, 2008, Federal Subsistence Board meeting to close federal subsistence hunting or trapping seasons for conservation purposes if already authorized to change other regulations (e.g., open a season, as granted to federal subsistence fisheries managers). The Council also requested delegation of inseason hunt authority in its 2008 Annual report to the Federal Subsistence Board, approved at the Council's March 24, 2009, meeting. The Federal Subsistence Board responded to this request for inseason management of federal subsistence harvest of wildlife on August 4, 2009, as follows:

> *The Southeast Region has been faced with a number of situations in the past two years where special actions were necessary to provide for conservation of wildlife resources. The Council recommends the board delegate in-season management authority for all wildlife to the same Forest Service managers that have in-season management authority for fish.*

The federal letter in response to the Council annual report stated**:**

> *Under 50CFR100.10 and 36CFR242.10, the Board can delegate to agency field officials the authority to set harvest and possession limits, define harvest areas, specify methods or means of harvest, specify permit requirements, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board. As you note, the Board has previously delegated inseason management authority for fisheries, and in some instances for wildlife, to agency field officials. A primary reason for equipping field officials with in-season fisheries management authority is to provide the required tools to implement timely conservation actions, recognizing the dynamic nature of fish populations.* ***A similar need to universally delegate in-season management authority of all wildlife populations in order to provide for conservation of wildlife resources has not been demonstrated****. Instead, for wildlife management, delegation of authority occurs on a case-by-case basis. Any field official receiving delegated in-season management authority is required to complete an analysis, consult with appropriate agencies and individuals, and document rationale for the special action. The Board believes that such processes have been responsive and timely in regard to processing special actions. Anyone may submit a proposal during the upcoming call for 2010-2012 wildlife*

> *regulatory proposals requesting delegation of authority for wildlife management field officials.* (Emphasis added)

While the Department supports wildlife special actions (e.g., WSA09-04) which temporarily grant federal land managers inseason authority to close a portion of a federal subsistence wildlife season for conservation purposes following consultation with the Department, the delegated authority should not be expanded to change the quota set in regulations, increase bag limits, or to establish an upper harvest limit. The delegated authority needs to be clarified to retain the existing maximum harvest quotas and limits set by the Department and Federal Board, while authorizing reduced quota or a closure if necessary to assure conservation of the population.

In contrast, WP10-22 as proposed would broadly delegate all in-season federal subsistence hunt authority to federal land managers in Units 1-5. The delegation of in-season management authority for federal land managers should be explicitly detailed in the "Scope of Delegation" and "Guidelines of Delegation" sections of letters of delegation from the Federal Subsistence Board for the purpose of authorizing in-season subsistence management actions based on conservation. The letters of delegation should contain sideboards, such as specifying upper limits in quotas for conservation purposes. This is required by 50 CFR 100.10(d)(6) and 36 CFR 242 10(d)(6), which authorize the Board to delegate authority only "*within frameworks established by the board.*" The Board should consult with the Department in developing these sideboards, to prohibit liberalizations and conditions that would result in reallocation between users without direction set by the Federal Subsistence Board. The Department also requests that language be added that specifies the consultation that federal managers will conduct with the Department prior to making decisions that involve the Department's management of fish and wildlife, i.e., defining what that consultation entails and respecting the Department's decisions on sustainable harvest levels and conservation needs.

Although the proponent and the federal staff explain that addressing this proposal through the Federal Subsistence Board process would allow for a public review and discussion of the proposed solution, adoption of this proposal would eliminate the public from the regulatory process of future modifications of delegated authorities. If adopted, designated in-season officials would be issued a letter of delegation by the Federal Subsistence Board which grants all in-season authorities currently in regulation, but future changes to the letter of delegation could expand that authority outside of the public process, thus eliminating the transparency of the public process in rulemaking. The proponent and federal staff indicate this proposed change is necessary for rational implementation of wildlife regulations and cooperative management. This point is overstated. The Department has cooperatively assisted federal staff during development and execution of federal subsistence fisheries and hunts for closure for 10 and 20 years, respectively. Eventual full delegation of in-season management authority is not necessary for rational implementation of federal subsistence regulation for conservation of fish and wildlife resources for federal subsistence users on federal public lands in Southeast Alaska and removes it from the close public involvement now required. Though the federal staff may desire a framework for eventually achieving full delegation of authority, such delegation has not been deliberated and the Federal Board clearly has not delegated full authority to any federal staff in Alaska for the purpose of managing federal subsistence wildlife hunting or trapping.

Comments WP10-22
April 30, 2010; Page 1 of 2

The Department presently works cooperatively with federal staff and does not foresee the benefits of adoption of this proposal. Delegation of all of the Board's authority to open, close, and restrict hunting and trapping by federal staff in Southeast Alaska is not only unnecessary and contravenes public process, but it may also exacerbate misunderstandings by some federal staff that the State remains responsible for the sustainable management of all wildlife on all lands in Alaska.

Recommendation: Oppose. If adopted, modification is needed that clarifies that the letters of delegation will be developed in consultation with the Alaska Department of Fish and Game to include: (1) maximum harvest quotas and harvest limits that do not exceed sustainable harvest established by the State and other sideboards on the exercise of delegated authority, (2) details the requirements and process for consultation with the State, (3) clearly detail the public review process required for modifying letters of delegation and/or protesting such modifications, and (4) direct federal staff to make the letters of delegation reasonably available to the public for review.

NOTE: The revised OSM analysis provided for the April Interagency Staff Committee meeting appears to have proposed the limits necessary for such delegated authorities in the Department's comments above. The summary of the OSM proposed modification appears intended to delegate only the existing inseason federal subsistence management authority for wildlife as currently referenced in regulation and, thus, does not delegate the extent of authorities as proposed by the Council. Further discussion with OSM is needed to determine if the limitations address the Department concerns discussed above.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-22. The Committee supports the delegation of authority to the regional manager and believes this may allow them to act in a timely manner and is similar to the authority held by our local ADF&G wildlife biologist.

Sitka Fish and Game Advisory Committee

Support Proposal WP10-22 **with modification** as recommended in the OSM Conclusion. The proposal is supported by the Southeast Regional Advisory Council as well as by the affected agencies. It standardizes the process for delegation of authority without changing the existing delegations.

Wrangell-St. Elias National Park Subsistence Resource Commission

WP10-23/24/25/26 Executive Summary	
General Description	Proposals WP10-23, -24, -25 and -26 request changes in the wolf hunting and trapping seasons in Southeast Alaska. *Submitted by the Alaska Wildlife Alliance*
Proposed Regulation	
Proposal WP10-23:	**Units 1, 3, 4 and 5—Wolf Hunting**
	5 Wolves — ***Sept. 1–Mar. 31*** ~~*Aug. 1–April 30*~~
Proposal WP10-24:	**Units 1, 3 and 4—Wolf Trapping**
	No limit — *Nov. 10–**Mar. 31*** ~~*April 30*~~
Proposal WP10-25:	**Unit 4—Wolf Hunting**
	~~***5 Wolves***~~ — ***No Federal open season*** ~~*Aug. 1–April 30*~~
Proposal WP10-26:	**Unit 4—Wolf Trapping**
	~~***No limit***~~ — ***No Federal open season*** ~~*Nov. 10–April 30*~~
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose** Proposals WP10-23/24/25/26 **1 Oppose** Proposal WP10-23

STAFF ANALYSIS
WP10-23, -24, -25 AND -26

ISSUES

Proposals WP10-23, -24, -25 and -26 were submitted by the Alaska Wildlife Alliance and request changes in the wolf hunting and trapping seasons in Southeast Alaska.

DISCUSSION

Proposal WP10-23 requests that wolf hunting not be allowed in Units 1, 3, 4 and 5 in the months of August and April. Proposal WP10-24 requests that wolf trapping not be allowed in Units 1, 3 and 4 in the month of April. Proposals WP10-25 and -26 seek to close the wolf hunting and trapping seasons in Unit 4.

The proponent states that wolf hides harvested in April are rubbed, have reduced value on the fur market, and make poor trophies. The proponent notes that by late April, female wolves are nearly at full term. The proponent states that in August, at the start of the wolf hunting season, pups are totally dependent on adults for survival. The proponent also states that hides harvested in August are nearly worthless on the fur market and make very poor trophies. The proponent believes that the wolf hunting and trapping seasons in Unit 4 should be closed since wolves do not currently occur there.

Existing Federal Regulations

Units 1, 3, 4 and 5—Wolf Hunting	
5 Wolves	*Aug. 1–April 30*
Units 1, 3 and 4—Wolf Trapping	
No limit	*Nov. 10–April 30*

Proposed Federal Regulations

Proposal WP10-23:

Units 1, 3, 4 and 5—Wolf Hunting	
5 Wolves	***Sept. 1–Mar. 31*** ~~*Aug. 1–April 30*~~

Proposal WP10-24:

Units 1, 3 and 4—Wolf Trapping	
No limit	*Nov. 10–**Mar. 31*** ~~*April 30*~~

Proposal WP10-25:

Unit 4—Wolf Hunting	
~~***5 Wolves***~~	***No Federal open season*** ~~*Aug. 1–April 30*~~

Proposal WP10-26:

Unit 4—Wolf Trapping	
~~***No limit***~~	***No Federal open season*** ~~*Nov. 10–April 30*~~

Existing State Regulations

Units 1, 3, 4 and 5—Wolf Hunting	
5 Wolves	*Aug. 1–April 30*
Units 1, 3 and 4—Wolf Trapping	
No limit	*Nov. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 89% of Unit 1 and consist of 80% U.S. Forest Service (USFS) and 20% National Park Service (NPS) lands (see **Unit 1 Map**). All of the NPS managed lands are part of Glacier Bay National Park, which is closed to subsistence.

Federal public lands comprise approximately 94% of Unit 3 and are 100% USFS land (see **Unit 3 Map**).

Federal public lands comprise approximately 96% of Unit 4 and are nearly 100% USFS land (see **Unit 4 Map**).

Federal public lands comprise approximately 96% of Unit 5 and consist of 65% NPS, 34% USFS and 1% Bureau of Land Management lands (see **Unit 5 Map**). Glacier National park lands are closed to subsistence.

Customary and Traditional Use Determinations

All rural residents are eligible to harvest wolves in Units 1, 3 and 4.

Rural residents of Unit 5A have a positive customary and traditional use determination to harvest wolves in Unit 5. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf trapping seasons in Units 1, 3 and 4 were December 1–February 15 with no harvest limit in regulatory year 1990/91. The wolf trapping seasons in these units were changed to November 10–April 30 in regulatory year 1991/92.

In regulatory year 1990/91 there was no closed season and no harvest limit for wolf hunting in Units 1, 3, 4 and 5. Action taken on a proposal from ADF&G (Proposal 2) changed the wolf hunting season to August 1–April 30 and established a harvest limit of 5 wolves in regulatory year 1994/95.

In 2004, Defenders of Wildlife submitted Proposal WP05-02 requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southeast Alaska

Subsistence Regional Advisory Council (Council) opposed that proposal, as did seven other Regional Advisory Councils. In its comments concerning Proposal WP05-02, the Council noted that this proposal was not necessary, would adversely affect subsistence use, and was not supported by substantial evidence (FSB 2005). Consistent with Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02.

Biological Background

Wolves (*Canis lupus)* likely moved into Southeast Alaska following postglacial immigration and establishment of Sitka black-tailed deer populations (Lowell 2006a). Wolves are found throughout most of Units 1, 3 and 5. Wolves are well adapted to the island and mainland environment of Southeast Alaska, although densities on the mainland are generally lower than on maritime-influence islands. Wolves are capable swimmers and regularly travel between adjacent islands in search of prey (Porter 2006). Deer are the primary food source of wolves in Southeast Alaska (Lowell 2006a). Other prey species include mountain goat, moose, small mammals, beaver, salmon and waterfowl.

Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) observed that wolves sometimes disperse great distances. Porter (2006) reported that one radio-collared wolf from Kupreanof was observed moving more than 120 miles overland and making several saltwater crossings.

Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 1

The wolf population in Unit 1A appears to be stable (Porter 2006). Though data was limited, Lowell (2006b) estimated that the population in Unit 1B was 45–85 wolves in approximately 8 packs. While wolves are common throughout most of Units 1C and 1D, there is not sufficient data to provide meaningful population estimates (Barten 2006a, Scott 2006).

Unit 3

Lowell (2006a) estimated that the Unit 3 wolf population was 125–235 animals in approximately 21 packs and noted that recent increases in moose abundance had probably helped sustain relatively high wolf numbers.

Unit 4

Wolves are not established in Unit 4. There have been confirmed reports of wolves on Pleasant Island near Gustavus (Cunning 2010, pers. comm.) and along the east side of Admiralty Island (Grossman 2009). At the nearest points, it is only about three miles from the mainland to both of these islands.

Unit 5

Barten (2006b) reported that while there had been no attempts in recent years to quantify wolf number, it appears that the population is stable throughout the unit. In 1977, it was estimated that there were 45–50 wolves at a density of 67/1000 mi^2 in Unit 5A. In 1979 the Unit 5A and 5B minimum population estimates were 35 and 10 wolves respectively. In 1980 the estimates were 50 wolves in Unit 5A and 12 in Unit 5B (Barten 2006b). It appears that salmon are an important food source for wolves in late fall and early winter (Barten 2006b).

Harvest History

Wolf pelts have long been important for subsistence uses in Southeast Alaska (Smythe 1988, Mills and Firman 1986, Firman and Bosworth 1990, and Cohen 1989). Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Fur prices and weather conditions affect wolf trapping effort. Unusually mild winters can contribute to reduced trapper success (Lowell 2006a). The harvest by trappers is normally spread throughout the winter and declines in late-winter. Wolf hides in Southeast Alaska are generally considered to be of relatively poor quality by fur buyers, so there is little financial incentive to harvest wolves (Lowell 2006b). Porter (2006) and Lowell (2006a and b) observed that recent low harvest and low effort has likely been related to high gas prices.

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Between regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves ranged from 67 to 141 wolves in Units 1, 3 and 5 (**Table 1**). Of the 1081 cumulative harvest during that period, 118 (11%) were taken during the months of August and April (**Table 1)**. Lowell (2006a and b) reported that the wolf harvest in Units 1B and 3 probably under represented the actual wolf harvest. He suspected that some poaching was occurring and that some wolves are shot and left.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Unit 1

Porter (2006) observed that trapping effort and catch per trapper in Unit 1A were low. Lowell (2006b) noted that much of Unit 1B is not hunted or trapped. Barten (2006a) stated that there is little effort exerted toward taking wolves in Unit 1C, and that the harvest remains well below the level that would negatively influence the population. Scott (2006) observed that there is little pressure from either hunters or trappers to take wolves in Unit 1D.

Table 1. Reported wolf harvest and method of take for Units 1, 3 and 5 (ADF&G 2009 and 2010).

Regulatory Year	Reported Total Harvest	August & April Harvest	Method of take for total harvest from Units 1, 3 and 5				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	129	19	77	60	49	38	3
2000/01	141	17	97	69	44	31	0
2001/02	113	15	77	68	33	29	3
2002/03	139	17	84	60	52	37	3
2003/04	90	0	55	61	35	39	0
2004/05	77	0	51	66	26	34	0
2005/06	96	11	56	58	40	42	0
2006/07	103	4	53	51	23	20	26
2007/08	67	12	35	52	32	48	0
2008/09	126	23	72	57	53	42	1

Unit 3

Lowell (2006a) observed that most of Unit 3 is not trapped for wolves and that hunters/trappers using highway vehicles harvested the majority of the wolves. He noted that reduced harvests in regulatory years 2003/04 and 2004/05 were the direct result of actions taken by the Alaska Board of Game to shorten the wolf hunting and trapping seasons.

Unit 5

Barten (2006b) reported that people hunting other species shot most of the wolves taken in the fall, and that during the winter and spring, the harvest is mostly limited to trappers. He observed that hunting and trapping pressure on wolves will probably remain low due to difficult access and inclement weather throughout the unit.

Effects of the Proposal

If any of these proposals are adopted, opportunity to harvest wolves under Federal subsistence regulations in Southeast Alaska will be reduced.

If Proposal WP10-23 is adopted, the Federal wolf hunting season in Units 1, 3, 4, and 5 would be closed August 1–31 and April 1–30, thereby shortening the seasons in these units by 61 days. If Proposal WP10-24 is adopted, it would close Federal wolf trapping seasons in Units 1, 3 and 4 during April, thereby shortening the seasons in these units by 30 days. Between regulatory years 1999/2000 and 2008/09, 11% of the reported wolf harvest in Units 1, 3 and 5 occurred in August and April (**Table 1)**.

If Proposals WP10-25 and -26 are adopted, the Federal wolf hunting and trapping seasons in Unit 4 would be closed. While there is not an established population of wolves in Unit 4, there have been confirmed reports of wolves in Unit 4. Hunting and trapping could help prevent wolves from becoming established in Unit 4. Wolves would likely have a significant impact on the ecology of Unit 4 and the deer populations that are so important to subsistence users. The deer model for USFS land management

in Southeast Alaska incorporates about a 1/3 deer population reduction factor on islands with wolves (Grossman 2009, pers. comm.).

Proposal WP10-23 would make the Federal subsistence wolf hunting seasons for Unit 1, 3, 4 and 5 shorter than the State seasons. Proposal WP10-24 would make the Federal subsistence wolf trapping seasons for Units 1, 3 and 4 even shorter than the State seasons. The proposed closure of wolf hunting and trapping for Unit 4 would make the Federal subsistence regulations more restrictive than the State regulations.

OSM CONCLUSION

Oppose Proposals WP10-23, -24, -25 and -26.

Justification

The wolf populations in Units 1, 3, and 5 appear to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than harvest by hunters and trappers. Wolves are a very important subsistence resource in Units 1, 3 and 5. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. While wolves are not established in Unit 4, there have been confirmed reports of wolves from this unit.

Even if these proposals were adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on USFS, Wrangell St. Elias National Preserve and Glacier Bay National Preserve lands. Therefore, adoption of these proposals by the Federal Subsistence Board would not have the effect sought by the proponent.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposals WP10-23/24/25/26. The Council determined that this proposal may result in a reduction in subsistence deer harvest. There is not a conservation concern with wolves and this action would result in an unnecessary restriction on subsistence uses.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-23/24/25/26

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-23: Shorten the wolf hunting season in Units 1, 3, 4, and 5 from the present dates of August 1 through April 30 to September 1 through March 31.

Wildlife Proposal WP10-24: Shorten the wolf trapping season in Units 1, 3, and 4 from the present dates of November 10 through April 30 to November 10 through March 31.

Wildlife Proposal WP10-25: Eliminate the wolf hunting season in Unit 4.

Wildlife Proposal WP10-26: Eliminate the wolf trapping season in Unit 4.

Introduction: The federal subsistence and State of Alaska wolf hunting seasons are identical (August 1 through April 30). During the 2002 and 2004 Alaska Board of Game meetings, proposals were submitted to change the wolf hunting season dates. In 2002, a proposal was adopted to shorten the season, and in 2004 a proposal was adopted to return to the original season dates prior to the 2002 season adjustment. The Department did not support shortening the season in 2002 and supported readopting the pre-2002 season dates during the 2004 Board of Game meeting.

Wolf populations are healthy and the hunting and trapping seasons length does not compromise sustained yield principles. The August 1 opening allows hunters who are afield for goats or deer to opportunistically harvest a wolf. In spring, the Department supported a season extending through April to allow people to shoot or trap wolves. These season dates provide for substantial hunting and trapping harvest opportunity while allowing for sustainable wolf populations. The department opposed extending the trapping season into May because of wolf pupping season and to avoid catching bears after they emerge from dens in early May.

The only portion of Unit 4 where wolves have ever been documented with certainty is Pleasant Island near Gustavus, and this has been only on an occasional basis. The present hunting season dates reflect an interest by the department to keep an open season on wolves in this area should they become established. Unit 4 represents the primary producer of deer for many hunters from many communities in northern Southeast Alaska. Much of the area is subject to substantial snowfall during winter, which concentrates deer near the beaches and leaves them vulnerable to predation. If wolves do become established, the deer population would likely decline dramatically, leaving many fewer animals available for subsistence hunters. By leaving the present season dates intact, hunters can harvest wolves and prevent them from becoming established in Unit 4.

Impact on Subsistence Users: Proposal WP10-23 would shorten the wolf hunting season from 9 months to 7 months, reducing some opportunity for federal subsistence hunters and WP10-24 would shorten the wolf trapping season by ending March 31 instead of April 30, also reducing federal subsistence trapping opportunities. Federal subsistence hunting opportunities for deer, moose, and goats could be impacted if a shorter wolf season resulted in reduced wolf harvests and increased predation rates on these species. The past three severe winters lowered these prey

species populations, and any additional mortality could inhibit their ability to recover. Given that no wolves have been harvested in Unit 4, proposals 25 and 26 would have no affect on federal subsistence users. However, the deer populations in Unit 4 are at low levels due to increased mortality during the past three severe winters. Therefore, if wolves were to become established in Unit 4, the combination of vulnerability to predation and mortality due to severe winters would have a significant detrimental affect on deer populations in northern southeast Alaska.

Opportunity Provided by State: The wolf hunting season under state regulation in this area is from August 1 through April 30, with a bag limit of five wolves. The wolf trapping season under state regulation in this area is November 10 through April 30 with no bag limit.

Conservation Issues: This proposal would not present conservation issues for wolves.

Enforcement Issues: This proposal might result in some confusion by federal subsistence users who would have a shorter season than those hunting under state regulations.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposals WP10-23/24/25/26. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose Proposal WP10-23. The proposal would adversely affect subsistence users by reducing subsistence opportunity, and there is not a conservation concern.

Wrangell-St. Elias National Park Subsistence Resource Commission

WP10-27 Executive Summary	
General Description	Proposal WP10-27 requests that the harvest limit of 2 caribou in Units 13A and 13B and the harvest limit of 2 bulls in Unit 13 remainder be changed to 1 caribou for all of Unit 13. In addition, the proponent requests that the authority delegated to the Glennallen Field Office Manager of the Bureau of Land Management (BLM) to announce the sex of the animals to be harvested be rescinded. *Submitted by the Paxson Fish and Game Advisory Committee*
Proposed Regulation	**Unit 13—Caribou** *Units **13** ~~13A and 13B—2~~ **1** caribou by Federal registration permit only.~~ The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.~~* — *Aug. 10–Sept. 30* *Oct. 21–Mar. 31* ~~*Unit 13 remainder—2 bulls by Federal registration permit only.*~~ — ~~*Aug. 10–Sept. 30*~~ ~~*Oct. 21–Mar. 31*~~ *Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** reducing the bag limit to one caribou. **Oppose** removal of the defined delegated authority granted to the federally designated Bureau of Land Management official to announce the sex of the caribou to be harvested.
Written Public Comments	**2 Oppose** **1 Support** Proposal WP10-27 **with modification**

STAFF ANALYSIS
WP10-27

ISSUES

Proposal WP10-27, submitted by the Paxson Fish and Game Advisory Committee, requests that the harvest limit of 2 caribou in Units 13A and 13B and the harvest limit of 2 bulls in Unit 13 remainder be changed to 1 caribou for all of Unit 13. In addition, the proponent requests that the authority delegated to the Glennallen Field Office Manager of the Bureau of Land Management (BLM) to announce the sex of the animals to be harvested be rescinded.

DISCUSSION

The proponent requests that the harvest quota be reduced due to concern that more lands will be open for hunting once Federal-State land conveyances are completed. The proponent is concerned that once lands are conveyed, more lands will be open to subsistence harvests, which will create the potential for harvest beyond sustainable levels. The proponent also states that the proposed change would keep the harvest at conservative levels, while still allowing most households to participate in a hunt.

Existing Federal Regulations

Unit 13—Caribou

Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Unit 13 remainder—2 bulls by Federal registration permit only.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Proposed Federal Regulations

Unit 13—Caribou

*Units **13** ~~13A and 13B—2~~ **1** caribou by Federal registration permit only.~~ The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.~~*	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*

~~*Unit 13 remainder—2 bulls by Federal registration permit only.*~~	~~*Aug. 10–Sept. 30*~~ ~~*Oct. 21–Mar. 31*~~
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Existing State Regulation

Unit 13—Caribou

Unit 13 residents—1 caribou by registration permit every 4 regulatory years.	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*
OR	
1 caribou by community permit	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*

Extent of Federal Public Lands

At present, Federal public lands comprise approximately 10% of Unit 13 and consist of 2% Bureau of Land Management (BLM), 6% Denali National Park and Wrangell-St. Elias National Preserve, and 2% Chugach National Forest lands. Specifically within Units 13A and 13B, Federal public lands include BLM managed lands and comprise approximately 8% of Unit 13B and 1% of Unit 13A. (See **Unit 13 Map**).

The land selections from the State of Alaska have not been finalized; therefore an accurate estimation of potential conveyed lands is premature.[1]

Customary and Traditional Use Determinations

UNIT(S)	CUSTOMARY AND TRADITIONAL DETERMINATION FOR CARIBOU
Units 13A and 13D	Rural residents of Units 11, 12 (along the Nabesna Road), 13, and the residents of Chickaloon.
Unit 13B	Rural residents of Units 11, 12 (along the Nabesna Road), 13, residents of Unit 20D except Fort Greely, and the residents of Chickaloon.
Unit 13C	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, Dot Lake and Healy Lake.
Unit 13E	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, McKinley Village, and the area along the Parks Highway between mileposts 216 and 239 (except no subsistence for residents of Denali National Park headquarters).

[1]Through Title IX of ANILCA, the State of Alaska was allowed to overselect (by 25%) lands it had an interest in being conveyed from the Federal Government. Once the State's selections have been established, prioritized, and finalized, any remaining overselected lands will return to BLM management authority.

Regulatory History

The Nelchina Caribou Herd (NCH) is an important resource for many rural and non-rural users due to its proximity to Anchorage and Fairbanks and its distribution within Units 11, 12, 13, and 20 E (Tobey 2003). A State Tier II system for NCH harvest was established in 1990 for Unit 13. A State Tier I permit was added for the 1996/97 and 1997/98 seasons to allow any Alaskan resident to harvest cows or young bulls, in order to reduce the herd to the management objective. In 1998, the Tier I hunt was closed, as the herd was brought within management objectives by increased harvest and lower calf recruitment. The two Federal registration hunts (RC513 & RC514) in Unit 13 are for residents of Units 11, 13, and residents along the Nabesna Road in Unit 12 and Delta Junction in Unit 20. Since 1998, a Federal registration hunt (RC412) has been opened to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between November and April when the NCH migrate through the Tetlin National Wildlife Refuge.

In 2001, the Federal Subsistence Board (Board) adopted Proposal WP01-07 which changed the harvest limit of 2 caribou to 2 bulls by Federal registration permit only for all of Unit 13.

In 2002, Proposal WP02-16 was deferred until the 2003 regulatory year when it was adopted by the Board (as WP03-14). It changed the harvest limit for Unit 13A and 13B back to 2 caribou from 2 bulls, with the harvest of bulls only during the August 10 – September 30 season. During the winter season (October 21 – March 31) the Glennallen Field Office Manager of the Bureau of Land Management was delegated the authority to determine the sex of the animals taken in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. For the remainder of Unit 13, the harvest limit remained 2 bulls for the August 10 – September 30 and October 21 – March 31 season.

On October 20, 2003 the State closed the fall caribou season and also closed the winter season by Emergency Order based on conservation concerns for the caribou herd (Tobey 2005).

In 2005, WP05-08 was adopted by the Board for Unit 13A and 13B to allow the sex of the harvested animals to be determined by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. This was in effect for the entire season (August 10 – September 30 and October 21 – March 31), not just the winter season.

Emergency Order 02-01-07 closed the remainder of the 2006–2007 State harvest season for the Nelchina Caribou Herd on February 4, 2007 due to high state hunter success in the State Tier II hunt. Likewise, Emergency Order 02-08-07 closed the 2007–2008 Tier II subsistence harvest (TC566) on September 20, 2007 and was scheduled to re-open on October 21, 2007. However concerns that the unreported harvest of the State and Federal subsistence hunts would put the harvest over 1000 bulls and 500 cows resulted in a closure of the remainder of the season as a precaution.

For the 2009–2010 the State Nelchina caribou Tier II subsistence hunt was eliminated. Two hunts were added: a Tier I hunt (Alaskans only) and a Community harvest hunt for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each is one caribou (sex to be announced annually) with season dates of August 10 – September 20 and October 21 – March 31 with a harvest limit of 300 caribou. All other Alaskan hunters may obtain a permit and participate in a Tier I (resident only) hunt. A Federally qualified subsistence user could opt into the community harvest system or a State registration permit to harvest one caribou and then get a Federal permit to harvest another caribou since the Federal limit is two.

Management Direction

Current ADF&G management objectives for the NCH are to: maintain a fall population of 35,000 – 40,000 caribou with a minimum of 40 bulls:100 cows and 40 calves:100 cows. In addition, the management objectives include providing the potential to harvest 3,000 – 6, 000 caribou.

Biological Background

From 2001 to 2007, the fall population estimates for the NCH have remained relatively stable with the estimated herd size being between 30,000–39,000 animals (**Table 1**). In June 2007, a post-calving census estimated the NCH to be approximately 32,569 caribou (ADF&G 2008) and in June 2009, the census showed approximately 33,146 caribou (ADF&G 2009a).

Radio-collared cows captured initially as 4 month old calves have been monitored to assess age of first reproduction for the NCH since 1992 and have shown that no 2-year old cows in the NCH have produced calves. The limiting factor in calf production of 3-year old cows has been the quality and availability of forage (Cameron et al. 1991, Crete and Huot 1993). In years of good forage, up to 64% of the 3-year old cows (7 of 11 in 2002) have had calves (Tobey and Kelleyhouse 2007). However, in years following a drought or deep snow conditions, 3 year old cows generally do not have calves during that year (Tobey and Kelleyhouse 2007). Poor forage quality in the summer can cause cow caribou to skip a breeding season to regain body condition due to being nutritionally stressed (Cameron et al. 1991, Crete and Huot 1993). The resulting decrease in body condition in female caribou can have a negative effect on productivity by causing lower weight gain or survival in calves (Griffith et al 2002, Whitten et al. 1992, Cameron et al. 1993). In October 2000, the calf recruitment had declined to 20 calves per 100 cows which is the lowest recruitment rate for the herd since the late 1940s. Low calf production was attributed to a decline in physical condition of the cows, which resulted in a delay in age of first reproduction (from 2 or 3, to 4 years of age) and the subsequent reproductive pause in many adult cows due to poor nutrition (Tobey and Kelleyhouse 2007). However, historically the productivity for the NCH has been high with an average of 52 calves:100 cows (1985–1996) and is determined by June and October surveys by ADF&G. More recent (2007–2009) productivity measures show an average of 34 calves:100 cows which is below the management goal of 40 calves:100 cows. In October 2007, sex and age composition survey estimated ratios of 35 calves:100 cows and 34 bulls:100 cows (ADF&G 2008) and the fall survey in 2008 showed 40 calves:100 cows and 39 bulls:100 cows (ADF&G 2009a). During the most recent fall survey in 2009, 29 calves:100 cows and 42 bulls:100 cows were observed (Schwanke 2009, pers. comm.)

The bull:cow ratio has been below the management objective of 40 bulls:100 cows since 1998 and has been an average of 32 bulls:100 cows since 2001 with the lowest ratio of 23 bulls:100 cows in 2006–2007 (**Table 1**). Hunters harvested primarily bulls in Tier II, drawing, and subsistence registration hunts despite the hunt being open for either sex (**Table 2 and Figure 1**). There was an overall reduction in bull harvest from 2001 to 2004 (**Table 2 and Figure 1**) which may allow the large bull category to rebound despite an increase of bull harvest again in the 2005–2006 regulatory year. Higher numbers of adult bulls in the population are important as it helps maintain synchrony in parturition. Holand et al. (2003) showed skewed sex ratio and increased young male age structure of reindeer could result in fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls. Maintaining synchrony in parturition also provides increased survival chances for calves since parturition is typically timed with the start of plant growth (Bergerud 2000). Late-born offspring have been shown to have lower body mass than caribou offspring produced earlier in the season (Holand et al. 2003) which can lead to lower juvenile survival rates due to density dependent factors of winter food limitation (Skogland 1985)

Table 1. Nelchina caribou fall composition counts and estimated herd size, regulatory years 2001 – 2009

Regulatory Year	Total bulls: 100 cows	Calves:100	Calves (%)	Cows (%)	Total bulls (%)	Composition Sample size	Total Adults	Estimate of herd size	Postcalving[a] count
2001-2002	37	40	22	57	21	3949	26,159	33,745	35,106
2002-2003	31	48	27	56	17	1710	25,161	34,380	35,939
2003-2004	31	35	21	60	19	3140	23,786	30,141	31,114
2004-2005	31	45	26	57	17	1640	27,299	36,677	38,961
2005-2006	36	41	23	57	20	3263	28,133	36,428	36,993
2006-2007	24[b]	48[b]	25	61	14	3300	NA	N/A	N/A
2007-2008	34	35	21	59	20	3027	2395	32,569	33,744
2008-2009	39	40	22	56	22	3378	2627	N/A	N/A
2009-2010	42	29	17	58	25	3076	2553	33,835	33,146

[a] Spring census
(Tobey and Kelleyhouse 2007, ADF&G 2008, Becky Schwanke, pers. comm.)

Table 2. Nelchina caribou harvest data by permit hunt, regulatory years 1999-2006 (Tobey 2005 and 2007, ADF&G 2009b)

Hunt #	Regulatory Year	Permits Issued	% did not hunt	% Successful	Bulls	(%)	Cows	(%)	Unk	Total Harvest
TC566[a]	2001-2002	1996	16%	49%	977	99%	4	1	1	982
	2002-2003	2003	15%	48%	965	99%	1	0	0	966
	2003-2004	2005	24%	38%	746	99%	3	0	3	752
	2004-2005	1869	10%	48%	884	99%	5	1%	5	894
	2005-2006	4001	16%	65%	1614	74%	548	25%	15	2177
	2006-2007	5494	21%	59%	1813	72%	686	27%	3	2502
	2007-2008	3003	30%	32%	693	72%	272	28%	1	966
	2008-2009	2500	28%	54%	787	75%	262	25%		1049
RC 513/514[b]	2001-2002	2568	24%	19%	492	98%	3	1	6	501
	2002-2003	2552	31%	14%	349	96%	2	1	12	363
	2003-2004	2598	32%	12%	318	99%	2	1	1	321
	2004-2005	2558	34%	13%	250	74%	86	26%	1	337
	2005-2006	2570	39%	24%	369	60%	239	39%	7	615
	2006-2007	2641	44%	17%	319	60%	239	37%	8	572
	2007-2008	2408	48%	15%	259	72%	120	27%	5	385
	2008-2009	2569	49%	22%	180	68%	89	33%	4	273
Totals for all permit hunts	2001-2002	4703	21%	32%	1476	98%	17	1%	7	1500
	2002-2003	4726	25%	28%	1326	100%	6	0%	12	1344
	2003-2004	4754	29%	23%	1077	99%	6	1%	4	1087
	2004-2005	4600	25%	27%	1162	93%	93	7%	6	1261
	2005-2006	6749	24%	42%	1995	71%	798	29%	23	2816
	2006-2007	8,135	33%	38%	2,132	66%	925	32%	11	3074
	2007-2008	5,411	39%	24%	952	72%	392	28%	6	1351
	2008-2009	5069	39%	38%	967	70%	351	29%		1322

[a] State Tier II subsistence drawing permit
[b] Subsistence registration for local resident (Unit 11 & 13), administered by BLM as federal hunt RC513 in 1990, and includes 20D residents in hunt 514. Harvest limit was 2 caribou, so percentages related to permits, not hunters.

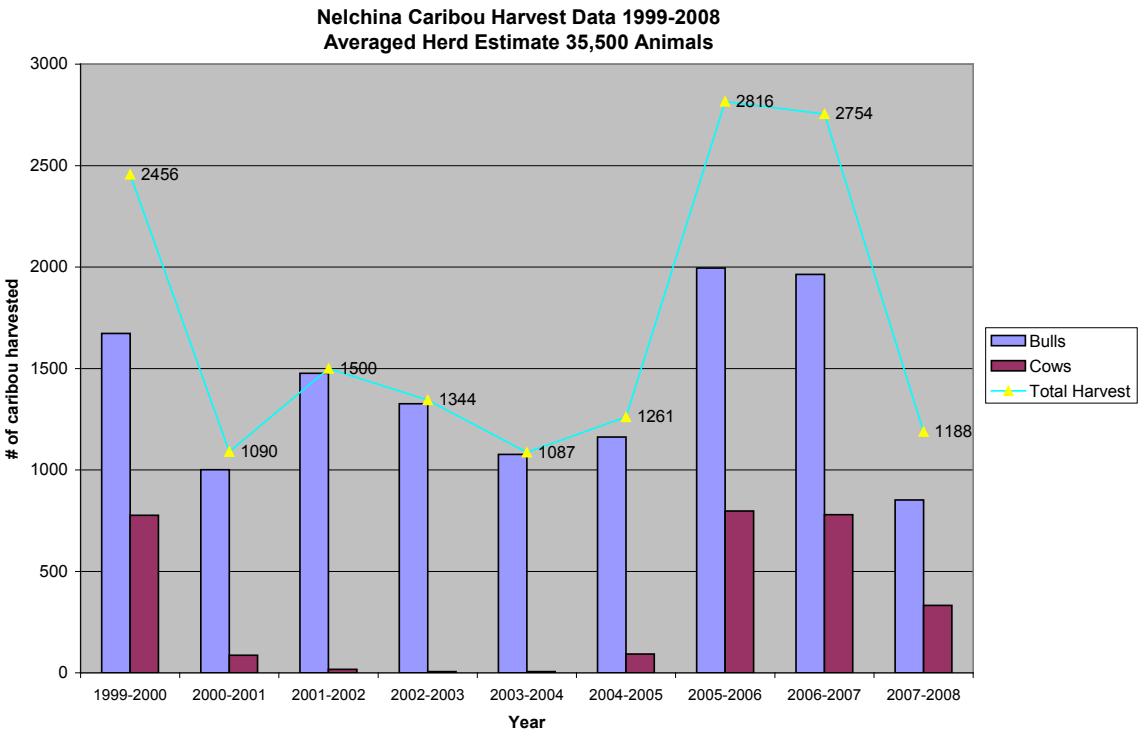

Figure 1. Nelchina Caribou Harvest Data (1999-2008) by sex of harvested animal and total harvest of all animals.

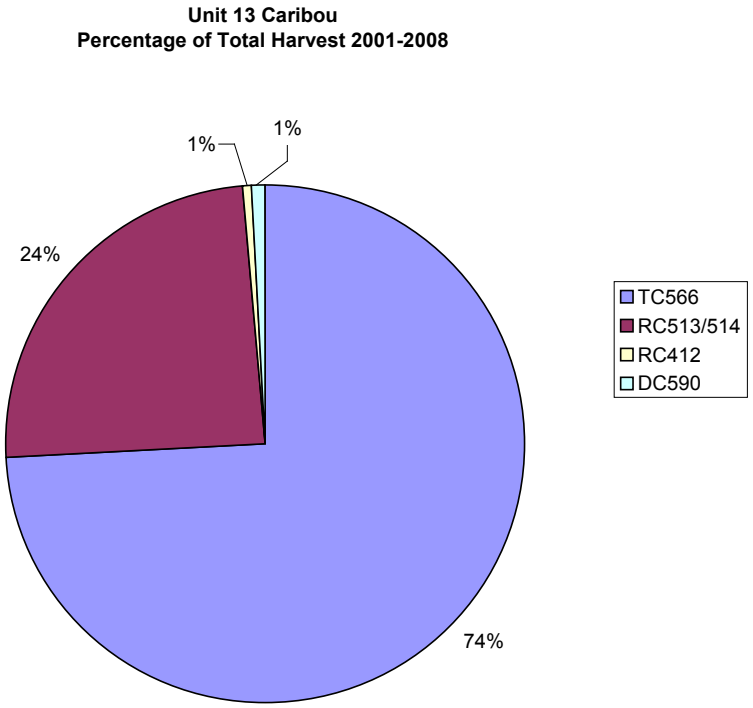

Figure 2. Unit 13, Percentage of Total Harvest by State and Federal Hunts, 2001-2008.

and deep snows (Bergerud 2000). However, a high bull:cow ratio is not the only factor to consider in maintaining a healthy, sustainable population.

Distribution and Movements

ADF&G (Tobey and Kelleyhouse 2007) conducts aerial composition surveys twice each year. In June, to determine postcalving aggregations and herd productivity, in October to ascertain bull:cow and calf:cow ratios, and in the winter to determine winter distribution. Radio-collared caribou are located seasonally to delineate herd distribution and seasonal range use.

Winter habitat for the NCH ranges from northern Unit 13 to Unit 20E. Caribou winter range in 20E is generally considered high quality due to high lichen biomass as a result of old burns (>50 years) (Dale 2000, Joly et al. 2003). In 2004, a large proportion of NCH winter range in Unit 20E burned. Many caribou still winter in 20E, although caribou now utilize adjacent unburned areas. Winter distribution for the NCH in 2006 extended into Unit 13E, across 13A and 13B, and northeast into Units 11, 12 and 20E (Tobey and Kelleyhouse 2007). In some years, a small number of caribou winter in Unit 13D and have been observed as far south as Edgerton Highway.

The eastern Talkeetna Mountains, from the Fog Lakes southeast to the Little Nelchina River, is the typical area for calving for the NCH with the core calving area extending from the Little Nelchina River north to Kosina Creek (Tobey and Kelleyhouse 2007).

Harvest History

Between 2001 and 2008, the State Tier II subsistence hunt (TC566) was the primary source for harvest of the NCH and accounted for 74% of the overall harvest (**Table 2, Figure 2**). The Federal registration hunts (RC513/514), limited to those users with a positive customary and traditional use determination for caribou in Unit 13 are administered by the BLM and comprised 24% of the harvest between 2001 to 2008 (**Table 2, Figure 2**).

The fall caribou season is the most popular time to hunt (Tobey 2005). Successful harvests in the fall make the winter season more susceptible to emergency closures when the harvest quota is reached before the end of the season on March 31. A large percentage of NCH typically migrates out of Unit 13 in October and does not return from wintering areas in Units 11, 12 and 20E until April, therefore success during the winter season is largely dependent upon the number of caribou that remain in Unit 13 (Tobey and Kelleyhouse 2007) and if the season has been closed due to successful harvest in the fall season reaching the harvest objective.

Participation in the Federal registration hunt has remained relatively consistent with an average of 2500 permits issued from 2001 to 2008 (**Table 2**) with an average annual harvest of 421 caribou, (ranged from 273 to 615). Between 2003 and 2007, an average of 138 hunters harvested two caribou, and 165 hunters reported taking one caribou.

Currently, much of the Federal land in subunits 13B and 13E along the Denali Highway is selected by the State of Alaska, keeping these areas closed to Federal subsistence management regulations. Once over-selections return to Federal status, additional Federal subsistence harvest opportunity will likely occur, which may result in an increase in caribou harvested under this hunt. Currently, the majority of the harvest occurs under State hunts (**Table 2, Figure 3**) and BLM lands provide approximately 2% of total lands in Unit 13 for Federal harvest when caribou cross along the Richardson Highway between Paxson and Sourdough during the fall migration. Additional caribou are also available to qualified Federal

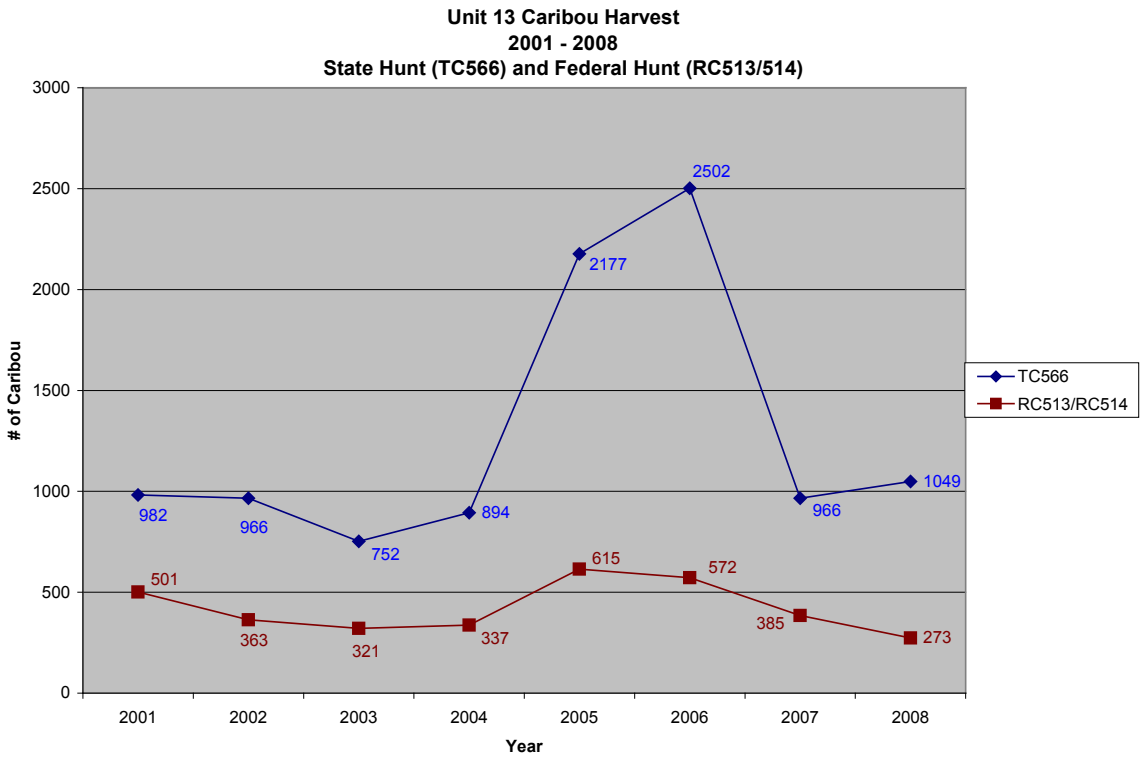

Figure 3. Unit 13, Harvest by predominate State and Federal Hunts (TC566, RC513/514), 2001-2008.

hunters throughout the entire season in small areas of 13E near Broad Pass in Denali National Park and on BLM lands along the Denali Highway near Tangle Lakes (Tobey 2005). Increased available Federal lands after State conveyances are finalized could possibly increase the total caribou harvest under the Federal registration hunt, however it is premature to speculate on the effects to the NCH until conveyances are complete.

Prior to 2009, the State Tier II hunt (TM566) provided a State subsistence opportunity from August 10–September 20 and October 21–March 31. This has been eliminated and a community harvest (CC001) from August 10– September 20 and October 21–March 31 has been established for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina and Kluti Kaah with a harvest limit of 300 caribou. All other Alaskan hunters may obtain a permit and participate in a Tier I (resident only) hunt. A Federally qualified subsistence user could opt into the community harvest system or a State registration permit to harvest one caribou and then get a Federal permit to harvest another caribou since the Federal limit is two.

Current Events Involving Species

Prior to 2009, the State Tier II hunt (TM566) provided a State subsistence opportunity from August 10–September 20 and Oct. 21–Mar. 31. Although the Tier II hunt has been eliminated, the new State Tier I hunt and the community harvest hunt (CC001) are expected to result in the same number of caribou harvested annually (Schwanke 2009, pers. comm.).

In July 2009, the BLM Glennallen Field Office concurred with the recommendation of the Glennallen ADF&G office to restrict Nelchina Caribou hunt to bulls only for the 2009–2010 regulatory year. A harvest quota of 1,000 bulls has been set for the combined Nelchina Caribou hunt (Cebrian 2009, pers. comm.).

The State of Alaska was required to submit the final state-wide land selections to BLM by September 30, 2009, however BLM has not processed the final selections to date making this proposal premature since final conveyances could take more than a year to process. Furthermore, because the over-selected lands are statewide, to date it is not known which specific areas are to become unencumbered.

Effects of the Proposal

Currently, Federally qualified subsistence users may harvest two caribou on Federal lands, which comprises approximately 10% of the land in Unit 13. If this proposal is adopted it would reduce the Federal harvest limit from two to one caribou, which would reduce opportunity and adversely affect Federally qualified subsistence users. At present, conservation concerns are minimal considering the productivity for the NCH has been high with an average of 52 calves:100 cows (1985–1996). More recent (2007–2009) productivity measures show an average of 34 calves:100 cows which is below the management goal of 40 calves:100 cows. In October 2007, sex and age composition survey estimated ratios of 35 calves:100 cows and 34 bulls:100 cows (ADF&G 2008) and in 2008 showed 40 calves:100 cows and 39 bulls:100 cows (ADF&G 2009a). During the most recent fall survey in 2009, 29 calves:100 cows and 42 bulls:100 cows were observed (Schwanke 2009, pers. comm.). Current management strategies appear to be working as the NCH population remains near management goals.

A Federally qualified subsistence user could opt for a community permit or a State registration permit to harvest one caribou and then get a Federal permit to harvest another caribou since the Federal limit is two. With an increase of Federal lands there may be more permits given (individuals who did not apply for Federal permits before, but may choose to apply for one if Federal lands were more accessible), which could increase the overall harvest. However, the Community harvest is new under State regulations and may satisfy the subsistence needs for those within the community, thereby not increasing the harvest even if more lands are conveyed. Because the land selections from the State of Alaska have not been finalized nor conveyed, the potential of increased Federal harvests should lands change to Federal subsistence management regulations is unknown. In addition, rescinding the delegated authority of the Glennallen Field Office Manager to announce the sex of the animal to harvest would reduce the ability for in-season management, which could have deleterious effects on the population by not allowing adaptive management based on recent herd composition data.

OSM CONCLUSION

Oppose Proposal WP10-27

Justification

The State has selected most of the Federal lands in subunits 13B and 13E along the Denali Highway (Tobey and Kelleyhouse 2007). However, the land selections from the State of Alaska have not been finalized; therefore an accurate estimation of what lands would return to Federal management is not possible at this time and the effects thereof are impossible to determine. (Cebrian 2009, pers. comm.).

The majority of the NCH harvest comes from State administered hunts, which are closed by Emergency Order when the annual harvest quota is reached. The Federal hunt, if necessary, can also be closed to

avoid exceeding the annual harvest quota. Since the Nelchina Caribou population is currently below management objectives, it is critical to maintain the delegated authority to allow the sex of the harvested animals be determined by the Glennallen Field Office Manager in consultation with the other various managers. Rescinding the delegated authority would reduce the ability for in-season management and could have deleterious effects on the population. Currently conservation concerns seem minimal considering the productivity for the NCH has been high with an average of 52 calves:100 cows (1985–1996) and is determined primarily by October surveys by ADF&G. More recent (2007–2009) productivity measures show an average of 34 calves:100 cows which is below the management goal of 40 calves:100 cows. In October 2007, sex and age composition survey estimated ratios of 35 calves:100 cows and 34 bulls:100 cows (ADF&G 2008) and in 2008 showed 40 calves:100 cows and 39 bulls:100 cows (ADF&G 2009a). Once land conveyances are finalized, the NCH hunt should be re-evaluated. At that time, conservation of the herd as well as hunting opportunity should be re-addressed.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-27. The Council determined that it is premature to know if land selections in this area may result in significantly more Federal land under Federal jurisdiction which may result in additional caribou harvest. The herd is healthy and is currently capable of supporting a two caribou limit.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-27. If adopted by the Board, reduction in harvest will affect subsistence users. Currently, there is no conservation concern for the population and Federal and State management plans are in place to protect the Nelchina Caribou Herd from overharvest.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-27

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-27
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-27: This proposal would: (1) reduce the bag limit for federal subsistence permittees in Game Management Unit 13 from two caribou to one and (2) remove delegated authority of the inseason designated federal official to assign sex of caribou harvested.

Introduction: The amount of federal public land open to federal subsistence hunting in Unit 13 is about 2% of the unit. The federal subsistence hunt can exceed 50% of the yearly harvest quota. With increasing federal land ownership, individuals harvesting under federal subsistence regulations could significantly impact the caribou herd north of Denali Highway and could impact subsistence opportunity of federally qualified users hunting under the recently enacted State community harvest system that applies on all lands (federal, state, and private). Annual federal subsistence caribou harvests in Unit 13 have been as high as 600 animals. Total Nelchina Caribou Herd harvest quotas in recent years ranged from 1,000–2,000 caribou. The harvest quotas for both bulls and cows for the entire herd are set by the Alaska Department of Fish and Game prior to the hunting season each year. Quotas are based on modeling of annual herd size and composition data. Cow harvests are only recommended in years when the herd is within or above the population objective of 35,000-40,000.

Impact on Subsistence Users: An average of 138 individuals (range = 84–204) from 2003–2007 reported taking two caribou. Federal subsistence regulations allow any federal hunter to be a designated hunter, so multiple caribou could still be harvested in households with two or more hunters.

Opportunity Provided by State: Beginning 2009, the State provides for two alternative Tier I hunts open to all residents but geared towards two separately recognized uses: (1) local, community-oriented subsistence use, and (2) nonlocal, much more individually-oriented use.

The Tier I community use is provided by a State system that allows harvesting under community harvest permits, as requested by local subsistence hunters. Up to 300 caribou may be harvested under this hunt; and, based on input from local users, federally-taken caribou are counted against this total. Under community harvest permits, a few communal hunters may harvest on behalf of their entire communities, up to the total amount of participants who sign up to partake in the program, so there is, effectively, a very large potential bag limit for communal hunters. There are other unique, subsistence-oriented advantages under this system, including the ability to hunt throughout nearly all of the tradition hunting territories of all villages currently participating under a single permit, the ability to preserve customary and traditional practices, and applicability on all federal and non-federal lands.

The other Tier I hunt is a drawing-type opportunity that is designed to provide participants with a permit about every four years to harvest a single caribou bull, so long as doing so is consistent with state-established yearly harvest objectives for the Nelchina Caribou Herd. This opportunity was based on input and requests from nonlocal users. Federally-taken caribou will also count against the total number of animals available in this hunt, but the nonlocal users who are most likely to participate in this hunt will generally not qualify as federal subsistence users, so their

federal take is likely to be very small. In other words, the more caribou taken under federal regulation, the fewer will be available for both communal hunting and individual hunting. Because communal hunting is limited to 300 animals and communal hunters are the most likely to also harvest under federal regulations, communal hunters may face an early State closure if they take too many animals under federal regulations. Thus, the higher federal bag limit may lead to an overall decrease of subsistence opportunity for the local, rural users it is designed to protect and to short-circuit the broad, carefully negotiated and locally-oriented subsistence hunting system adopted by the Alaska Board of Game for this region, as requested by the users and applicable on all federal and nonfederal lands in the area.

Enforcement Issues: Enforcement of the herd harvest quota is difficult with the federal program authorizing multiple bag limits for individuals. Also, emergency orders closing a season are less effective when hunters can take more than one animal, especially when animals are abundant during fall migrations near highways. Further, enforcement issues could arise if Bureau of Land Management and State-managed hunts allow different sexes of animals to be harvested.

Other Comments: The Department supports the flexibility of defined federal inseason management authority for the Nelchina Caribou Herd as long as the decisions do not adversely affect herd conservation. This authority is used to set the sex of animals to be harvested prior to the hunting season and to restrict cow or bull harvests inseason if necessary for conservation purposes, similar to Department authority over State hunts. The Department's Glennallen office has worked hard to maintain this federal inseason management authority, and the current system works well. This authority is necessary to maintain consistency between federal and State hunts for the benefit of caribou hunters on an annual basis.

Removing the delegated authority to announce the sex of caribou to be harvested by the federal designated official will not necessarily impact the federal subsistence harvest, but it could delay implementation of management recommendations. If this portion of the proposal is adopted by the Federal Subsistence Board and the delegated authority to announce the sex of the caribou to be harvested is rescinded, the Bureau of Land Management designated official will be required to annually submit a Wildlife Special Action to the Federal Subsistence Board to establish the sex of the caribou to be harvested.

Recommendations: (1) Support reducing the bag limit to one caribou. (2) Oppose removal of the defined delegated authority granted to the federally designated Bureau of Land Management official to announce the sex of the caribou to be harvested.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-27. The proposal would adversely affect subsistence users by reducing subsistence opportunity. Conservation concerns are minimal and can be addressed through the current delegation of authority for in-season management.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-27. We oppose WP10-27 which will restrict Unit 13 Nelchina Caribou to 1 caribou per person harvest limit. The Federal take of 2 caribou needs to stay in place, so that Federally qualified subsistence users will have their needs met. If a moose is not harvested, then 2 caribou can be harvested under the Federal system. If there is ever a decline due to over harvest of caribou in Unit 13, then measures can be made then.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Support Proposal WP10-27 **with modification**. I am writing a clarification for our caribou proposal for unit 13. Our Advisory Committee felt that the present wording may confuse.....

1. Harvest limit should be one caribou for all of unit 13.

2. We wish the sex of the animal to be taken to follow the State of Alaska regulation--whatever that may be on any given season. [the reasoning is that the State does 100% of the caribou population studies at this time so is very aware of the condition of the herd. The Federal managers need to follow the lead of the State biologists on this one for the continued health and maintenance of the Nelchina caribou herd]

John Schandelmeier, chair, Paxson Fish and Game Advisory Committee

WP10-28 Executive Summary	
General Description	Proposal WP10-28 requests that the harvest limit of 1 antlered bull moose be changed to 1 antlered bull per household for Unit 13B and that the season be changed from August 1–September 20 to August 20–September 30. *Submitted by the Paxson Fish and Game Advisory Committee*
Proposed Regulation	**Unit 13 remainder—Moose** *1 antlered bull moose by Federal registration permit only* — *Aug. 1–Sept. 20* **Unit 13B—Moose** ***1 antlered bull moose per household by Federal registration permit only*** — ***Aug. 20– Sept. 30***
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose shifting the moose season** into the rut. **Support the proposed change in bag limit** to one antlered bull moose per household as is in federal regulations for Unit 13E, but modified to apply to all Unit 13 in order to reduce impacts of federal regulations on future subsistence opportunity for federally qualified users in Unit 13.
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-28

ISSUES

Proposal WP10-28, submitted by the Paxson Fish and Game Advisory Committee, requests that the harvest limit of 1 antlered bull moose be changed to 1 antlered bull per household for Unit 13B and that the season be changed from August 1–September 20 to August 20–September 30.

DISCUSSION

The proponent requests the moose harvest season in 13B be changed due to concern that more lands will be open for hunting once Federal-State land conveyances are completed. The proponent is concerned that there is a potential to increase harvest beyond sustainable levels once the land has been conveyed. The proponent also states that this change would help keep moose harvest at a sustainable level while still allowing most households to participate in a hunt.

Existing Federal Regulation

Unit 13 remainder—Moose	
1 antlered bull moose by Federal registration permit only	*Aug. 1–Sept. 20*

Proposed Federal Regulation

Unit 13 remainder—Moose	
1 antlered bull moose by Federal registration permit only	*Aug. 1–Sept. 20*
Unit 13B—Moose	
1 antlered bull moose per household by Federal registration permit only	***Aug. 20– Sept. 30***

Existing State Regulations

Unit 13—Moose	
1 bull by Community permit for residents	*Aug. 10–Sept. 20*
OR	
One bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tine on at least one side for residents	*Sept. 1–Sept. 20*
One bull by drawing permit	*Sept. 1–Sept. 20*
One bull with 50-inch antlers or antlers with 4 or more brown tine on a at least one side for non-residents by drawing permit	*Sept. 1–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 10% of Unit 13 and consist of 2% BLM, 6% Denali National Park and Wrangell-St. Elias National Preserve, and 2% Chugach National Forest lands. For Unit 13B specifically, Federal lands comprise 8% of the subunit and are managed by the Bureau of Land Management (See **Unit 13 map**).

The land selections from the State of Alaska have not been finalized; therefore an accurate estimate of conveyed lands is not possible at this time. [1]

Customary and Traditional Use Determinations

Rural residents of Units 13, 20D (except Fort Greely), Chickaloon, and Slana have a positive customary and traditional use determination for moose in Unit 13B.

Regulatory History

Since 1998, the Federal subsistence moose hunting regulations for Unit 13 have allowed one antlered bull moose by Federal registration permit only, from August 1 to September 20, except in Unit 13E where only one Federal registration permit is issued per household.

The State general harvest regulations for moose in Unit 13 were changed in 2000 when the designation of a legal bull went from 3 or more brow tines or 50-inch antler spread to a 4 or more brow tines or 50-inch antler spread and has been in effect ever since. The same year, non-resident general moose hunting was eliminated from Unit 13 due to low population numbers. In addition, the Alaska Department of Fish and Game (ADF&G) also managed a State Tier II hunt (TM300) for one bull moose by permit August 15–31 between 1995 and 2008.

By Alaska law, giving preference to individuals based on residency to harvest fish and wildlife for subsistence is allowed through the Tier II provisions (AS 16.05.258(b)(4)(B)). In 2008, the State Tier II hunt was changed to add a community harvest (CM300) and the season was modified to August 10–September 20 with an upper harvest limit of 25 any-bull moose for Unit 13B. For residents, drawing permit hunts (DM330-334) for one bull moose from September 1 to September 20 were added as a new harvest option in select areas where moose numbers have increased. For non-residents, drawing permit hunts (DM 335-339) were established to harvest one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side from September 1 to September 20. Adoption of the Federal regulation for one permit per household would reduce the opportunities for Federal subsistence users to harvest moose in Unit 13B, while the State regulations have no such caveat.

Management Direction

Current ADF&G management objectives for the moose population in Unit 13 are to increase to 20,000–25,000 moose with a minimum of 25 bulls:100 cows, 25–30 calves:100 cows, and 10 yearling bulls:100 cows in the fall. In addition, the human use management objective includes providing the potential to harvest bulls and cows to a combined total of 1,200–2,000 animals and provide subsistence harvest of 300–600 moose per year.

[1]Through Title IX of ANILCA, the State of Alaska was allowed to overselect (by 25%) lands it had an interest in being conveyed from the Federal Government. Once the State's selections have been established, prioritized, and finalized, any remaining overselected lands will return to BLM management authority.

Biological Background

Since the 1940s, the moose population in Unit 13 has fluctuated broadly with a decrease in population of an estimated 47% in 2001 (Tobey 2008). Aerial surveys conducted in the fall to acquire sex and age composition and populations trends have shown an increase in bull:cow and calf:cow ratios throughout Unit 13 since 2001 (**Table 1**). Long-term population trends for all of Unit 13 are monitored by observing annual changes in numbers of moose during the fall and show a general increase in the number of moose counted from 2001 to 2007 (**Table 1**). The fall 2007 aerial moose composition counts showed that Unit 13B met the management objectives of ADF&G for both bull and yearling bull:cow ratios, but falls short of calf:cow ratios (**Table 2**) with similar results in 2008 with 38 bulls:100 cows and 18 calves:100 cows (Schwanke 2009, pers. comm.). Recent increases in yearling bulls have been attributed to less winter mortality of calves due to mild winters and reduction in wolf population (Tobey and Schwanke 2008). Winter mortality due to deep snow conditions was lower than average in 2006–2008. ADF&G has developed a winter severity index within Unit 13 that records snow depths to determine snow pack and severe conditions that might effect moose survival (Testa 2004). The winter severity index for 13B in 2004–2005 showed severely high snowpack conditions compared to the previous eleven years. Moose numbers remained stable from 2004 to 2005 (Schwanke 2009, pers. comm.) Since 2005, moose numbers have increased in 13B (**Table 3**). The 2007 fall aerial surveys estimated 2265 moose which is approximately 1.5 moose/mi^2, showing an increase (25%) in moose density in Unit 13B since 2001 (**Table 3**).

Nutritional constraints can result in low twinning rates and delays in age of first reproduction (Testa 2004) and therefore can be an important limiting factor in moose populations. While no studies have been done regarding productivity in Unit 13B, the twinning rate at birth for collared cows in 13A, based on calf observations, averaged 21% between 1994 and 2007. Twinning rates are obtained in other subunits by flying aerial surveys from late May to early June, just past the peak of parturition and tend to be higher than in 13A, averaging 27% between 1992 and 2006 (Tobey and Schwanke 2008). While specific correlation between productivity in Unit 13A and 13B can not be compared, the variation in productivity illustrate population dynamics have a myriad of constraints beyond harvesting.

The use of prescribed fires to replace wildfire as a method of improving moose habitat has had limited application in Unit 13 (Tobey and Schwanke 2008). The Alphabet Hills controlled burn, a joint project between BLM and the State, was ignited in August 2004 and burned approximately 41,000 acres around Kelly Lake on the south slopes of the Alphabet Hills in subunit 13B (Tobey and Schwanke 2008). The burn area is near the headwaters of the West Fork of the Gulkana River, and is expected to increase moose productivity in this area in coming years (Schwanke 2009, pers. comm.).

From 1977 to 1984, predation of moose calves by predominately brown bears (73%) was a limiting factor for moose population growth in the Nelchina Basin (Ballard et al. 1981, 1991). In addition to bears, wolves also have a substantial impact on the moose population in Unit 13 (Tobey and Schwanke 2008). Since 2001, ADF&G has maintained an active wolf management program in Unit 13 specifically to increase the moose population. The plan is up for reauthorization in July 2010 (ADF&G 2009b). Since 2006, the Unit 13 wolf population estimates have been within the ADF&G spring population objective of 135–165 wolves (ADF&G 2009b). Predation by bears and wolves have been shown to contribute to high rates of mortality of moose in Unit 13, while human harvest of moose is limited to a limited number of males (Testa 2004). Research models with data from 1996–2004 in Unit 20A which is north of Unit 13B showed bear and wolf predation contributed to 9% and 8–15%, respectively, of the post-calving mortality, while hunters contributed 2–6% (Boertje et al. 2007).

Table 1. Unit 13 fall aerial moose composition counts (Tobey and Schwanke 2008)

Year	Bulls:100 cows	Yearling bulls: 100 cows	Calves:100 cows	% Calves	Adults observed	Total moose observed	Moose/hour	Density moose/mi² (observed range)
2001	23	3	15	11	3086	3466	37	1.0 (0.6 – 1.4)
2002[a]	24	6	22	15	2918	3428	36	1.0 (0.5 – 1.2)
2003	24	8	18	12	3707	4230	47	1.2 (0.5 – 1.7)
2004	28	6	22	15	3215	3768	40	1.1 (0.5 – 1.7)
2005	27	7	18	13	3500	4009	45	1.1 (0.4 – 1.4)
2006	30	8	23	15	3416	4028	49	1.1 (0.5 – 1.5)
2007[b]	32	10	22	14	3875	4517	40	1.3 (0.5 – 1.8)
2008[c]	35	12	19	13	3918	4481	54	1.3 (0.5 - 1.9)

a Two of eight count areas were not flown in 2002, therefore data was estimated for those areas

b One of eight count areas was not flown in 2007, therefore data was estimated

c (Schwanke 2009, pers. comm.)

Table 2. Unit 13B subunit fall 2007 aerial moose composition counts (Tobey and Schwanke 2008)

Unit	Bulls: 100 cows	Yearling bulls: 100 cows	Calves: 100 cows	Calves %	Total moose observed	Density moose mi²
13A	23	9	27	18	1256	1.3
13B	35	12	20	13	2265	1.5
13C	36	15	21	14	463	1.5
13D	66	7	15	8	183	0.5
13E	24	5	16	11	346	0.8

[a] 13D not counted in 2007, data was estimated.

Table 3. **Unit 13B** fall aerial moose composition counts (2001-2007) (Tobey and Schwanke 2008, Tobey and Kelleyhouse 2006, Tobey 2004, Tobey 2002)

Year	Bulls:100 cows	Yearling bulls:100 cows	Calves:100 cows	% Calves	Total moose observed	Density moose/mi^2
2001	22	3	16	11	1833	1.2
2003	22	6	17	12	1943	1.3
2005	27	7	23	15	1891	1.3
2007	35	12	20	13	2265	1.5

Moose are abundant along the southern slopes of the Alaska Range and within the Alphabet Hills portion of Unit 13B (**Table 2**). Moose typically congregate in subalpine habitats during fall rutting and post-rutting and historically, moose numbers in Unit 13B tend to fluctuate more than lower density areas (Tobey and Schwanke 2008).

Harvest History

Historically, Unit 13 has been an important area for moose hunting in Alaska due to the proximity to major human populations within the State. Throughout the 1960s and early 70s, harvests were large and averaged more than 1,200 bulls and 200 cows annually (Tobey 2004). During this time, the harvests extended into both fall and winter hunts and moose numbers began to decline. By the late 1970s harvests had been reduced to approximately 775 bulls annually, cow harvests and the winter season were eliminated, but the bull:cow ratios were still low. In response, the ADF&G changed the harvest of any bull to a harvest of a bull with an antler spread of at least 36 inches or 3 brow tines on at least one antler in 1980. This harvest regime eventually allowed an increase of moose populations and subsequently the harvests increased as well, peaking with a harvest of 1259 moose in 1988 (Tobey 2004). Since 2001 moose harvest and population levels have continued to increase in Unit 13 (**Tables 1, 2, and 3 and Figure 1**) which lead to harvest regulations being liberalized in these specific areas in 2008 with the addition of 5 resident-only any bull drawing hunts, and limited large bull non resident drawing hunts. However, the State general hunt is not likely to be liberalized due to lower moose numbers in accessible roadside hunt areas (Schwanke 2009, pers. comm.).

Currently, the Federal harvest season in Unit 13 is from August 1–September 20 which allows for a longer subsistence opportunity for Federally qualified subsistence users. Annual reported harvests by Federal subsistence users have been consistent from 2004–2007 with an average of 33 bulls harvested (**Table 4 and Figure 1**). Since 2004, the early part of the season from August 1–20 has only accounted for about 7% of the total bull moose harvest. (**Table 5 and Figure 2**). The latter portion of the season sees more harvest success with 25% of the moose in Unit 13B being harvested in the last week of the hunt (**Figure 2**).

The State general harvest season is from September 1–20 in Unit 13 and is the predominate source of moose harvest under State regulations (**Table 4 and Figure 1**). Prior to 2009, the State Tier II hunt (TM300) provided a State subsistence opportunity from August 15–30. This has been eliminated and a community harvest hunt (CM300) from August 10–September 20 with a harvest limit of one bull has been established for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina and Kluti Kaah. All other Alaskan hunters may participate in the general season hunt from September 1–20 for bulls

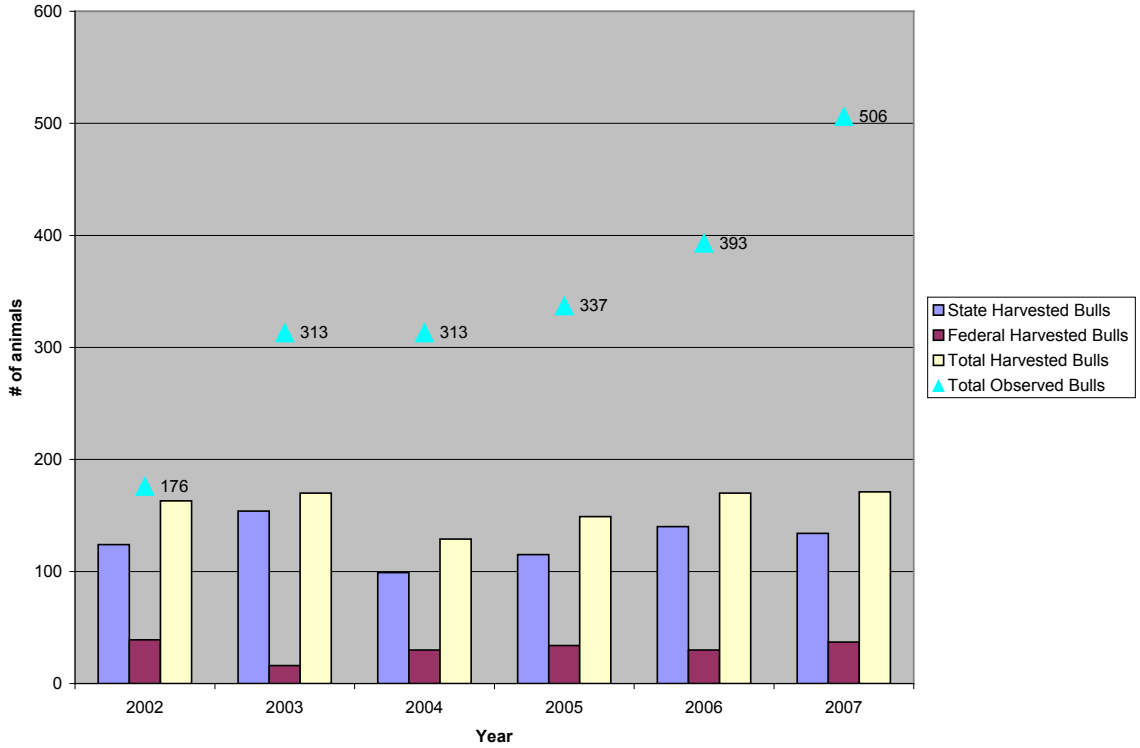

Figure 1. Unit 13B Bull Moose Harvest Data (2002-2007) and total number of bulls observed for a portion of Unit 13B. (Total observed bull data courtesy of Schwanke 2009, pers. comm.).

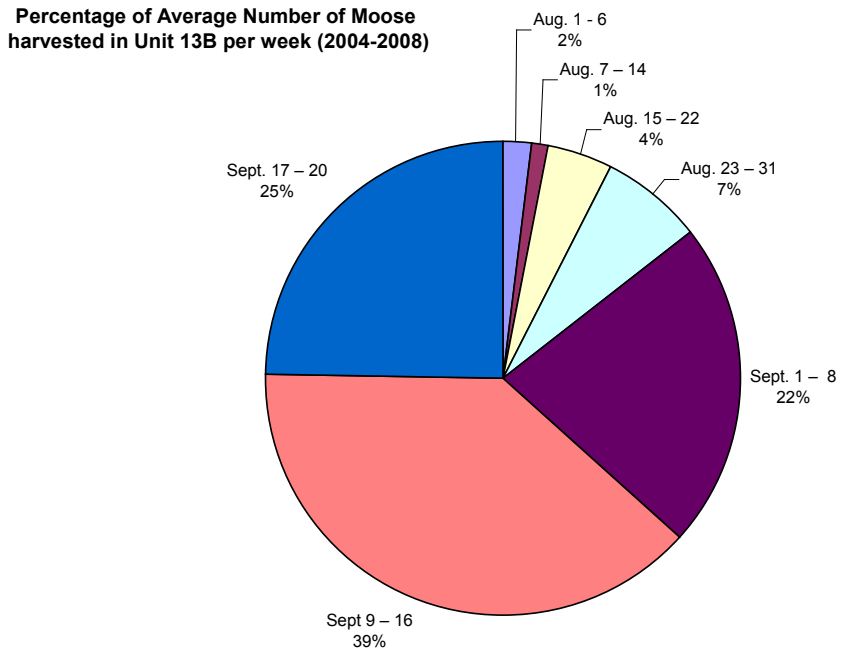

Figure 2. Unit 13B Average Moose Harvest per week (2004-2008).

Table 4: Results of State and Federal moose hunts in **Unit 13B** from 2004-2007 (ADFG 2009 and FWS 2009)

Year	State Tier II harvest (TM300) Sept 1–Sept 20	General harvest Sept 1–Sept 20	# of State hunters reported [a]	Total State Bull Harvest	Federal subsistence harvest (BLM/FM 313/314) Aug 1–Sept 20	# of Federal hunters reported	Total Federal Bull Harvest
2004	6	93	689	99	30	378	30
2005	6	109	800	115	34	357	34
2006	15	127	923	142	30	114	30
2007	12	122	776	134	37	293	37

[a] Actual number of hunters who hunted both unsuccessfully and successfully
Moose harvest management objective for Unit 13B is 310-620 moose.

Table 5. **Unit 13B** moose harvest chronology percent by week for State and Federal hunts 2008 (ADF& G 2008, FWS 2008)

	RM313 Aug. 1 – Sept. 20					RM314 Aug. 1 – Sept. 20					TM300 Aug. 15 – Aug. 31					State General Sept. 1 – Sept. 20				
	Year					Year					Year					Year				
Week Harvested	08	07	06	05	04	08	07	06	05	04	08	07	06	05	04	08	07	06	05	04
Aug. 1 – Aug. 6	1	0	1	0	4	3	0	3	1	3	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aug 7 – Aug. 14	5	1	0	2	1	1	2	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Aug. 15 – Aug. 22	5	1	1	4	1	0	1	0	0	0	9	5	6	3	1	n/a	n/a	n/a	n/a	n/a
Aug. 23 – Aug. 31	4	3	4	1	1	2	3	1	2	1	9	7	9	2	5	n/a	n/a	n/a	n/a	n/a
Sept. 1 – Sept. 8	1	2	2	2	5	0	0	1	2	1	n/a	n/a	n/a	n/a	n/a	35	32	38	31	23
Sept 9 – Sept. 16	7	10	5	5	3	1	3	2	1	5	n/a	n/a	n/a	n/a	n/a	56	60	59	41	47
Sept. 17 – Sept. 20	6	6	6	10	2	4	6	4	4	3	n/a	n/a	n/a	n/a	n/a	37	27	27	35	19
Total	29	23	19	24	17	11	14	11	10	13	18	12	15	5	6	128	119	124	107	89

with spike-fork or 50-inch antlers or antlers with 4 or more brow tine on at least one side or the drawing permits (DM330-334) for one bull by permit for residents.

Current Events Involving Species

For the 2009–2010 state regulatory year, the State Tier II hunt (TM300) changed to Community harvest for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina and Kluti Kaah, as well as any bull permit hunts (DM330-334) in select areas where moose numbers have increased. Both of these hunts are expected to increase moose hunting opportunity in Unit 13. All Alaskan hunters may participate in the general season hunt from September 1–20.

The State of Alaska was required to submit the final state-wide land selections to BLM by September 30, 2009, however BLM has not processed the final selections to date making this proposal premature since final conveyances could take more than a year to process. Furthermore, because the over-selected lands are statewide, to date it is not known which specific areas are to become unencumbered.

Effects of the Proposal

Currently, Federally qualified subsistence users may harvest one antlered bull moose by permit from August 1 to September 20. If the proposal is adopted it would shift the time of the harvest season by 10 days compared to the State community harvest hunt (August 10–September 20), but would be longer than the current State general season (September 1–20). Currently, there is an upward population trend of moose in Unit 13B and the 2007 fall aerial surveys estimated 1.5 moose/mi^2, showing an increase (25%) in moose density since 2001. While cyclical winter mortality can negatively affect moose populations, the current moose populations in Unit 13B can support the current harvest regulations. In addition, adoption of this proposal for one permit per household would reduce the opportunities for Federal subsistence users to harvest moose in Unit 13B, while the State regulations have no such restriction.

Land selections from the State of Alaska have not been finalized; therefore an accurate estimate of conveyed lands and the effect of changing land status on the harvest of moose in Unit 13 are unknown at this time (Cebrian 2009, pers. comm.). Once land conveyances have been achieved, the resultant effects can be evaluated.

OSM CONCLUSION

Oppose Proposal WP10-28

Justification

The proponent is concerned that there is a potential to increase harvest beyond sustainable levels once the land has been conveyed, however the proposed change could actually increase the number of moose harvested. Sustainable harvest levels for moose are evaluated annually by ADF&G, and regulations and permit numbers are adjusted accordingly with the guiding principle of sustainable yield. Currently, there is an upward population trend of moose in Unit 13B and total State and Federal harvest numbers are stable to increasing in response to this increase in moose numbers. The 2007 fall aerial surveys estimated approximately 1.5 moose/mi^2, showing an increase (25%) in moose density in Unit 13B since 2001).

Since 2004, the chronology of the total moose harvest has shown August 1–20 to comprise approximately 7% of the total bull moose harvest while more harvest success is in the later portion of the season with 25% of the moose in Unit 13B being harvested in the last week of the hunt, which currently

ends September 20. Overall harvest numbers for Federal subsistence have been relatively consistent from 2002–2007 (The State general harvest season is from September 1–20 in Unit 13 and harvest predominately occurs under State regulations). Therefore, shifting the time of the season to August 20 to September 30 would negatively affect Federally qualified subsistence users by reducing the season. In addition, adoption of the regulation for one permit per household further limits the Federal subsistence user in harvest of moose in Unit 13B, while the State regulations have no such restriction.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-28. The Council determined that there is no evidence to support this proposal. There is no reason to shift the moose hunting season into the breeding season.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-28. The Council opposed the proposal to change the harvest limit to 1 antlered bull; the proposal if adopted by the FSB will be more restrictive than current State regulations and will adversely affect subsistence users. No conservation concerns exist for the current moose population.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-28

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-28
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-28: Change the bag limit, antler restrictions, and season dates for the federal subsistence moose hunt in Game Management Unit 13B.

Introduction: Existing federal regulations limit take to one antlered bull moose in Unit 13B August 1 through September 20. This proposal would limit federal subsistence users to one bull per household as is in federal regulations for Unit 13E. The proposal would also shift the federal moose season in Unit 13B from August 1 through September 20 to August 20 through September 30. (The proposal requests one any-bull per household; federal subsistence regulations restrict harvest to "antlered bulls.")

Impact on Subsistence Users: The reduction in bag limits would not impact federal subsistence users. During the 5 years from 2003 to 2007, only six families took two federal subsistence moose and one family took three moose. If the proposal is adopted, however, the 10-day season extension from September 20 through September 30 would negatively affect the moose population and reduce future subsistence hunting opportunity on federal public lands.

Opportunity Provided by State: The State provides a 20-day moose season for spike or fork, 50 inch antler spread, or four brown tine bull moose throughout Unit 13. In addition, a community harvest hunt for eight Unit 13 rural villages is administered by Ahtna, Inc., that provides for 100 any-bull and *an unlimited number of* spike or fork, 50-inch antler spread, or four brown tine bulls with a 20-day longer season from August 10 through September 20. There are also any-bull drawing hunts available in parts of Units 13A, 13B, and 13C in areas where the moose population can sustain this additional pressure.

Conservation Issues: An any-bull bag limit for a general hunt occurred in Unit 13 in 1979. Heavy hunting pressure under an any-bull bag limit greatly reduced the bull:cow ratio as low as 5:100 in heavily hunted areas. As the amount of federal public land is increasing, if this proposal is adopted, the bull ratios can be expected to decline. Currently, the amount of federal public land open for subsistence in Unit 13 is small and over harvest of bulls is not a conservation issue because of the limited land open to federal subsistence hunting. Additional protection is also provided for small bulls under the state spike or fork, 50-inch antler spread, or four brown tine bull moose antler restriction regulation.

As additional large parcels of federal land are expected to become available for subsistence harvest within the next year, the any-bull bag limit is expected to greatly reduce bull:cow ratios on these lands. The decline would be accentuated if the season is extended because moose are extremely vulnerable to hunting after September 20, when leaf fall increases visibility and breeding behavior of the bulls during the rut makes them more vulnerable.

Enforcement Issues: Extending the federal season after the State season closes will increase risk of enforcement on nonfederal land. Current federal subsistence moose harvests are in excess of 2% of the total take in Unit 13 despite only 2% of the land being open to federal moose

hunting. Moose do not congregate on federal public lands. It is highly likely that some current take already comes from the predominant adjacent State lands.

Recommendation: (1) Oppose shifting the moose season into the rut. (2) Support the proposed change in bag limit to one antlered bull moose per household as is in federal regulations for Unit 13E, but modified to apply to all Unit 13 in order to reduce impacts of federal regulations on future subsistence opportunity for federally qualified users in Unit 13.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-28. We oppose WP10-28 which would shorten the Unit 13B moose season from Aug. 1–Sept. 20 to Aug. 20–Sept. 30. We do not know what the take of moose will be in Unit 13B, and a decision should not be made to shorten the moose season. If over harvest occurs in Unit 13B, then measures can be taken to address the problem. Federally qualified subsistence users need to have a longer moose season, than the State system, so that subsistence needs can be met.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-29/30 Executive Summary	
General Description	Proposals WP10-29 and 30 request a positive customary and traditional use determination for brown bear and black bear in the Unit 11 remainder area for some rural residents of Unit 12: Tok Cutoff road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46). *Submitted by the Wrangell-St. Elias Subsistence Resource Commission*
Proposed Regulation	**Customary and Traditional Use Determination** **Unit 11 north of the Sanford River—Brown Bear** *Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.* **Unit 11 remainder—Brown Bear** *Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, Unit 11,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).*** **Unit 11 north of the Sanford River—Black Bear** *Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.* **Unit 11 remainder—Black Bear** *Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, Unit 11,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP10-29/30

ISSUES

Proposals WP10-29 and 30, submitted by the Wrangell-St. Elias Subsistence Resource Commission, request a positive customary and traditional use determination for brown bear and black bear in the Unit 11 remainder area for some rural residents of Unit 12: Tok Cutoff road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46).

DISCUSSION

Proposals WP10-29 and 30 seek a positive customary and traditional use determination for the residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46), referred to in this analysis as the proposal area (see **Map 1**), to harvest brown and black bear in the remainder portion of Unit 11. The remainder of Unit 11 consists primarily of lands within the Wrangell-St. Elias National Park and Preserve located south of the Sanford River. The proponent states that residents of the proposal areas have subsistence use patterns that closely resemble those of Slana and Mentasta Lake (in Unit 13). Further, the proponent stated that residents of this area "traditionally harvest wildlife resources, including bear, throughout the Copper Basin and were inadvertently omitted from the current customary and traditional use provisions." The proponent also notes that it is confusing to be out "hunting one species, then a bear walks by that we would shoot to eat, but not be allowed to harvest the animal." Residents from the proposal area also have customary and traditional use determinations for other large mammals in Unit 11 remainder, i.e. sheep and wolf.

Existing Federal Regulation

Customary and Traditional Use Determinations

Unit 11 north of the Sanford River— Brown Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.

Unit 11 remainder— Brown Bear

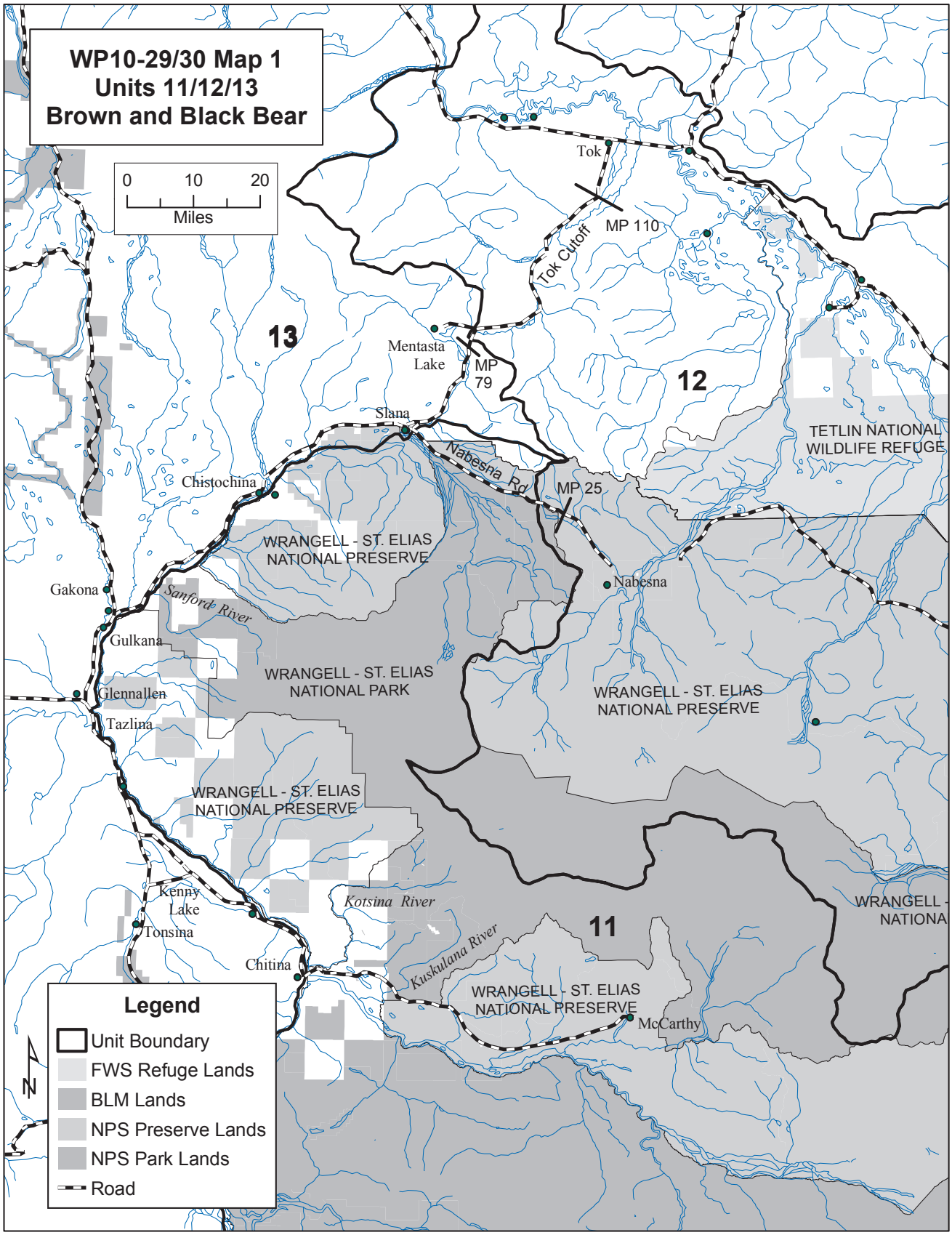
Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Unit 11.

Unit 11 north of the Sanford River—Black Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.

Unit 11 Remainder— Black Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Unit 11.


WP10-29/30 Map 1
Units 11/12/13
Brown and Black Bear
0 10 20
Miles
Tok
MP 110
Tok Cutoff
13
Mentasta Lake
MP 79
12
Slana
Nabesna Rd
MP 25
TETLIN NATIONAL WILDLIFE REFUGE
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Nabesna
Gakona
Sanford River
Gulkana
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Glennallen
Tazlina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Kenny Lake
Tonsina
Kotsina River
11
WRANGELL - NATIONA
Chitina
Kuskulana River
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
Legend
Unit Boundary
FWS Refuge Lands
BLM Lands
NPS Preserve Lands
NPS Park Lands
Road
N

Proposed Federal Regulation

Customary and Traditional Use Determination

Unit 11 north of the Sanford River—Brown Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.

Unit 11 remainder—Brown Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, Unit 11, ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***

Unit 11 north of the Sanford River—Black Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12.

Unit 11 remainder—Black Bear

Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, Unit 11, ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 81% of Unit 11 and includes lands managed by Wrangell-St. Elias National Park and Preserve (79%), Chugach National Forest (2%) and Bureau of Land Management (1%).

Regulatory History

The regulatory history is described in full in Appendix A. The main points in the regulatory history pertinent to the analysis for Proposals WP10-29 and 30 are as follows:

When the Federal Subsistence Board (Board) assumed management of subsistence wildlife resources on Federal public lands in 1990, it adopted State of Alaska customary and traditional use determinations. In 1990, in Unit 11, there was a “no subsistence” determination for brown bear under State regulations. The customary and traditional use determination for black bear was “no determination” (which meant that all Federally qualified rural residents were eligible to harvest black bears) and there was “no closed season,” with a limit of three bears per year.

In 1997, the Board addressed the customary and traditional use of brown bear in Unit 11 for rural residents of Unit 12. There was no proposal for black bear because the liberal State regulations, “no closed season, three bears per year” had been adopted by the Federal program. The Board recognized the customary and traditional use of brown bear in Units 12 and 20E by residents of Unit 12 and Dot Lake (FSB 1997:33, 38, 40–41). The customary and traditional uses of brown bear in Unit 11 by

residents of Unit 12 were not recognized by the Board (see Appendix A for more details on the Council recommendations for this decision).

In 1998, the Board addressed Proposals 21 and 22, which requested a revised customary and traditional use determination in Unit 11 for black and brown bear for the rural residents of Chistochina, Chitina, Copper Center, Gakona, Gulkana, Mentasta, and Tazlina (FSB 1998:25). All of these communities are in Unit 13 situated on or near the border of Unit 11. In its review of Proposals 21 and 22, the Board noted that many black and brown bear harvests are incidental and that because Unit 12 residents have customary and traditional use determinations for other species (moose, caribou, and sheep) in Unit 11 north of the Sanford River, it would be consistent for residents of Unit 12 to also have a customary and traditional use determination for black and brown bear in Unit 11 north of the Sanford River, but not Unit 11 remainder (south of the Sanford River) (FSB 1998:214–216; 223–226).

To summarize, a review of the regulatory history and record indicates that the Board carefully reviewed the information provided in staff analyses, Council recommendations, and public comment and concluded that the uses of black and brown bear by residents of Unit 12 in Unit 11 remainder were not customary and traditional. However, the Board did not specifically discuss the uses of the residents residing along the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and Nabesna Road (mileposts 25–46). The Board looked at Unit 12 in a holistic manner and did not distinguish the pattern of use of the residents of the proposal area from the Upper Tanana region.

Community Characteristics

The settlement patterns of the Upper Tanana and Copper Basin areas are diverse; some residents live in "recognized" communities and many households are dispersed along the road system between communities (Cellarius 2010, pers. comm.). It is difficult to describe the community characteristics of Tok Cutoff Road (Mentasta Pass) and Nabesna Road because they are not communities per se. Neither are listed in the State of Alaska Division of Community and Regional Affairs community database. They are not census designated places (U.S. Census 2000). Additionally, it is difficult to determine harvest estimates based on the ADF&G harvest ticket data because residents can get their mail at one of several post offices in the area and their mailing address does not necessarily indicate where they actually live. [1]

Tok Cutoff Road or Mentasta Pass

For the purposes of this analysis, the area of milepost 79–110 was designated by the proponent because this segment of the road extends north from the boundary of Units 12 and 13. The Mentasta Pass area of the Tok Cutoff Road was described as "homesites along the Tok Cutoff from milepost 79–110" (McMillan and Cuccarese 1988:127; NPS 1995:323).

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 11 households in this area with an estimated population of 26 people (ADF&G 2010).[2] In 1987, these households harvested an estimated 187 pounds of subsistence resources per person or approximately 4,962 pounds for the Tok Cutoff Road area (ADF&G 2010). At the Fall 2009 EISRAC meeting, one member stated,

[1] For example: Nabesna Road residents are on a rural delivery route that have a Gakona Address and a Gakona zip code. The same zip code is also used to deliver mail to the Slana post office although mail for Slana has "Slana" on the address rather than "Gakona" (Cellarius 2010, pers. comm.).
[2] The Mentasta Pass or Tok Cutoff Road survey unit for the 1987 study was the area between mileposts 79–110 (McMillan and Cuccarese 1988: 127).

> *…the community around the Tok Cutoff, it is where I live, I know, but I can tell you that the surrounding area from Mentasta on the Tok Cutoff Road and Nabesna Road, we're like all one. We all kind of do the same thing. So I just wanted to align the people where we live (EISRAC 2009:322).*

No ADF&G Subsistence Division studies have been conducted on Mentasta Pass since 1987 and there is no specific census data for this area, thus it is unknown how many residents live in this area today nor is there new information on their subsistence uses.

Nabesna Road

For the purposes of this analysis, the area of milepost 25–46 was designated by the proponent because this segment of the road falls within Unit 12. Mileposts 1–24 of the Nabesna Road are in Unit 11.

Like Mentasta Pass, this area is primarily comprised of homesites along the Nabesna Road. Nabesna Road is a state maintained road, much of which is located in Wrangell-St. Elias National Park and Preserve. The road was constructed to access the Nabesna gold mine in the 1930s although the area was used traditionally by Upper Ahtna and Upper Tanana Athabascans and the road follows a historic route, also used by early homesteaders, between upper Ahtna and Upper Tanana territory (Stratton and Georgette 1984:155). Generally, when people refer to "Nabesna," they are referring to the end of the road where the mine was located. There are a number of localities along the road that are culturally significant, including the Ahtna Athabascan family settlement of Twin Lakes in the Unit 12 portion of the road and Batzulnetas (Ahtna) in Unit 11 (Cellarius 2010, pers. comm.; Reckord 1983:146–150).

In her early 1980s study on subsistence in Wrangell-St. Elias National Park, Reckord described the Nabesna Road area:

> *At Slana, a dirt road parallels the Copper River and its mass of arteries for 20 miles…to the Old Nabesna Mine…Approximately 10–12 families live along the road...most live in the area year round. At least seven of the families are involved principally in the guiding business (1983:269–270).*

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 13 households in this area with an estimated population of 37 people (ADF&G 2010)[3]. In 1987, these households harvested approximately 250 pounds of subsistence resources per person or 9,212 pounds total for the Nabesna Road study area (ADF&G 2010). No ADF&G Subsistence Division studies have been conducted on the Nabesna Road since 1987 and there is no specific census data for this area, thus it is unknown how many residents live in this area today nor is there new information on their subsistence uses.

Mentasta Lake

The proponent stated that the subsistence harvest patterns of the residents of the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and Nabesna Road (mileposts 25–46), both located in Unit 12, are similar to those of Mentasta Lake and Slana, both located in Unit 13. For this reason, the characteristics of these two communities are reviewed here.

[3] The "Nabesna Road" survey unit of the 1987 study was from mile 7 of the Nabesna Road to the end of the road at the Nabesna mine site, referred to as Nabesna (McMillan and Cuccarese 1988:132). Slana "is a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads (McMillan and Cuccarese 1988:142).

Not to be confused with Mentasta Pass, Mentasta Lake, also referred to as Mentasta, is a distinct community and a census designated place located in Unit 13. According to the Alaska Division of Community and Regional Affairs Community database, the current 2010 population is approximately 112 and it is located 6 miles off the Tok Cutoff Road on the west side of Mentasta Pass. Mentasta Lake is further described as "primarily Athabascan and subsistence activities are important…the families in Mentasta Lake come from Nabesna, Suslota, Slana and other villages with the area" (DCRA 2009). According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 25 households in this area with an approximate population of 77 people (ADF&G 2010). In 1987, these households harvested approximately 125 pounds of subsistence resources per person or a total community harvest of 9,672 pounds (ADF&G 2010). Mentasta Lake is situated on the northern border between the Ahtna Athabascan (Copper Basin) communities or territory and the Upper Tanana Athabascan communities or territory (Map in Haynes and Simeone 2007:9). This border also bisects the Nabesna Road as does the border between Units 11 and 12.

Slana

Slana, according to DCRA, has a current 2010 population of 107 people, "the community is comprised primarily of homesteaders…it stretches along the Nabesna Road" (to approximately mile 4) (DCRA 2009). Slana has also been described as "a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads (McMillan and Cuccarese 1988:142). According to ADF&G Subsistence Division surveys, conducted in 1987, there were approximately 25 households in this area with an approximate population of 57 people (ADF&G 2010). In 1987, these households harvested approximately 249 pounds of subsistence resources per person or a total community harvest of 14,185 pounds (ADF&G 2010).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses

that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

The Board previously determined that the residents of Unit 12 generally exhibit the eight factors for brown and black bears and has made positive customary and traditional use determinations for the residents of Unit 12—which includes the residents of the proposal area— for brown and black bears in Unit 12 and in Unit 11 north of the Sanford River. The question for this analysis is not whether a customary and traditional pattern of use of black or brown bears occurred, but rather whether or not the residents of the proposal area have a pattern of use harvesting brown and black bears in Unit 11 remainder as well. As such, it is a question of where the use occurs, not if the use occurs. Thus, a full analysis of the eight factors is not necessary because an analysis of the eight factors has been conducted previously in the analyses for Proposals WP98-21 and WP98-22 (EISRAC 1998, FWS 1998, and FSB 1998). The discussion of the eight factors in these analyses indicates that the residents of Unit 12 generally exhibit the eight factors for harvesting brown and black bears in Units 11 north of the Sanford River and in Unit 12 and the Board has recognized the customary and traditional uses of residents of Unit 12 for brown and black bears (FSB 1998). The Board's decision was based on the premise that the Unit 12 boundary is not only a boundary of management units, but also a boundary between Native cultures and harvest areas. Unit 12 residents, however, are not limited to Athabascan residents. In the early 1980s, Reckord noted:

> *Subsistence resources have played a major role in the history of white people in the Copper River Valley. From the very first visit of Russian-Aleut explorers in 1848 through the gold rush and mining period at the turn of the century and into the present, subsistence resources have contributed to the diet of the residents of the valley…Over the years an indigenous white culture developed which highly valued the use of subsistence foods such as moose, caribou, sheep and fish. At first some of the white settlers learned from the Native people; they were educated by young Natives in the local species and where these species could be taken…Contrary to the belief of some observers, the use of subsistence resources by white people in the region extends beyond mere recreation (1983:166).*

Further, Reckord described the Tok Cutoff area:

> *The people living along the Tok Cutoff often live several miles from their nearest neighbors. Small settlements are found at Gakona, Chistochina, and Mentasta (Lake). The Tok Cutoff people are often oriented to businesses serving the tourists and hunters who regularly travel this route between the Copper River Valley and the Alaska Highway. Homesteaders, retired people, and guides are also found living along the road. Some of these residents have lived here for 20 or 30 years and suddenly find the area developing around them…Most of the permanent residents along the Tok Cutoff utilize a number of subsistence species each year. Most people are oriented to the highway…It is obvious when talking to the Tok Cutoff residents that it is the bush lifestyle that has brought them to this place (1983:256–257).*

There is no new information on brown or black bear harvests for the areas under consideration in the current proposal. The ADF&G harvest ticket database was searched for harvest information for the proposal area, but the database does not accurately reflect harvests for the areas of consideration in this proposal because of the difficulties in identifying location of hunter residence by mailing address.

Residents in the proposal area get their mail in communities near the area, so there is no way to distinguish their harvests from others in these communities.

The proponent states that the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) share similar subsistence patterns with the residents of Slana and Mentasta, which are both in close proximity to the proposal area (**Map 1**). Mentasta Lake is located only 6 miles to the west of the Tok Cutoff Road. Slana is a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads. Slana is in Unit 13 on the border between Units 11 and 13 and close to the border of Unit 12. Mentasta Lake also is in Unit 13, but close to the border of Unit 12. The proposal area is in Unit 12. Mentasta Lake and Slana are both included in the positive customary and traditional use determinations for brown and black bear in Unit 11 remainder (see **Map 1).**

In her early 1980s study on subsistence in Wrangell-St. Elias National Park, Reckord described the Tok Cutoff area:

> *The people living along the Tok Cutoff often live several miles from their nearest neighbors…. The Tok Cutoff people are often oriented to businesses serving the tourists and hunters who regularly travel this route between the Copper River Valley and the Alaska Highway. Homesteaders, retired people, and guides are also found living along the road. Some of these residents have lived here for 20 or 30 years and suddenly find the area developing around them…Most of the permanent residents along the Tok Cutoff utilize a number of subsistence species each year. Most people are oriented to the highway…It is obvious when talking to the Tok Cutoff residents that it is the bush lifestyle that has brought them to this place (1983:256–257).*

In order to engage in subsistence activities in Wrangell-St. Elias National Park, the National Park Service requires that subsistence users live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have been issued a subsistence permit (36 CFR 13.440) by the park superintendent. The Tok Cutoff Road extends between Slana and Tok, which are resident zone communities, and the Nabesna Road extends between Slana and Nabesna, which also is a resident zone community. A designation by the National Park Service as a resident zone community indicates that the residents in these communities are recognized as having customary and traditional uses of the Wrangell-St. Elias National Park. Thus, the National Park Service recognizes Slana and Mentasta as resident zone communities and these communities are also including in the customary and traditional use determination for brown and black bears for all of Unit 11. The people living in proposal area in close proximity to Slana and Mentasta Lake should not be excluded from being eligible to hunt in the same areas that Slana and Mentasta Lake hunt in just because they live along a road and not in Slana or Mentasta Lake. Therefore, the residents of the proposal area should have the same customary and traditional use determinations as Slana and Mentasta.

Effects of the Proposal

If this proposal is adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would be able to harvest brown and black bear in Unit 11 remainder, similar to the communities closest to their area of residence, Mentasta Lake and Slana. Residents of the proposal area would still have to comply with National Park Service regulations for engaging in subsistence activities in Wrangell-St. Elias National Park, which requires that subsistence users live within the Park's resident zone or have been issued a subsistence permit (13.440 permit) by the park superintendent. The proposal area is not a resident zone community.

If this proposal is adopted, there would be minimal effects on nonsubsistence users because black and brown bear hunting in Unit 11 remainder includes National Preserve lands where nonrural residents may hunt under State of Alaska regulations.

If this proposal is adopted, no effects on black and brown bear populations are anticipated as it is not expected that black and brown bear harvests would increase substantially. There are only 24 households estimated to be in the areas under consideration.

If this proposal is not adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would not be able to harvest brown and black bear in the portion of Unit 11 remainder that is Park[4] land, however, they could request from the National Park Service individual customary and traditional use determinations for black and brown bear in this area.

If this proposal is not adopted, the residents of the proposal area would be able to continue harvesting brown and black bear in Unit 12 and in Unit 11 north of the Sanford River and for brown bear in Unit 20E where their customary and traditional uses are recognized. All rural residents may hunt black bear in Unit 13 and brown bear in Unit 20 remainder.

OSM CONCLUSION

Support Proposals WP10-29 and 30.

Justification

In 1997 and 1998, the Federal Subsistence Board addressed the customary and traditional use determinations for black and brown bear for Unit 12 residents. The Board determined that the residents of Unit 12 generally exhibit the eight factors for brown and black bears and made positive customary and traditional use determinations for the residents of Unit 12—which includes the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46)—for brown and black bear in Unit 11 north of the Sanford River. While the Board carefully reviewed the information provided in staff analyses, council recommendations, and public comment and concluded that the uses of black and brown bear by residents of Unit 12 in Unit 11 remainder were not customary and traditional, they did not specifically address the areas under consideration in this proposal, both in Unit 12. The residents of Unit 12 have customary and traditional use determinations for black and brown bear for Unit 11 north of the Sanford River (as well as moose, caribou) and for sheep in all of Unit 11 as well as other areas. The proponent states that the residents of the proposal area have subsistence use patterns more similar to those of Slana and Mentasta, which are in close proximity to the proposal area. Those people living along a road close to a community should be included in the customary and traditional use determinations of the closest community or communities.

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APPENDIX A: REGULATORY HISTORY

When the Federal Subsistence Board assumed management of subsistence wildlife resources on Federal public lands in 1990, it adopted State of Alaska customary and traditional use determinations. At the time, in Unit 11, there was a "no subsistence" determination for brown bear under State regulations and the determination for black bear was "no closed season" with a limit of three bears per year.

In the 1997–98 regulatory year, twenty-one Unit 11 customary and traditional use proposals for a wide variety of species were submitted to the Board. Many of these proposals included Units 11, 12, 13 and 20 (FWS 1997:36–261) The NPS conducted extensive research of the customary and traditional uses of the area for the Board. This research included interviews with residents, historic and ethnographic literature including kinship and trade routes, biological reports, planning documents and both subsistence survey and harvest ticket harvest data. The results of this research provided the basis for staff analyses of the numerous customary and traditional use proposals (NPS 1994 and 1995).

As noted by OSM staff in 1997 when reviewing the Unit 11 proposals:

> *...in this region the question of customary and traditional eligibility is made even more complex by the heterogeneity of the communities involved. And as was discussed this morning, the mobility of the people that live in this region, there is among both natives and non-Natives there is considerable variation in the length of residence in the communities and so it is important that we consider the composition of the communities in order to best give a customary and traditional use determination for the people that historically lived in a particular area or used a particular area for hunting...(*SCRAC 1997:75)

Most of the customary and traditional use determinations for Unit 11 have been divided into two areas: Unit 11 north of the Sanford River and Unit 11 remainder (**see Unit 11 Map**).

The division of Unit 11 into two portions, "north of the Sanford River" and Unit 11 "remainder" was a major aspect of the customary and traditional use determinations for Units 11, 12, 13 and 20 in 1997. The 1997 proposal analyses illustrate that this boundary was based on detailed examinations of customary and traditional uses which indicated that when Unit 12 residents harvested subsistence resources in Unit 11, these harvests occurred north of the Sanford River (SCSRAC 1997a:78; FSB 1997:43, 45–46, 53, 68–71, 74; (SCRAC 1998:65) and that much of this use, in addition to the uses of the non-Native residents of the area, was determined by the boundary, agreements and kinship ties between Upper Tanana and Ahtna Athabascan communities (FWS 1997:36–261; FSB 1997, see Haynes and Simeone 2007:9).

The Sanford River was chosen as a geographic boundary that was easily recognizable. It has a steep canyon and people who know the area know where it is located (Rabinowitch 2010, pers. comm.). In some cases, harvest areas did not extend as far south as the Sanford River, however in an attempt to simplify the boundaries, it became the designated line (SCSRACb 1997:141; FSB 1997:43, 45–46, 53, 68–71, 74).

Residents of Unit 12 have positive customary and traditional use determinations in Unit 11 north of the Sanford River for most large land mammals: black and brown bear, caribou, moose and sheep. The residents of Unit 12 do not have a positive customary and traditional use determination for these species in the Unit 11 remainder. There is, however, one exception. Some residents of Unit 12 have a positive customary and traditional use determination for sheep in Unit 11 remainder. These are the Unit 12 residents who live on the Tok Cutoff Road (mileposts 79–110 Mentasta Pass) and Nabesna Road (mileposts

25–46). The first part of the Nabesna Road, mileposts 0–25, is in Unit 11. This customary and traditional use determination for sheep in the remainder of Unit 11 for specific residents of Unit 12 is from the State of Alaska customary and traditional use determinations adopted by the Federal Board in 1990. From testimony provided at the 1997 Board meeting, it appears this may be the only place in the region where abundant sheep populations are accessible to subsistence harvesters (FSB 1997:64–65).

Among the many 1997 proposals, there was a proposal for customary and traditional use of brown bear for rural residents of Unit 12 in Unit 11. There was probably no need for a proposal for black bear because the liberal State regulations "no closed season, three bears per year" had been adopted by the Federal program. The SCSRAC opposed[5] and the EIRSAC supported the proposal (FWS 1997:36; EIRAC 1997:226; SCRAC 1997:72–73). The Board supported the aspects of recommendations from both Councils for their "respective regions" (FSB 1997:33). The Board rejected the portion of the proposal for Units 11 and 13 in accordance with the SCSRAC recommendation and adopted the EISRAC recommendation with modification to recognize the customary and traditional use of brown bear in Units 12 and 20E by residents of Unit 12 and Dot Lake (FSB 1997:33, 38, 40–41). Thus, residents of Unit 12 did not obtain a customary and traditional use determination for brown bear in Unit 11.

In the 1998–99 regulatory year, six Unit 11 customary and traditional use proposals were submitted to the Board. Proposals 21 and 22 requested a revised customary and traditional use determination for in Unit 11 black and brown bear for the rural residents of Chistochina, Chitina, Copper Center, Gakona, Gulkana, Mentasta, and Tazlina (FSB 1998:25). All of these communities are in Unit 13 situated on or near the border of Unit 11. The EISRAC and the SCSRAC both supported the proposals with modification.

For Proposal 21 (black bear) the EISRAC requested the addition of residents of Unit 11 and residents of adjacent subunits in Region 9 (Unit 12) (FWS 1998:25, 47). The SCSRAC requested the addition of residents of Glennallen, Tonsina, Kenny Lake and Unit 11 (FWS 1998:25). One Southcentral council member stated that "I don't think they should be able to come in and hunt in Unit 11 because that is traditional Ahtna territory but portions of Unit 12 and the upper northern part [of Unit 12], that is their historical hunting area (SCSRAC 1998:65)March 18, 1998 page 65). A member of the Upper Tanana/Fortymile Advisory Committee responded "…last year when some of the C&Ts were established for Unit 12 residents, most of the designations have been set north of the Sanford River. And…I'm relatively certain that Upper Tanana residents are willing to look at that as a boundary line for their usage. Certainly most of the people that did use that resource did it in that particular area" (SCSRAC 1998:65). Federal staff noted that there was no information provided which indicated harvest of black bear in Unit 11 by Unit 12 residents (FSB 1998:212). However, the Board noted that many bear harvests are incidental and that because Unit 12 residents have customary and traditional use determinations for other species (moose, caribou, and sheep) in Unit 11 north of the Sanford River, it would be consistent for residents of Unit 12 to also have a customary and traditional use determination for black bear in Unit 11 north of the Sanford River (FSB 1998:214–216).

For Proposal 22 (brown bear) the EISRAC requested the addition of the adjacent subunits of Region 9 (Unit 12) (FWS 1998:47). The SCSRAC recommended recognizing customary and traditional use of brown bear for the same communities as black bear (FWS 1998:47, SCRAC 1998:82–84). For the same reasons as above, the Board voted to adopt the SCSRAC recommendation with modification to include residents of Unit 12 in that portion of Unit 11 north of the Sanford River (FSB 1998:223–226).

[5] The Council also noted that this proposal would establish a subsistence priority for residents of units outside of Unit 11 who did not at the time have subsistence priority for brown bear in their units of residence (SCRAC 1997: 73).

REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-29/30. The Council determined that communities located along the road system generally exhibited the same use patterns of other adjacent communities. These communities should have the same customary and traditional use determination as the adjacent communities.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-29/30. Recommendations from Wrangell-St. Elias NP Subsistence Resource Commission, comments from the Ahtna Community, and the OSM staff analysis supported a positive customary and traditional use for brown and black bears in Unit 11 remainder for some rural residents of Unit 12. No conservation concerns exist for the brown and black bear population in Unit 11 remainder.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-29/30

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-29/30
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-29 and WP10-30: These proposals, submitted by the Wrangell-St. Elias Subsistence Resource Commission, request a positive customary and traditional use determination for brown bear and black bear in the Unit 11 remainder area for some rural residents of Unit 12: Tok Cutoff road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46).

Customary and Traditional Determination: Ahtna have a long pattern of use of black and brown bear, and there is sufficient ethnographic support for a positive customary and traditional use determination by the residents of these areas. The federal staff analysis cites most of the major references and provides substantial evidence of historic use and contemporary patterns of use of these populations by these residents, as required by the federal regulations for a positive customary and traditional use finding.

Recommendation: Support.

WRITTEN PUBLIC COMMENTS

Support Proposals WP10-29/30 consistent with the justification for the OSM Conclusion along with public comments presented at the SRC meeting.

Wrangell-St. Elias National Park Subsistence Resource Commission

Support Proposals WP10-29/30. We support WP10-29/30 to grant C&T determination for brown and black bear in Unit 11 remainder to include "To Cutoff Road (mileposts 79-110 Mentasta Pass) and Nebesna Road (mileposts 25–46)." Few residents live along this road area , and they meet the C&T determination criteria.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-31 Executive Summary	
General Description	Proposal WP10-31 requests an individual customary and traditional use determination for moose and caribou in Unit 13E. In areas managed by the National Park Service where subsistence uses are allowed, customary and traditional use determinations may be made on an individual basis. *Submitted by Kevin Mayo of Healy*
Proposed Regulation	**Federal Regulation Regarding Individual Customary and Traditional Use Determinations for National Parks and Monuments** *§__.16 Customary and traditional use process* *(a) The Board shall determine which fish stocks and wildlife populations that have been customarily and traditionally used for subsistence. These determinations shall identify the specific community's or area's use of specific fish stocks and wildlife populations. For areas managed by the national Park Service, where subsistence uses are allowed, the determinations may be made on an individual basis.* **Customary and Traditional Use Determination** **Unit 13E—Moose** *Rural residents of Unit 13, Chickaloon, McKinley Village, Slana and the area between mileposts 216–239 of the Parks Highway* ***and Kevin Mayo****. No Federal subsistence priority for the residents of Denali national park headquarters.* **Unit 13E—Caribou** *Rural residents of Units 11, 12, (along the Nabesna Road), 12, Chickaloon, McKinley Village, and the area between mileposts 216–239 of the Parks Highway* ***and Kevin Mayo****. No subsistence priority for the residents of Denali National Park headquarters.* *Note: Names of individuals do not appear in regulation booklets, they are on a list maintained by the respective National Park Service subsistence manager.
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**

continued on next page

WP10-31 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**Oppose**

STAFF ANALYSIS
WP10-31

ISSUES

Proposal WP10-31, submitted by Kevin Mayo of Healy, requests an individual customary and traditional use determination for moose and caribou in Unit 13E. In areas managed by the National Park Service where subsistence uses are allowed, customary and traditional use determinations may be made on an individual basis.

DISCUSSION

The proponent has described a history of customary and traditional use of moose and caribou in Unit 13E of Denali National Park. Mr. Mayo holds a National Park Service subsistence use permit (13.440 permit, CFR 36).[1] Mr. Mayo and his family are originally from Cantwell, which is a resident zone community of Denali National Park, however, Mr. Mayo and his immediate family moved to Healy. Although Healy is a rural community, the residents of Healy do not have a positive customary and traditional use determination for moose or caribou in the Park. As a result, Mr. Mayo is unable to harvest moose and caribou in the Park because of his residency in Healy. However, National Park Service regulations (NPSa 2010:3) allow people with a 13.440 permit who live in a community without a customary and traditional use determination for the species they wish to hunt to submit a proposal to the Federal Subsistence Board for an individual customary and traditional use determination. Federal subsistence regulations allow the Board to make individual customary and traditional use determinations in National Park and Monument areas, but not in Preserve areas.

National Park Service regulations include unique subsistence eligibility requirements for National Park Service lands. Fewer people have subsistence eligibility in National Park Service areas than other Federal public lands. Requests for individual customary and traditional use determinations are analyzed in the same way that a community or area request for a customary and traditional use determination is analyzed (FSB 1999:224). Subsistence harvests are authorized only in the ANILCA additions to Denali National Park.

Existing Federal Regulation

Federal Regulation Regarding Individual Customary and Traditional Use determinations for National Parks and Monuments

§__.16 Customary and traditional use process

(a) The Board shall determine which fish stocks and wildlife populations that have been customarily and traditionally used for subsistence. These determinations shall identify the specific community's or area's use of specific fish stocks and wildlife populations. For areas

[1] Individuals residing outside of Denali National Park and Preserve's resident zone communities who have a personal or family history of using the Park additions established by ANILCA in 1980 for subsistence purposes at the time ANILCA was passed, may obtain a special subsistence use permit (36 CFR 13.440). They must provide documentation of their traditional subsistence use, without the use of aircraft for access. Eligible subsistence users for Denali National Park and Preserve must also comply with the Federal Subsistence Management Regulations regarding the harvest of fish and wildlife (NPSb 2010).

managed by the national Park Service, where subsistence uses are allowed, the determinations may be made on an individual basis.

Customary and Traditional Use Determination

Unit 13E—Moose

Rural residents of Unit 13, Chickaloon, McKinley Village, Slana and the area between mileposts 216–239 of the Parks Highway. No Federal subsistence priority for the residents of Denali national park headquarters

Unit 13E—Caribou

Rural residents of Units 11, 12, (along the Nabesna Road), 12, Chickaloon, McKinley Village, and the area between mileposts 216–239 of the Parks Highway. No subsistence priority for the residents of Denali National Park headquarters.

Proposed Federal Regulation

Federal Regulation Regarding Individual Customary and Traditional Use Determinations for National Parks and Monuments

§__.16 Customary and traditional use process

(a) The Board shall determine which fish stocks and wildlife populations that have been customarily and traditionally used for subsistence. These determinations shall identify the specific community's or area's use of specific fish stocks and wildlife populations. For areas managed by the national Park Service, where subsistence uses are allowed, the determinations may be made on an individual basis.

Customary and Traditional Use Determination

Unit 13E—Moose

Rural residents of Unit 13, Chickaloon, McKinley Village, Slana and the area between mileposts 216–239 of the Parks Highway ***and Kevin Mayo***[2]*. No Federal subsistence priority for the residents of Denali national park headquarters.*

Unit 13E—Caribou

Rural residents of Units 11, 12, (along the Nabesna Road), 12, Chickaloon, McKinley Village, and the area between mileposts 216–239 of the Parks Highway ***and Kevin Mayo****. No subsistence priority for the residents of Denali National Park headquarters.*

[2] Names of individuals do not appear in regulation booklets, they are on a list maintained by the respective National Park Service subsistence manager.

Other Relevant Federal/National Park Service Subsistence Regulations

Federal Regulation Regarding Individual Customary and Traditional Use Determinations for National Parks and Monuments

36CFR§ 13.41 Applicability.

Subsistence uses by local rural residents are allowed pursuant to the regulations of this Subpart in the following park areas:

(a) In national preserves;

(b) In Cape Krusenstern National Monument and Kobuk Valley National Park;

(c) Where such uses are traditional (as may be further designated for each park or monument in Subpart C of this part) in Aniakchak National Monument, Gates of the Arctic National Park, Lake Clark National Park, Wrangell-St. Elias National Park, and the Denali National Park addition.

36CFR§ 13.440 Subsistence permits for persons whose primary, permanent home is outside a resident zone.

(a) Any rural resident whose primary, permanent home is outside the boundaries of a resident zone of a national park or monument may apply to the appropriate Superintendent pursuant to the procedures set forth in Sec. 13.51 for a subsistence permit authorizing the permit applicant to engage in subsistence uses within the national park or monument. The Superintendent shall grant the permit if the permit applicant demonstrates that,

(1) Without using aircraft as a means of access for purposes of taking fish and wildlife for subsistence uses, the applicant has (or is a member of a family which has) customarily and traditionally engaged in subsistence uses within a national park or monument; or

(2) The applicant is a local rural resident within a resident zone for another national park or monument, or meets the requirements of paragraph (a)(1) of this section for another national park or monument, and there exists a pattern of subsistence uses (without use of an aircraft as a means of access for purposes of taking fish and wildlife for subsistence uses) between the national park or monument previously utilized by the permit applicant and the national park or monument for which the permit applicant seeks a subsistence permit.

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 19% of Unit 13 E, and are managed by the National Park Service, Denali National Park.

Regulatory History

Requests for individual customary and traditional use determinations began almost as soon as the Federal Subsistence Board assumed management authority for subsistence on Federal public lands in 1990. Because of the proximity of the Parks Highway to Denali National Park, many of the first requests came from residents of this area (Norris 2002:229). Cantwell is the only resident zone community on the

highway, yet many people who live along the highway outside of Cantwell also participate in subsistence hunting in the Park (Norris 2002:229). Many of the initial individual customary and traditional use proposals were held up for years because of a huge backlog of proposals for community customary and traditional use determinations and lack of clarity as to whether or not individual customary and traditional use determinations were within the purview of the Federal Subsistence Board (Norris 2002: 229–232. In 1999, the Board finally addressed several proposals for individual customary and traditional use determinations. Later in 1999 the Board recognized one individual customary and traditional use determination for Denali National Park and several from Wrangell St. Elias National Park (Norris 2002:232, FSB 1999:222–243). The Board also denied some of these proposals due to lack of sufficient information exemplifying the eight factors Norris 2002:232; FSB 1999: 222–243).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

The following information regarding Kevin Mayo's subsistence uses in Denali National Park and Preserve were derived from personal communication with Mr. Mayo (2009 pers. comm.).

The Mayo extended families have depended upon moose and caribou in the Cantwell area as their primary sources of sustenance for four generations and have regularly and consistently hunted in Unit 13 for 45 years. Mr. Mayo's great grandfather, Alywn Smith, came to Alaska in 1937 on a steamship, initially settled in Anchorage, left the state during World War II, and then returned to Anchorage after the war. In 1964 he moved to Cantwell, married into a local Native family (Nellie Norton, sister of Bud Carlson [residents of Cantwell]). Soon after he arrived in Cantwell he began hunting and trapping on a

regular basis in the Cantwell Creek area. Mr. Mayo's maternal grandfather, Herman Cotter Sr. first arrived in Alaska in 1947 and initially lived in Anchorage and then moved to Cantwell in 1964. Prior to moving to Cantwell, Herman was a subsistence hunter and trapper in the Wrangell St. Elias area. Immediately after arriving in Cantwell, Herman, his brothers, and his father formed a corporation and bought the town of Cantwell. Herman continued his subsistence hunting, fishing, and trapping activities within the boundary of what is now the boundary of the ANILCA addition to Denali Park in Unit 13E. Mr. Mayo's mother, Vivian Cotter Mayo, was born in Anchorage and moved to Cantwell in 1965. In 1970 Vivian's husband, Scott Mayo, moved to Cantwell to work with the railroad. Since 1964, multiple generations of his extended family have lived in Cantwell and harvested caribou, moose, firewood, fish, and berries in the ANILCA addition.

Mr. Mayo and his extended family continue to hunt moose together every hunting season in the Cantwell Creek and Foggy Pass area. The Mayo family's camp is on state land near Cantwell Creek and the Foggy Pass area in Unit 13E right at the border of the ANILCA addition to the Park. Their traditional harvest area is within the ANILCA addition. Mr. Mayo began to hunt moose when he was fourteen years old and continues to hunt with his father, brother, and extended family. Mr. Mayo was an eligible subsistence user who resided in Cantwell (a Denali National Park resident zone community) his entire life prior to moving to Healy (Unit 20A) in 2004 where he and his family continue to reside. He is applying for an individual customary and traditional use determination because Healy does not have a customary and traditional use determination for moose and caribou in the ANILCA addition of Denali National Park.

Prior to 2004, with the exception of 2001–2002, Mr. Mayo routinely received Federal subsistence moose and caribou permits for Unit 13E. Mr. Mayo did not apply for a permit hunt in 2001–2002 because he was in Arizona for three months of training. Although Mr. Mayo currently is not qualified for a Federal subsistence moose or caribou permit because he resides in Healy, which has no customary and traditional use determination for moose or caribou, he continues to actively participate in his family's moose and caribou hunting traditions by helping with the butchering, packing, and processing of the moose and caribou.

The Mayo extended family travels to their hunting area to hunt moose and caribou by foot, tracked vehicles and off-road vehicles (ORV). The Mayo's have not used airplanes for hunting. The Mayo family continues a recurring pattern of use within the area using traditional methods and means which are characterized by efficiency and economy of effort. According to Mr. Mayo, one of the main benefits of tracked vehicle and a trailer is that the Mayo family can haul all their family and gear to camp in one load. Once the family sets up their camp, they walk about two miles to a hill where they sit and spot for a moose with binoculars. Once they spot moose, they walk to within shooting distance of the moose. After they shoot the moose or caribou (generally located within the ANILCA Park addition), the moose or caribou are gutted, skinned, and quartered in the field and then packed by foot to a designated ORV trail and transported by tracked vehicle to camp. Once at camp, they hang sections of meat from a meat pole and cover it with a tarp. The Mayo's use all edible parts of the animal. Much of the meat is canned or stored in the freezer and some portions of the moose dried. Mr. Mayo uses handling techniques that he was taught by his father, grandfather, and great grandfather.

The most recent generation of the Mayo family has hunted in the area since 1971 and established their current camp in 1985. In the past, the Mayo family used to put their tent up and take it down after every hunting season. Recently they built a tent platform. Generally the extended family prefers to hunt close to their camp. If they hunt a distance from camp it is difficult to salvage the moose or caribou and the likelihood of bears getting into the moose/caribou meat increases. The family enjoys the social aspects related to spending extended time at hunting camp.

One moose will feed three families. The Mayo family targets moose that have antler spreads greater than 50 inches and avoid harvesting moose that are smaller than 50 inches because they do think there is not enough meat on the smaller moose.

Knowledge, skills, and the use of particular hunting areas are passed from generation to generation. Mr. Mayo's grandparents learned how to hunt in the Cantwell area and passed this knowledge on to their descendants. Before he shot his first moose, Mr. Mayo accompanied his father, mother, and other relatives on moose hunts, long before he was actually old enough to hunt himself. Mr. Mayo continues to harvest moose and caribou with his family thereby passing these skills to his children. Hunting, trapping, berry picking, and fishing are significant resources upon which the Mayo family depend. Moose and caribou hunting is a family event, participated and shared by all the family members within and between households and generations.

It is the Mayo's family custom to share moose/caribou and equipment. If a family member or friend does not get enough meat for the season it is expected that the Mayo family will share their harvest with that person or household. For example, Mr. Mayo's mother shares moose/caribou meat with her sister, mother, and Cantwell elders.

Mr. Mayo's great-grandparents passed down their traditional subsistence lifestyle to their extended multi-generational family. Typically the extended family harvests one moose per hunting season or two caribou each season. Wild food is on the table at least four days per week. The Mayo family enjoys eating moose and caribou meat because it is healthful and fall moose and caribou hunting is a family tradition.

Moose and caribou were and continue to be the Mayo families' primary source of meat. The family harvests a variety of subsistence resources such as berries, bear, ptarmigan, fish and furbearers including beaver, marten, fox, wolf, and lynx. These resources fulfill the social and nutritional needs of the family. Moose and caribou hunting are a significant social and family effort.

Effects of the Proposal

If adopted, this proposal would recognize Mr. Mayo's customary and traditional uses of moose and caribou in Unit 13E and would allow Mr. Mayo to pass his traditional subsistence lifestyle to his children. Because this customary and traditional use determination is for one individual who has a history of moose and caribou harvests in this area, the effects on other users and on moose and caribou would be minimal.

OSM CONCLUSION

Support Proposal WP10-31.

Justification

Mr. Mayo possesses a National Park Service subsistence use permit (13.440 permit) for Denali National Park. Mr. Mayo provided information regarding his family's customary and traditional use of moose and caribou that exemplify the eight factors for customary and traditional use determinations.

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National Park Service. 2010a. Subsistence Users Guide. Wrangell St. Elias National Park and Preserve. http://www.nps.gov/wrst/historyculture/upload/Subsistence%20brochure.pdf Retrieved January 6, 2010.

National Park Service. 2010b. Subsistence Users Guide. Denali National Park and Preserve. http://www.nps.gov/dena/parkmgmt/eligibility.htm Retrieved January 6, 2010.

Norris, Frank. 2002. Alaska Subsistence, A National Park Service Management History. U.S. Department of the Interior. National Park Service. Anchorage, AK.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-31. The proponent demonstrated a customary and traditional pattern of use for moose and caribou in Unit 13E based on NPS documentation and the staff analysis presented in support of the request.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-31

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-31: This proposal, submitted by Kevin Mayo of Healy, requests an individual customary and traditional use determination for moose and caribou in Unit 13E. In areas managed by the National Park Service where subsistence uses are allowed, customary and traditional use determinations may be made on an individual basis.

Customary and Traditional Use Determination: There is a positive customary and traditional finding for the subsistence use of moose and caribou in Unit 13E. The proposer lived in a resident zone community that had a positive customary and traditional determination but subsequently moved to a location that is not within a community that has a positive customary and traditional determination. The individual demonstrated a long term use of these animals and documented fulfilling other factors of the eight factors in federal regulations for customary and traditional determinations. The individual provided sufficient documentation to hold a National Park Service permit under 36 CFR 13.440 and, under park regulations, must comply with federal subsistence regulations to harvest fish and wildlife in the park additions to Denali National Park and Preserve.

Concerns: Although the Federal Board may make customary and traditional determinations (§__.16(a)) on an individual basis, it is not at all apparent why this individual needed to subject himself to this additional layer of scrutiny by the public, the regional advisory council, and the federal agencies when he already was fully permitted to harvest under National Park Service permit and federal subsistence regulations in the ANILCA park addition. The Department suggests this is unnecessary bureaucracy in that it is a redundant exercise, both time-consuming and expensive for staff and the individual. Unless there is more to this authorization than meets the eye, the Department suggests that Office of Subsistence Management review procedures and consider adoption of procedural steps or instructions so that individuals already authorized by 13.440 permits do not need to revisit their qualifications through the federal board process.

A number of questions arose in evaluating the federal staff analysis. For example:

- What would happen if the Regional Advisory Council or federal staff did not support this positive finding but the individual did have a 13.440 permit—would the Service then revoke it?
- The federal analysis states: "*If adopted, this proposal . . . would allow Mr. Mayo to pass his traditional subsistence lifestyle to his children.*" Would the children qualify under the Federal Board determination in the future to hunt in the park additions?
- If so, would they then also need to go through the Federal Board process for a positive determination?
- Will the children qualify for a 13.440 permit from the Service regardless of Federal Board action or as a result of Federal Board action?

Recommendation: Support.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-31. We oppose WP10-31 to grant an individual C&T determination for moose and caribou in Unit 13E to the Kevin Mayo family. We do not support individual C&T determination. We oppose individual C&T determination because in our opinion, they to not meet the criteria of the customary and traditional use determination of resources.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-32a Executive Summary		
General Description	Proposal WP10-32 requests a positive customary and traditional use determination for Hope and Sunrise for caribou in Unit 7 as well as season and harvest limits. The customary and traditional portion of the proposal is addressed in this analysis for Proposal WP10-32a and the season and harvest limit portion is addressed in the analysis for Proposal WP10-32b. *Submitted by Paul Genne and Dennis Ressler*	
Proposed Regulation	**Unit 7—Caribou** *Unit 7*	**Customary and Traditional Use Determination** ***Residents of Hope and Sunrise.***
OSM Conclusion	**Support**	
Southcentral Regional Council Recommendation	**Support**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Oppose/Neutral**	
Written Public Comments	**None**	

STAFF ANALYSIS
WP10-32a

ISSUES

Proposal WP10-32, submitted by Paul Genne and Dennis Ressler, requests a positive customary and traditional use determination for Hope and Sunrise for caribou in Unit 7 as well as season and harvest limits. The customary and traditional portion of the proposal is addressed in this analysis for Proposal WP10-32a and the season and harvest limit portion is addressed in the analysis for Proposal WP10-32b.

DISCUSSION

The proponent is requesting a positive customary and traditional use determination for caribou in Unit 7 for Hope and Sunrise residents because it would re-establish the customary and traditional use of this resource for the residents of Hope and Sunrise (**Map 1**). Based on historical reports, caribou were relatively abundant on the Kenai Peninsula prior to the late 1800s (Porter 1893, Sherwood 1974). Large forest fires on the Peninsula in the late 1800s, including a massive fire in 1883, destroyed a significant amount of caribou habitat and contributed to a decline in the Kenai Peninsula caribou population (Leopold and Darling 1953; Sherwood 1974). It is thought that caribou were extirpated on the Kenai Peninsula by about 1912 (Lutz 1956). The Kenai Mountains Caribou Herd in Unit 7 was derived from reintroductions of caribou on the Kenai Peninsula in 1965 and 1966. The State has had a caribou hunt in Unit 7 since 1972. The State's Kenai Mountains Caribou Hunt is a drawing hunt, which is available to all Alaska residents and nonresidents (including non-US residents). For more details on the history of caribou in Unit 7, see the analysis for Proposal WP10-32b.

Existing Federal Regulations

Unit 7—Caribou	**Customary and Traditional Use Determination**
Unit 7	*No Federal subsistence priority.*

Proposed Federal Regulations

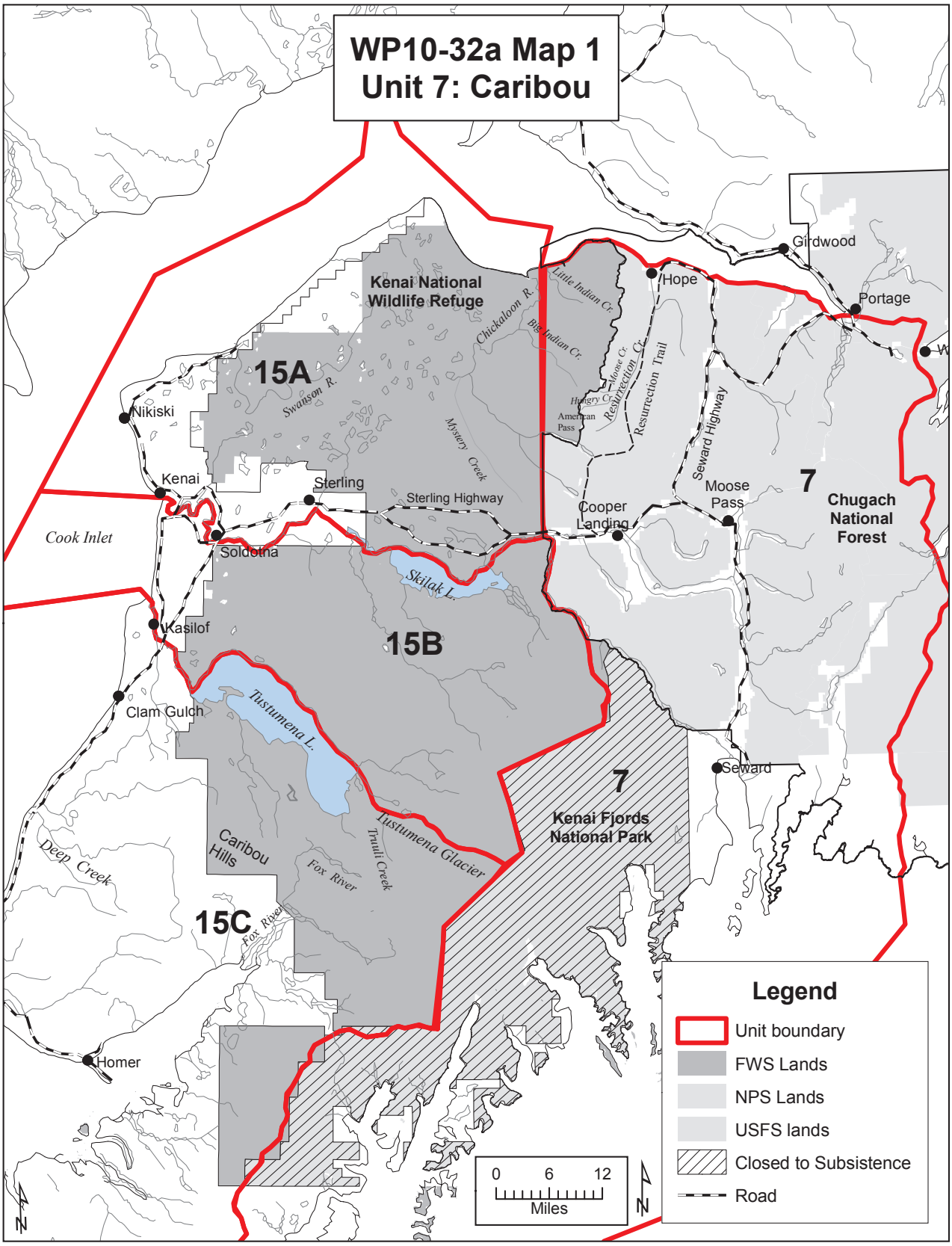
Unit 7—Caribou	**Customary and Traditional Use Determination**
Unit 7	***Residents of Hope and Sunrise.***

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are comprised of Federal public lands, consisting of 50% Chugach National Forest lands managed by the U.S. Forest Service (USFS), 23% Kenai Fjords National Park lands managed by the National Park Service, and 5% of lands managed by the Kenai National Wildlife Refuge (NWR). The Kenai Fjords National Park lands are not open to subsistence uses (see **Map 1**).

Regulatory History

The Federal Subsistence Board (Board) has addressed customary and traditional use determinations for the Kenai Peninsula since the inception of the Federal Subsistence Management Program in 1990. The


WP10-32a Map 1
Unit 7: Caribou
Kenai National Wildlife Refuge
15A
Swanson R.
Chickaloon R.
Little Indian Cr.
Big Indian Cr.
Hope
Girdwood
Portage
Moose Cr.
Resurrection Cr.
Resurrection Trail
Hungry Cr.
American Pass
Seward Highway
Mystery Creek
Nikiski
Kenai
Sterling
Sterling Highway
Cooper Landing
Moose Pass
7
Chugach National Forest
Cook Inlet
Soldotna
Skilak L.
Kasilof
15B
Clam Gulch
Tustumena L.
Seward
7
Kenai Fjords National Park
Tustumena Glacier
Caribou Hills
Fox River
Truuli Creek
Deep Creek
15C
Fox River
Homer
Legend
Unit boundary
FWS Lands
NPS Lands
USFS lands
Closed to Subsistence
Road
0 6 12
Miles
N

Board adopted the State's customary and traditional use determinations in 1990. At that time the State determined the road-connected portion of the Kenai Peninsula—which is most of Units 7 and 15—to be a nonsubsistence area. As a result of the State's nonsubsistence area, the Federal Board then determined that all wildlife resources in Units 7 and 15 had a "no Federal subsistence priority" customary and traditional use determination. For a summary of the regulatory history, see **Appendix A**. While the Board has revisited a number of its determinations on the Kenai Peninsula, this is the first time that a proposal has been submitted for the Board's consideration to change the "no Federal subsistence priority" for Unit 7 for caribou.

The request in Proposal WP10-32a is the first request from Hope residents to include Hope in any of the customary and traditional use determinations. The Board has recognized the use of "all fish" in the Federal public waters of the Kenai River Area partially located within Unit 7 by residents of Hope, but this was through an analysis of a request for a customary and traditional use determination for the entire Kenai Peninsula.

Reintroduced and Introduced Species: The Board has recognized the customary and traditional uses of reintroduced species, for example, muskoxen in Units 22, 23, and 26. Elk and deer were introduced in Unit 3 and the Board has recognized customary and traditional uses for these species in Unit 3. Deer were introduced in Unit 8 and the Board has recognized customary and traditional uses of the species in Unit 8. Moose were introduced near Cordova in Unit 6 and the Board has recognized customary and traditional uses of this species as well.

Community Characteristics

Hope is a small, unincorporated community located in Unit 7 within the Kenai Peninsula Borough with an estimated permanent year-round population of 148 in 2008 (ADCRA 2008). The community of Hope, originally called "Hope City," was established as a mining camp for Resurrection Creek in 1896. The Hope post office began operating in 1897 (DCRA 2008). Hope is located on the northern end of the Kenai Peninsula, on the southshore of the Turnagain Arm of Cook Inlet, 86 miles by road from Anchorage to the north and 103 miles from Kenai to the South (Map 1). The community is within the Chugach National Forest and is the northern terminus of the popular Resurrection Trail. Almost half (48%) of the houses in Hope are vacation houses or cabins. There is one school with eleven students. The school and local businesses are the only employment. Hope is recognized as a rural community by the Federal Subsistence Board.

Sunrise is only seven miles from Hope and had a year-round population of 22 in 2008 (**Map 1**). Sunrise is a census designated place and has very little in the way of a community and is considered a "subcommunity" of Hope. Sunrise was established on Sixmile Creek and was the dominant community during the early part of the 20th century, but the population declined and had no residents in 1940 (Barry 1973). Gradually people have moved into Sunrise since the 1940s, but the population continues to be small. There are no schools, businesses, and government organizations. Any children in Sunrise would attend school in Hope; Sunrise residents receive their mail in Hope. Because of the close proximity of Sunrise to Hope and the interconnectedness between the two communities, Sunrise is considered a part of Hope for this analysis. All references in this analysis to Hope's uses of caribou include Sunrise.

Dena'ina Athabascans inhabited the Kenai Peninsula long before the miners arrived. At the turn of the 20th century about half of Hope's residents were Alaska Native (Mishler 1985). The Dena'ina also had settlements at the mouth of the Resurrection River and one at Chickaloon Bay. Once the miners moved in, the Dena'ina communities declined due to out-migration and mortality from disease (Barry 1973). Some of the Dena'ina moved to Point Possession, another Athabascan community, 30 miles to the west.

The inhabitants of Point Possession were decimated by the flu epidemic of 1918 and the community never recovered (Holmes 1985).

Hope became connected by road to Seward in 1951 (Buzzell and McMahan 1986). This road system greatly enhanced the opportunity for tourists and seasonal residents to enjoy the wildlife, scenery, and sport fishing available in the Hope area.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or seasonal restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

Existing information indicates that Hope residents traditionally harvested the resources available to them. Hunting, fishing, trading, bartering, and trapping of resources were important activities for the early residents of Hope (Barry 1973) and continued to be an important part of Hope residents' lifestyle into the 1950s (Seitz et al. 1992). Caribou were harvested by the early inhabitants of the Kenai Peninsula (de Laguna 1975, Buzzell and McMahon 1986). Osgood (1976) [1937] discusses the use of caribou among the Dena'ina in general, and Ackerman (1975) mentions the use of caribou by the Kenaitze Tribe specifically. Pedersen (1983) discusses the use of caribou in the beginning of the 1900s. Seitz et al. (1994) documents the contemporary use of caribou by Hope residents.

Caribou existed on the Kenai Peninsula until the early 1900s. The last known sighting of caribou during that period was about 1912 in the Caribou Hills, about 80 miles south of Hope (Staller 2010, pers. comm.). Hope residents were unable to harvest caribou in Unit 7 after they were extirpated on the Kenai Peninsula about 1912 (Lutz 1956). This interruption was "beyond the control of the community" (factor

1 of the eight factors for determining customary and traditional uses). Today there are four small herds which are the result of reintroductions in 1965 to 1966 and 1985 to 1986. The Kenai Mountains Caribou Herd normally ranges in the area drained by the Chickaloon River, Big Indian Creek, and Resurrection Creek in Unit 7 (FWS 1993:25). The contemporary harvest of caribou is dictated by regulations and restrictions. Hope residents have harvested caribou in small numbers as a result of the limited harvest opportunities on the Kenai Mountains Caribou Herd since its reintroduction in the mid-1960s. The first hunting season occurred in 1972 and a State season has occurred every year since. Since 1977, ADF&G has managed the hunt using a limited drawing permit system that has been open to residents as well as nonresidents (McDonough 2007). Generally there have been few permits available for a large number of people applying for permits, with a 10 to 12% chance of drawing a permit in recent years (see Proposal WP10-32b for a discussion of harvest permit history).

The Alaska Department of Fish and Game does not have data on the number of caribou harvested by Hope residents from 1972 through 1981, however, a Hope resident reported that he and other Hope residents harvested caribou from the Kenai Mountains Caribou Herd in Unit 7 between 1972 and 1982 (Marrs 2009, pers. comm.). From 1981 through 2009, Hope residents applied 204 times for permits to harvest caribou from the Kenai Mountains Caribou Herd in Unit 7, but Hope residents only won permits 54 times. The average number of Hope residents applying for a permit each year for the Kenai Mountains Caribou Herd from 1981 through 2009 was 7.6 and the average number of times residents won permits was 1.9 (**Table 1**, ADF&G 2010). From 1981 through 2008, 41 Hope permit holders hunted caribou in Unit 7 and 22 caribou were harvested (**Table 1**). In 1984, 1985, and 1986, three caribou were harvested each year. After 1986, caribou were only harvested in 1996 and 1997 (**Table 1**). The last time a Hope resident harvested a caribou in Unit 7 was in 1997. It has become difficult for Hope residents to get a caribou permit since the drawing permit system was implemented by ADF&G. The State drawing permit is available to both Alaska residents and nonresidents. The over all success rate of getting a drawing permit was 12% in 2008.

Caribou also are harvested by Hope residents outside of Unit 7. From 1977 through 2009, 80 caribou were harvested outside of Unit 7 by Hope residents (**Table 2**; ADF&G 2010). While Hope residents have a history of harvesting caribou outside of Unit 7, this analysis is only concerned with the customary and traditional uses of caribou from Unit 7.

A household survey in 1990–1991 indicated that even with low numbers locally available caribou during the study year, caribou ranked second to moose among large mammals in frequency of use and harvest quantities (Seitz et al. 1992). During the study period, an estimated eight caribou, or about eight pounds per person, were harvested by Hope residents (it is unknown how much of this harvest was from Unit 7). Of the sampled households, 20% used caribou, 9% hunted and 7% harvested caribou (ADF&G 2009).

No information is available concerning the early settler or Dena'ina caribou hunting seasons in Unit 7 (FWS 1993:25). Current hunting regulations govern the seasons and harvest limits as well as the available permits. Caribou are hunted under State regulations from mid-August through December. Currently there is no Federal subsistence priority for caribou in Unit 7.

The Hope caribou harvest area within Unit 7 is in a 25 to 30 mile arc south of the community and is extremely difficult to access (FWS 1993). This is the area used by the Kenai Mountains Caribou Herd on Federal public lands managed by the U.S. Forest Service and the U.S Fish and Wildlife Service. The ADF&G harvest ticket database indicates that all Kenai Mountains Caribou Herd permits from 1981 through 1997 were for Unit 7. As discussed previously, no harvests have occurred in Unit 7 since 1997

Table 1. Hope caribou permit and harvest data for the Kenai Mountains Caribou Herd in Unit 7, 1972- 2009 (ADF&G 2010).

Year	Total Number of Permits Issued	Number of Hope Residents Applied for Permits	Number of Hope Residents Won Permits	Number of Hope Permittees Hunted	Number of Caribou Harvested	Percent Chance of Winning a Permit
1972	No Data	No Data	No Data	No Data	No Data	No Data
1973	No Data	No Data	No Data	No Data	No Data	No Data
1974	No Data	No Data	No Data	No Data	No Data	No Data
1975	No Data	No Data	No Data	No Data	No Data	No Data
1976	No Data	No Data	No Data	No Data	No Data	No Data
1977	No Data	No Data	No Data	No Data	No Data	No Data
1978	No Data	No Data	No Data	No Data	No Data	No Data
1979	No Data	No Data	No Data	No Data	No Data	No Data
1980	No Data	No Data	No Data	No Data	No Data	No Data
1981	100	16	4	2	0	32
1982	150	No Data	7	6	8	No Data
1983	150	6	1	1	0	33
1984	200	10	5	5	3	31
1985	200	No Data	17	11	3	24
1986	250	14	4	3	3	30
1987	250	7	2	2	1	35
1988	150	5	0	0	0	16
1989	150	8	0	0	0	15
1990	50	7	0	0	0	5
1991	100	7	1	1	1	7
1992	100	2	0	No Data	No Data	8
1993	200	3	0	0	0	13
1994	200	3	0	0	0	13
1995	200	11	0	0	0	15
1996	250	11	3	2	2	24
1997	250	6	4	3	1	29
1998	250	2	0	0	0	19
1999	250	7	2	2	0	17
2000	250	2	1	0	0	15
2001	250	10	2	0	0	14
2002	250	6	0	0	0	14
2003	250	7	0	0	0	13
2004	250	11	0	0	0	13
2005	250	5	0	0	0	14
2006	250	8	0	0	0	14
2007	250	7	1	1	0	12
2008	250	15	2	2	0	12
2009	250	8	0	No Data	No Data	No Data
Total		204	54	41	22	
Avg/yr		7.6	1.9	1.5	0.8	

(ADF&G 2007). Mapping conducted by ADF&G in 1991 indicated that Hope residents harvested caribou in Unit 7 (ADF&G 1991).

No data are available on the methods and means used by Hope residents to harvest large mammals, including caribou, except that the primary means of access for all hunters of the Kenai Mountains Caribou Herd is hiking in on foot or with horses, due to the difficult access (FWS 1993:27). The U.S. Forest Service also allows some ATV and snowmachine access (Staller 2010, pers. comm.).

Caribou meat was traditionally dried, smoked, or frozen outdoors. No data are available concerning contemporary methods of handling, preparing, preserving, or storing caribou by Hope residents. It is

Table 2. Caribou harvests by Hope residents outside of Unit 7, 1977 – 2009 (ADF&G 2010).

Year	Number of Caribou Harvested
1977	2
1978	No data
1979	No data
1980	No data
1981	1
1982	No data
1983	No data
1984	1
1985	No data
1986	No data
1987	No data
1988	1
1989	No data
1990	2
1991	No data
1992	No data
1993	4
1994	5
1995	6
1996	11
1997	6
1998	2
1999	8
2000	6
2001	2
2002	5
2003	3
2004	3
2005	2
2006	4
2007	4
2008	No data
2009	2
Total	80

likely that most caribou meat is preserved by freezing (FWS 1993:27).

No data are available concerning the handing down of knowledge of caribou hunting skills, value, and lore from generation to generation.

In a study conducted in Hope in 1991, most households were involved in giving or receiving wild resources. About 90 percent of households received at least one kind of wild resource from another household. Caribou was received by 13% of households and was given by 7% of households (ADF&G 2009). McCart (1983) also refers to a wide sharing of wild resources in the 1930s by Hope residents.

Residents of Hope depend on a wide diversity of fish and wildlife resources, harvesting an average of 9.1 different kinds of resources, similar to other road-connected communities on the Kenai Peninsula (Fall et al. 2000:240–245). Almost all Hope households (94%) hunted, fished, or gathered wild foods and 100% used at least one type of wild resource. The per capita harvest of wild resources, measured in pounds of useable weight, was 110.7 pounds while the mean household harvest was 262.2 pounds. The average number of wild resources used in the communities and areas in the Kenai Peninsula ranged from 7.6 (North Fork Road) to 21.5 (Nanwalek) (Fall et al. 2000:240–245).

Effects of the Proposal

If the proposal is adopted, the customary and traditional use of caribou by the residents of Hope in Unit 7 would be recognized. This would enable Federally qualified subsistence users to harvest caribou under Federal subsistence regulations from Federal public lands in Unit 7, should a season be established.

Additionally, Hope only represents approximately 20% of Federally qualified subsistence users from the Kenai Peninsula, including residents from the communities of Cooper Landing, Seldovia, and Ninilchik (Staller 2010, pers. comm.).

If the proposal is rejected, Hope residents could continue to apply for a State drawing permit to harvest caribou under State regulations, although the competition with applicants from other areas of Alaska and nonresidents (including other parts of the U.S. and other countries) makes it difficult for Hope residents to obtain a permit.

OSM CONCLUSION

Support Proposal WP10-32a.

Justification

Hope (including Sunrise) residents have a customary and traditional pattern of harvesting caribou in Unit 7. Den'ina Athabascans and early settlers of Hope harvested caribou until the early part of the 20th century in Unit 7. Hope residents demonstrate contemporary use of caribou in Unit 7, though in small numbers as a result of the limited harvest opportunities on the Kenai Mountains Caribou Herd since its reintroduction in the mid-1960s. The ADF&G harvest ticket database indicates that from 1981 through 2009, Hope residents applied for permits 204 times to harvest caribou from the Kenai Mountains Caribou Herd in Unit 7, but only 54 permit were won by Hope residents. The average number of Hope residents applying for a permit each year for the Kenai Mountains Caribou Herd from 1981 through 2009 was 7.6 and the average number of residents who won permits was 1.9. These data from the ADF&G harvest ticket database indicate a consistent desire by Hope residents to participate in the Kenai Mountains caribou hunt, despite the low availability of permits. From 1981 through 2008, 41 Hope permit holders hunted caribou in Unit 7 and 22 caribou were harvested. The ADF&G harvest ticket database as well as mapping of Hope's subsistence use areas confirms that caribou are harvested by Hope residents in Unit 7.

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APPENDIX A

Summary of the Regulatory History of the Federal Subsistence Board Customary and Traditional Use Determinations for Caribou on the Kenai Peninsula

- 1990: Federal Subsistence Management Program established; State's customary and traditional use determinations adopted.
    - State considers that the road-connected portion of the Kenai Peninsula—which is most of Units 7 and 15—is a nonsubsistence area. As a result, the Federal Board determined that Unit 7 had "no subsistence" determinations for caribou.
- April 1994: Federal Subsistence Board (Board) deferred all customary and traditional use determinations for all large mammals on the Kenai Peninsula until a process and schedule for making customary and traditional use determinations statewide could be established (FSB 1994).
- July 1995: Board continued to defer customary and traditional use determinations for Hope and other Kenai Peninsula communities (FSB 1995).
- May 1996: After an extensive Federal process involving data gathering, public hearings, and court decisions, Board made the customary and traditional use determinations for Unit 15 moose for Nanwalek, Ninilchik, Port Graham and Seldovia, but decisions on the remaining species and communities were deferred until rural determinations on the Kenai Peninsula could be made (FSB 1996).
- 2003: Board addressed customary and traditional use determinations for moose in Unit 15, but again deferred making customary and traditional use determinations for remaining communities and resources on the Kenai Peninsula until the completion of a report by the Institute for Social and Economic Research on rural determination and methodology and the subsequent review of rural determinations as required by regulation on a 10-year basis (FSB 2003:102).
- 2006: Board made its final rural determinations in 2006.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-32a. The communities of Hope and Sunrise exhibited rural characteristics and demonstrated a customary and traditional pattern of use of caribou in the area Unit 7.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-32A

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-32a: Requests a positive customary and traditional determination for the community of Hope–Sunrise for subsistence use of caribou in Game Management Unit 7.

Customary and Traditional Determination: There is ethnographic documentation that the Hope-Sunrise area was traditional Dena'ana territory and the Dena'ana hunted caribou. The report cites the appropriate literature on the Dena'ana and on the influx of miners starting in the late 1800s, as well as their use of wild resources[1]. Most Dena'ana moved out of the communities nearly a half century ago.

Current harvest data discussed in the federal staff analysis indicate that a few individual Hope-Sunrise area residents hunt caribou, but almost exclusively in other game management units. This may be substantially influenced by hunt restrictions due to drawing hunts or may be due to relative inaccessibility of where caribou occur. The federal analysis refers to documentation that Hope–Sunrise residents "share wild resources," as indicated in one household survey in 1991, in which only 13% of households in Hope received caribou and 20% used caribou, which was second to use of moose. However, the survey does not indicate whether this caribou was from Unit 7. Mapping in 1991 indicated that Hope residents harvested caribou in Unit 7. The federal staff analysis needs to be more specific as to evidence of whether the caribou population in Unit 7 was among the resources harvested and shared by Hope residents.

Insufficient evidence is provided that the communities fulfill the federal regulatory factors for the Board to make a positive customary and traditional determination of use of the caribou population in Unit 7 by residents of the Hope–Sunrise area. In fact, there is insufficient evidence that the communities of Hope-Sunrise even "generally exhibit" or "holistically" demonstrate customary and traditional use of caribou harvested in Unit 7 in the federal staff analysis.

Data derived from the residency of applicants for state drawing permit hunts does not substantiate customary and traditional use or patterns of use of the caribou population in Unit 7 by the communities of Hope and Sunrise. The federal staff analysis reports that only an average of 7.6 out of a population of approximately 150 year around Hope residents applied for a state caribou permit to hunt in Unit 7 from 1981 through 2009. However, this information alone is not a reliable indicator of effort and is even less indicative of use because the odds of being drawn are very low. Such information is inconclusive, at best. (If applied in the manner suggested by the federal analysis, these same data could just as easily be misapplied to make a positive customary and traditional determination for residents of all communities who ever applied for Unit 7 caribou drawing.)

Recommendation: Oppose/Neutral. The information presented is largely inconclusive. The federal staff analysis should more clearly organize available data around the eight factors that characterize customary and traditional use in federal regulations in order to facilitate evaluating whether substantial evidence is available to make a customary and traditional determination.

[1] Even though the relevant report Seitz et al. 1992 is cited, the federal staff analysis refers to the Community Subsistence Information System in places where it would be a more appropriate reference to cite the report instead.

WP10-32b Executive Summary	
General Description	Proposal WP10-32, submitted by Paul Genne and Dennis Ressler, requests that a caribou harvest season and limit be established in Unit 7. The proposal also requests a positive customary and traditional use determination for Hope and Sunrise residents for caribou in Unit 7, which is addressed in the analysis of Proposal WP10-32a. Proposal WP10-32b is only applicable if the Federal Subsistence Board adopts Proposal WP10-32a and recognizes the customary and traditional uses of Hope for caribou in Unit 7.
Proposed Regulation	**Unit 7—Caribou** *One caribou* *Aug. 10–Dec. 31*
OSM Conclusion	**Support** Proposal WP10-32b **with modification** to specify that the season will be closed when five caribou are harvested. **Unit 7—** ***north of the Sterling Highway and west of the Seward Highway—One caribou by Federal registration permit only***. ~~*No Federal Open Season*~~ ***Aug. 10–Dec. 31*** ***The Seward District Ranger will close the season when five caribou are harvested.*** Unit 7— **remainder** *No Federal Open Season*
Southcentral Regional Council Recommendation	**Support** WP10-32b **with modification** to implement a Federal registration permit hunt for five caribou in part of Unit 7 and provide in-season management authority to the Seward District Ranger. **Unit 7—** ***north of the Sterling Highway and west of the Seward Highway—One caribou by Federal registration permit only***. ~~*No Federal Open Season*~~ ***Aug. 10–Dec. 31*** ***The Seward District Ranger is authorized to close the season when five caribou are harvested.*** Unit 7— **remainder** *No Federal Open Season*
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	
Written Public Comments	**None**

STAFF ANALYSIS
WP10-32b

ISSUES

Proposal WP10-32, submitted by Paul Genne and Dennis Ressler, requests that a caribou harvest season and limit be established in Unit 7. The proposal also requests a positive customary and traditional use determination for Hope and Sunrise residents for caribou in Unit 7, which is addressed in the analysis of Proposal WP10-32a. Proposal WP10-32b is only applicable if the Federal Subsistence Board adopts Proposal WP10-32a and recognizes the customary and traditional uses of Hope for caribou in Unit 7.

DISCUSSION

This proposal requests a Federal subsistence season and harvest limit so residents of Hope and Sunrise have opportunity to participate in the Unit 7 caribou harvest under Federal subsistence regulations. There is a State hunting season for caribou in part of Unit 7 that requires a drawing permit that is available to Alaska residents and non-residents.

On July 31, 2009, one of the two proponents clarified that he would like to have a harvest limit of one caribou with an August 10 to December 31 season (Ressler 2009, pers. comm.).

Existing Federal Regulation

Unit 7—Caribou

No Federal open season

Proposed Federal Regulation

Unit 7—Caribou

One caribou	*Aug. 10–Dec. 31*

Existing State Regulation

Unit 7—north of the Sterling Highway and west of the Seward Highway

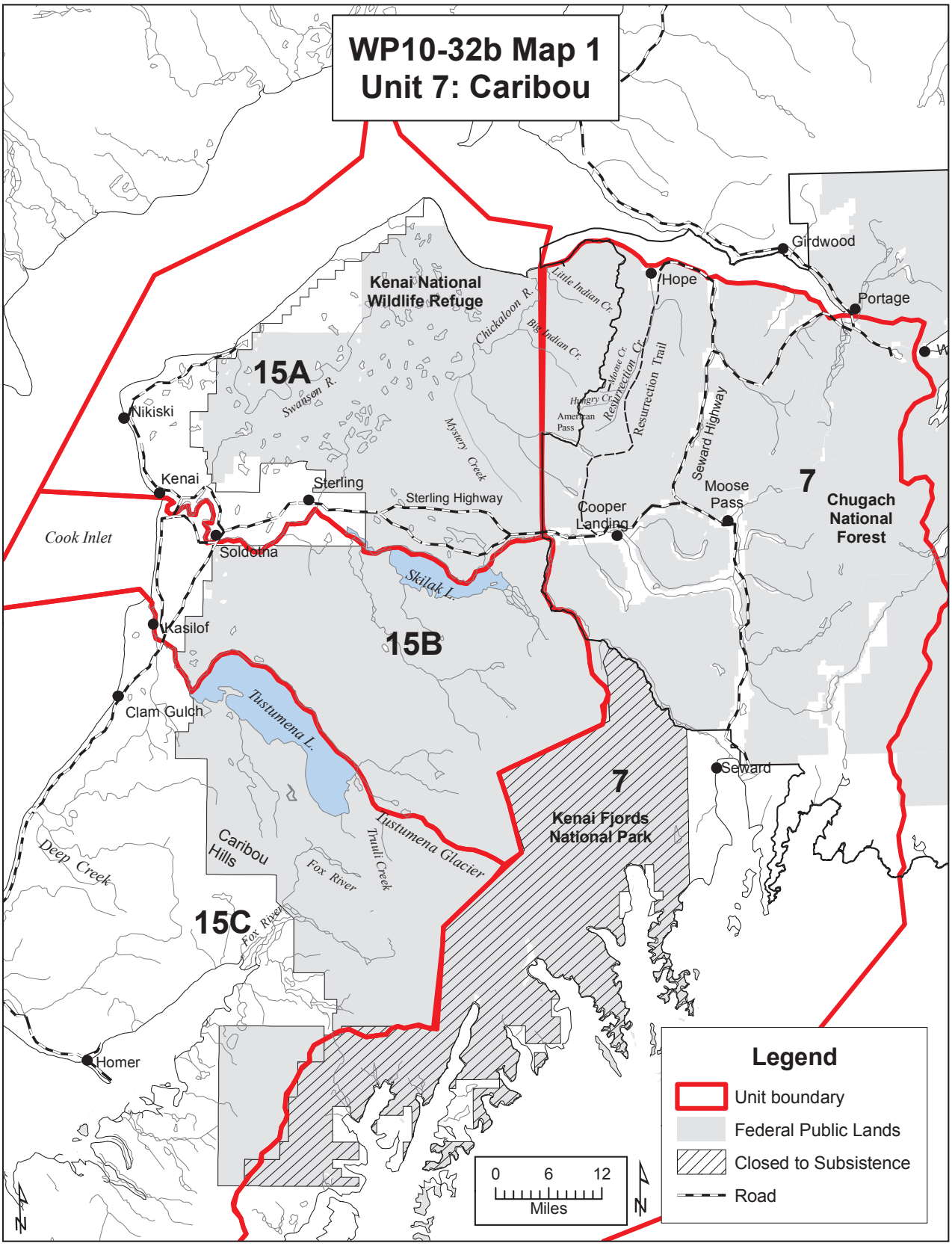
One caribou by permit DC001	*Aug. 10–Dec. 31*

Unit 7— remainder

No open season

Extent of Federal Public Lands

Federal public lands comprise approximately 78% of Unit 7. The U.S. Forest Service (USFS) manages 50% (Chugach National Forest), the U.S. Fish and Wildlife Service (FWS) 5% (Kenai National Wildlife Refuge), and the National Park Service 23% (Kenai Fjords National Park, which is closed to subsistence harvest) (**Map 1**).


WP10-32b Map 1
Unit 7: Caribou
Kenai National Wildlife Refuge
15A
Swanson R.
Chickaloon R.
Little Indian Cr.
Big Indian Cr.
Moose Cr.
Resurrection Cr.
Resurrection Trail
Hungry Cr.
American Pass
Mystery Creek
Girdwood
Hope
Portage
Seward Highway
Nikiski
Kenai
Sterling
Sterling Highway
Cooper Landing
Moose Pass
7
Chugach National Forest
Cook Inlet
Soldotna
Skilak L.
Kasilof
15B
Clam Gulch
Tustumena L.
Tustumena Glacier
Seward
7
Kenai Fjords National Park
Caribou Hills
Deep Creek
Fox River
Truuli Creek
15C
Homer
Legend
Unit boundary
Federal Public Lands
Closed to Subsistence
Road
0 6 12
Miles
N

Regulatory History

There has been a State hunting season for the Unit 7, Kenai Mountains Caribou Herd since 1972. From 1972 to 1976, ADF&G issued an unlimited number of registration permits, and the season was closed by emergency order when the caribou harvest exceeded sustainable limits. Since 1977, ADF&G has managed the Kenai Mountains Caribou Herd using a limited drawing permit system (McDonough 2007). The State has issued 250 drawing permits per year for one caribou of either sex from the Kenai Mountain Caribou Herd since 1996 (McDonough 2007). The State currently requires successful hunters to report within 10 days of harvest, and unsuccessful hunters to report within 15 days of season end (ADF&G 2009).

The State season for the Kenai Mountains caribou hunt has changed over time (Selinger 2005). Between 1993 and 1996, the hunting season was August 10 to September 30. In 1997 and 1998, the season was August 10 to September 30 and November 10 to December 10. From 1999 to present, the season has been August 10 to December 31.

Biological Background

When the Russians began occupying the Kenai Peninsula in 1786, caribou were plentiful and there were some moose (Pedersen 1976). Kenai Peninsula caribou were reasonably abundant in 1850 and 1890 (Seton-Karr 1887; Porter 1893; Palmer 1938). Murie (1935) and Skoog (1968) suggest that the historic Kenai Peninsula caribou population originated from an influx of caribou from the North during unusual migratory movements of interior Alaska herds when their populations were high. ADF&G et al. (1994) observed that although reports indicate that Kenai Peninsula caribou distribution was widespread, suitable habitat is limited, and caribou were probably never numerous.

There were large forest fires on the Kenai Peninsula beginning in the late 1800s, including a massive fire in 1883 (Sherwood 1974; Dufresne 1946). Widespread burning that accompanied Euroamerican settlement of the Kenai Peninsula contributed to a decline in the caribou population and increase in the moose population (Leopold and Darling 1953; Sherwood 1974; Spencer and Hakala 1964; Davis and Franzmann 1979; Klein 1965; Lutz 1956). Caribou depend upon climax vegetation, and as such, fires are detrimental (Leopold and Darling 1953; Lutz 1956). Lutz (1956) summarized information that suggested that it can take from 20 to more than 100 years for caribou/reindeer habitat to recover after a fire. A recent annotated bibliography on the role of wildfires in caribou ecology (Saperstein and Joly 2004) summarizes research done on the complexity of this relationship.

Settlers, miners, traders, and sport hunters brought improved firearms to the Kenai Peninsula. Caribou were harvested for their meat, hides and antlers with no laws to limit the harvest. It is thought that hunters quickly over-exploited Kenai Peninsula caribou (Elliott 1902; Davis and Franzmann 1979; Sherwood 1974); caribou are often very visible, as they favor open country. Uncontrolled killing of wildlife was likely worse in the period of a widely dispersed trapper-prospector population (Leopold and Darling 1953). Market hunters obtaining meat for mining camps may have killed most of the remaining original Kenai Peninsula caribou population (ADF&G et al. 1994). From 1901 to 1911 there were reports of remnants of the caribou population from the southern, western, northern and central part of the Kenai Peninsula (Osgood 1901; Elliot 1901; Shea 1910 and 1911; Shiras 1912). It is thought that caribou were extirpated on the Kenai Peninsula by about 1912 or 1913 (Lutz 1956; Spencer and Hakala 1964).

A 1952 FWS survey concluded that the range conditions on the Kenai Peninsula could support caribou (Alaska Game Commission 1952). In 1964, ADF&G, the U.S. Bureau of Sport Fisheries and Wildlife, and the USFS considered reintroducing caribou to the Kenai Peninsula (Lentfer 1965). Cooperative agreements for the reintroduction and management of Kenai Peninsula caribou were signed between these

three agencies. Caribou transplants were conducted by ADF&G with funds provided by the Federal Aid in Wildlife Restoration Act (Burris and McKnight 1973). In 1965, 15 Nelchina caribou (3 bulls and 12 cows) were released at Chickaloon River and Mystery Creek on the Kenai Peninsula (**Map 1**) (Burris and McKnight 1973; ADF&G et al. 1994). This first release was problematic; 14 animals died from the drug and transport prior to release. In 1966, 29 more Nelchina caribou (3 bulls and 26 cows) were released near Sterling (**Map 1**) (Burris and McKnight 1973; ADF&G et al. 1994). Some of the caribou from one or both of these releases migrated to the high country to colonize the northern portion of the Kenai Mountains in Unit 7 (Kenai Mountains Caribou Herd). Others colonized a portion of the lowlands in Subunit 15A north of the Kenai Airport to Swanson River and in the extreme western portion of 15B (Kenai Lowlands Caribou Herd).

The Kenai Mountains Caribou Herd numbered 119 animals in November 1970, 162 in November 1971, and 214 in December 1972 (Burris and McKnight 1973). The Kenai Mountains Caribou Herd grew to a pre-hunting season population of 339 animals in 1975 (Selinger 2005). Hunters reduced the population to 193 caribou by 1977 (Selinger 2003). The pre-hunting season herd population estimates in 1985 and 1988 were 434 and 305 caribou respectively (Selinger 2003). The herd population estimate ranged from 300-500 caribou from regulatory years 1995/96 to 2005/06 (**Table 1**; Selinger 2003 and 2005; McDonough 2007). ADF&G's management objective for the Kenai Mountains Caribou Herd is to maintain a post-hunt population of 300-400 animals (McDonough 2007). The calf to cow ratio ranged from 20-34:100 when composition counts were done between 1985 and 1996 (Selinger 2003; ADF&G et al. 1994). During this same period the bull to cow ratio was 37-44:100 (Selinger 2005; ADF&G et al. 1994). Average weight of yearling caribou was among the highest in Alaska, indicating good nutrition (Crowser 2002).

Table 1. Kenai Mountains caribou population estimates RY 1995/96-2005/06 (Selinger 2003 and 2005, McDonough 2007)

Regulatory Year	Date/Timing	Estimated Herd Size	Comments
1995/96	March 14, 1996	450	aerial survey
1996/97	March 14, 1997	500	aerial survey
1997/98	February 27, 1998	475	aerial survey
1998/99	January 7, 1999	425	aerial survey
1999/00	March 5, 2000	325	aerial survey
2000/01	March 31, 2001	400	aerial survey
2001/02	Oct. 23, 2001	375	aerial survey
2002/03	post-hunting season	300	No survey
2003/04	post-hunting season	300	No survey
2004/05	post-hunting season	325	aerial survey
2005/06	post-hunting season	325	No survey

Reintroductions in 1985 and 1986 established the Fox River Caribou Herd (McDonough 2007). The Fox River Caribou Herd range is south of the Tustumena Glacier between upper Fox River and Truuli Creek in Subunit 15C (**Map 1**). Some caribou from this herd occasionally move west into Unit 7, toward Seward (McDonough 2007). Although caribou inhabited the Seward area more than 100 years ago (Porter 1893, Sherwood 1974), it is unknown if the small number of dispersing animals is enough to establish a caribou population in this part of Unit 7 (McDonough 2007). The Fox River Caribou Herd peaked in

1998 at nearly 100 caribou and now appears to be much lower and is possibly no longer a viable herd (McDonough 2007).

Efforts to reestablish caribou on the Kenai Peninsula have met with limited success. Crowser (2002) observed that it appears that the Kenai Mountains Caribou Herd is currently only using a portion of the available historic habitat. It appears that the Kenai Mountains Caribou Herd does not mix with Kenai lowland herds (Crowser 2002). The Kenai Mountains Caribou Herd was established by some portion of the survivors from only 44 caribou (6 males and 38 females) that were released on the Kenai lowlands more than 40 years ago. Based on the very small gene pool, it is likely that inbreeding and lack of genetic variability (Lockran et al. 2009; O'Grady et al. 2006; Keller and Waller 2002) are limiting caribou reproduction, survival and the harvestable surplus.

Habitat

Alaska's barren-ground caribou (*Rangifer tarandus granti*) prefer treeless tundra during all seasons and sometimes winter in boreal forest; calving areas are usually located in mountains or on open tundra (Harper 2007). The Kenai Mountains Caribou Herd occupies mostly alpine tundra habitat between elevations of approximately 2,000 to 4,500 feet (ADF&G et al. 1994). This herd exhibits strong fidelity to approximately 205 mi^2 of winter range habitat on the south-facing, windblown ridges of that portion of the Kenai Mountains bordered by American Pass on the south, Little Indian Creek on the north, Big Indian Creek on the west, and Resurrection Creek on the east (**Map 1)** (Selinger 2003; ADF&G et al. 1994). The calving ground extends from American Pass to the headwaters of Big Indian Creek, including the headwaters of American, Hungry and Moose creeks (**Map 1)** (ADF&G et al. 1994). In summer the Kenai Mountains Caribou Herd expands its range to include areas east and south of Resurrection Creek to the Seward and Sterling highways; the summer range is approximately 560 mi^2 **(**Selinger 2003; ADF&G et al. 1994). The herd occupies habitat which is managed almost exclusively by the Chugach National Forest and Kenai National Wildlife Refuge. This land status provides protection for this herd's critical habitat year-round. The habitat utilized by the herd was affected by wildfires during the 1990s; this could be affecting the productivity of the herd (Crowser 2002).

Harvest History

When the Russians began occupying the Kenai Peninsula in 1786, Kenai Natives were using caribou skins for clothing. Both men and women wore "long shirts of caribou hide that fell to the knees… and loose boots of caribou" (Pedersen 1976). Hunting was unregulated by the Federal Government in Alaska through the 1800s. Placer gold mining operations on Resurrection Creek began in 1888 (Crowser 2002; Kenai Peninsula 2010). During the 1890s prospectors spread throughout the Kenai Mountains searching of gold; Hope and Sunrise were the center of activity (Cassidy and Titus 2003). Transient miners harvested fish and wildlife that they needed for food. Extensive hydraulic and hand placer mining began on Resurrection Creek in 1895 (Jansons et al. 1984). In 1896 the population of the Hope/Sunrise area grew to 3000 people, more than any other community in Alaska at that time (Cassidy and Titus 2003, Kenai Peninsula 2010). Some miners abandoned mining to work as professional market hunters (Sherwood 1981). Market hunters provided meat for the railroad and mining companies (Sherwood 1981; Cassidy and Titus 2003). Meat from wildlife was sold locally; heads, horns, and hides were exported from the state and sold (Sherwood 1981). As late as 1898, large numbers of caribou were "at least occasionally taken" on the Kenai Peninsula (Lutz 1956). Lee (1899) harvested three caribou in 1898 while trophy hunting near the head of Kachemak Bay. Lee noting that "game is wantonly killed by market hunters every winter, and if this is not soon put a stop to it will be entirely exterminated." Allen (1901) reported that the Andrew Stone expedition of 1900 collected three caribou from the Kenai Peninsula for the

American Museum of Natural History. Stone reported that caribou soon would be exterminated from the Kenai Peninsula by hunters who sold antlers, "at good prices for shipment to San Francisco." The Alaska Game Law of 1902 prohibited some wildlife exports and sales (Sherwood 1981). The Governor of the Territory of Alaska was authorized to hire game wardens starting in 1908 (Cassidy and Titus 2003). The Alaska Game Law of 1908 prohibited the killing of caribou on the Kenai Peninsula and restricted the shipment of heads and trophies (Alaska Game Regulations 1910). These regulations exempted the killing of Kenai Peninsula caribou for food or clothing by Natives, miners or explorers, when in need of food. In 1909, Game Warden Vian raised concern to Territorial Governor Clark about the exception to the 1908 Alaska Game Law noted above (Vian 1909). In 1911, Game Warden Shea requested the Secretary of Interior's help protect Kenai caribou with changes to the game law (Shea 1911). The Alaska Game Law of 1912 retained the prohibitions against killing caribou on the Kenai Peninsula as well as the exception for food or clothing for Natives, miners and explorers, when in need of food (Alaska Game Regulations 1913). However, laws and regulations came too late to save Kenai Peninsula caribou from extirpation.

Following caribou reintroductions in 1965 and 1966 and the establishment of a small herd in the northern portion of the Kenai Mountains, the State allowed hunting beginning in 1972. In regulatory years 1993/94 to 2008/09, the reported State harvest (drawing permit DC001) of Kenai Mountains Caribou Herd was 17-29 animals/year (**Table 2;** ADF&G 2009). During those years, most people that received a State DC001 drawing permit did not hunt, and only 7.6-11.6 % of those that received a permit, harvested a caribou. From regulatory years 1999/00 to 2005/06, even though the season extended from August 10 to December 31, 91% of the harvest occurred in August and September (Selinger 2003 and 2005; McDonough 2007).

Table 2. Kenai Mountains caribou harvest in the State DC001 drawing permit hunt 1993-2008 (ADF&G 2009)

Regulatory	**Reported Harvest**					
Year	Males	(%)	Females	(%)	Unk.	Total
1993/94	19	66%	10	33%	0	29
1994/95	17	61%	11	39%	0	28
1995/96	10	56%	8	44%	0	18
1996/97	10	43%	13	57%	0	23
1997/98	12	44%	14	52%	1	27
1998/99	17	68%	8	32%	0	25
1999/00	11	46%	13	54%	0	24
2000/01	15	68%	7	32%	0	22
2001/02	13	68%	6	32%	0	19
2002/03	11	61%	8	39%	0	18
2003/04	14	64%	7	32%	1	22
2004/05	10	59%	7	41%	0	17
2005/06	16	76%	5	24%	0	21
2006/07	10	59%	7	41%	0	17
2007/08	9	47%	9	47%	1	19
2008/09	15	79%	4	21%	0	19
2009/10		%		%		

The Kenai Mountains Caribou Herd is usually found near the headwaters of Big Indian Creek (Map 1) during the fall (ADF&G 2009). This area is 10 to 20 miles from the nearest road. Access to the herd is generally from the Resurrection Pass Trail (Map 1; ADF&G 2009) where USFS regulations 36 C.F.R. 261.54(a), 36 C.F.R. 261.55(b), 36 C.F.R. 261.56, and 36 C.F.R. 261.58(y) prohibit use of motorized vehicles during most of the caribou hunting season. Resurrection Pass Trail and watersheds are closed to summer and fall motorized vehicle use (both recreational and subsistence) due to safety concerns and resource damage potential (Zemke 2009, per. comm.). The Kenai Mountains caribou hunt normally requires long hikes, horseback trips, or a float plane to limited lakes (McDonough 2007). Kenai Mountains Caribou are occasionally harvested in areas with easier access (e.g.- Palmer Creek Road and day hikes from Summit Lake). From regulatory years 2001/02 to 2005/06, 60% of successful DC001 hunters backpacked into the hunting area from their highway vehicle (McDonough 2007). Other transport methods used by successful hunters included horses (18%), planes (9%), and ORVs (1%; includes mountain bikes). From regulatory years 2001/02 to 2005/06, no successful hunters reported using a 3- or 4-wheeler, boat, or snowmobile; 11% did not report their transportation method (McDonough 2007).

Bud Marrs (2009, pers. comm.) has been a resident of Hope for 41 years and said he had participated in about 20 Kenai Mountains caribou hunts over the years. Mr. Marrs said he puts in for the State drawing permit for Kenai Mountains caribou every year. He thought that if Federal permits for caribou could be made available, about 20 residents of Hope and Sunrise might get a permit. Of these, he estimated that only about six would harvest a caribou. Mr. Marrs noted that he has always backpacked in to hunt Kenai Mountains caribou, and that it is a tremendous amount of work to carry the meat out 10 to 12 miles on his back. He noted that he is 66 years old, but would definitely get a Federal permit to hunt Kenai Mountains caribou if Federal permits were "made available."

Effects of the Proposal

If Proposal WP10-32b is adopted, it would establish a season and harvest limit for caribou for the residents of Hope and Sunrise in Unit 7. A Federal subsistence hunt by residents of Hope and Sunrise would affect the State drawing permit (DC001) hunt, as the Kenai Mountains Caribou Herd is small and has a limited harvestable surplus each year. It is difficult to anticipate the level of harvest from the Kenai Mountains Caribou Herd that would occur if the Federal Subsistence Board were to implement a Unit 7 caribou hunt for residents of Hope and Sunrise. However, based on the small population of these two communities and difficult access to the Kenai Mountains Caribou Herd, it is likely that the harvest by residents of these two communities would be small. The Federal subsistence permit hunt would have priority over the State drawing permit hunt, and it is likely that the State hunt would need to be reduced to accommodate the Federal hunt.

OSM CONCLUSION

Support Proposal WP10-32b **with modification** to implement a Federal registration permit hunt for five caribou in part of Unit 7 and provide in-season management authority to the Seward District Ranger.

The modified regulation should read:

Unit 7*— north of the Sterling Highway and west of the Seward Highway—One caribou by Federal registration permit only*. ***The Seward District Ranger will close the season when five caribou are harvested.***	~~*No Federal Open Season*~~ ***Aug. 10–Dec. 31***

Unit 7— **remainder**

No Federal Open Season

Justification

The Council supported a 5-caribou harvest quota for Federal subsistence hunters from Hope and Sunrise at its winter 2010 meeting in Anchorage.

The State currently allows a caribou harvest by drawing permit from the Kenai Mountains Caribou Herd in Unit 7 north of the Sterling Highway and west of the Seward Highway. The State issued 250 drawing permits/year for this hunt. These permits are available to both Alaska residents and non-residents. The average annual harvest during the 8-year period from regulatory years 1993/94 to 2000/01 was 24.5 caribou per year. The average annual harvest during the 8-year period from regulatory years 2001/02 to 2008/09 was 19 caribou per year (ADF&G 2009). Virtually all of the hunting area for the Kenai Mountains Caribou Herd is Federal public land (Chugach National Forest and Kenai National Wildlife Refuge) and most of the harvest occurs on Chugach National Forest lands. Section 802(2) of ANILCA mandates that subsistence shall be given preference on Federal public lands over other consumptive uses.

A Federal hunt should be limited to that portion of Unit 7 that is north of the Sterling Highway and west of the Seward Highway; this is the area where the Kenai Mountains Caribou Herd is usually located. The hunt occurs primarily on land managed by the U.S. Forest Service. It is anticipated that Federally qualified subsistence users would hunt these caribou during the same general timeframe and using the same access methods that have been used by hunters with State drawing permits. Caribou very rarely occur in other parts of Unit 7; caribou hunting should not be allowed in other parts of Unit 7 for conservation reasons.

It will be important to closely monitor the inseason caribou harvest from a Federal hunt. It is recommended that a Federal hunt be managed using a registration permit with timely harvest reporting requirements. This would allow the Federal resource manager to closely track the caribou harvest inseason. The Council recommended that the Seward District Ranger (local Federal land manager) be delegated authority to close this season when five caribou are taken. The OSM Conclusion suggests that the regulation language recommended by the Council be modified by replacing "is authorized to" with "will." A five caribou quota may very well be adequate to provide for the subsistence uses of Hope and Sunrise.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-32b **with modification**. The season will be closed when the harvest limit of five caribou have been reached. This action will address the conservation concern to continue to protect the population when the limit has been reached. The total harvest limit of five caribou appears to be reasonable based on the staff analysis. Hope and Sunrise have a customary and traditional pattern of harvesting caribou in Unit 7.

The modified proposed regulation should read:

Unit 7*— north of the Sterling Highway and west of the Seward Highway—One caribou by Federal registration permit only*.	~~*No Federal Open Season*~~
The Seward District Ranger is authorized to close the season when five caribou are harvested.	***Aug. 10–Dec. 31***
Unit 7***— remainder***	
No Federal Open Season	

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-32B

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WP10-33 Executive Summary		
General Description	Proposal WP10-33 requests a positive customary and traditional use determination for residents of Hope and Sunrise for moose in Unit 7. *Submitted by Paul Genne and Dennis Ressler*	
Proposed Regulation	**Unit 7—Moose**	**Customary and Traditional Use Determination**
	Unit 7, that portion draining into Kings Bay	*Residents of Chenega Bay, Tatitlek, ~~and~~ Cooper Landing,* ***Hope and Sunrise****.*
	Unit 7 remainder	*Residents of Cooper Landing,* ***Hope and Sunrise****.*
OSM Conclusion	**Support**	
Southcentral Regional Council Recommendation	**Support**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Oppose/Neutral**	
Written Public Comments	**None**	

STAFF ANALYSIS
WP10-33

ISSUES

Proposal WP10-33, submitted by Paul Genne and Dennis Ressler, requests a positive customary and traditional use determination for residents of Hope and Sunrise for moose in Unit 7.

DISCUSSION

The proponent is requesting a positive customary and traditional use determination for moose in Unit 7 for Hope and Sunrise residents because it would "re-establish the customary and traditional use" of this resource for the residents of Hope and Sunrise. It should be noted that the proponent requested a positive customary and traditional use determination for all of Unit 7, which, in the Federal subsistence regulations, includes the following: Unit 7, that portion draining into Kings Bay as well as Unit 7 remainder. No distinction is made between these two areas in this analysis. The proponent also requested seasons and harvest limits, but the seasons and harvest limits requested are already in regulation, thus will not be addressed.

Existing Federal Regulations

Unit 7—Moose	**Customary and Traditional Use Determination**
Unit 7, that portion draining into Kings Bay	*Residents of Chenega Bay, Tatitlek, and Cooper Landing.*
Unit 7 remainder	*Residents of Cooper Landing.*

Proposed Federal Regulations

Unit 7—Moose	**Customary and Traditional Use Determination**
Unit 7, that portion draining into Kings Bay	*Residents of Chenega Bay, Tatitlek, ~~and~~ Cooper Landing,* ***Hope and Sunrise****.*
Unit 7 remainder	*Residents of Cooper Landing,* ***Hope and Sunrise****.*

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are comprised of Federal public lands, consisting of 50% Chugach National Forest lands managed by the U.S. Forest Service (USFS), 23% Kenai Fjords National Park lands managed by the National Park Service, and 5% of lands managed by the Kenai National Wildlife Refuge (NWR). The Kenai Fjords National Park lands are not open to subsistence uses (see **Unit 7 Map**).

Regulatory History

The Federal Subsistence Board (Board) has addressed customary and traditional use determinations for the Kenai Peninsula since the inception of the Federal Subsistence Management Program in 1990. The Board adopted the State's customary and traditional use determinations in 1990. At that time the State determined the road-connected portion of the Kenai Peninsula—which is most of Units 7 and 15—to be a

nonsubsistence area. As a result of the State's nonsubsistence area, the Federal Board then determined that all wildlife resources in Units 7 and 15 had a "no Federal subsistence priority" customary and traditional use determination. For a summary of regulatory history for Hope, see **Appendix A**.

The Board has never specifically considered the customary and traditional uses of moose by residents of Hope or Sunrise. In 2007, the Board added Cooper Landing to the customary and traditional use determination for moose in Unit 7.

The request in Proposal WP10-33 is the first request from Hope residents to include Hope in any of the customary and traditional use determinations. The Board has recognized the use of "all fish" in the Federal public waters of the Kenai River Area within Unit 7 by residents of Hope, but this was through an analysis of a request for a customary and traditional use determination for the entire Kenai Peninsula.

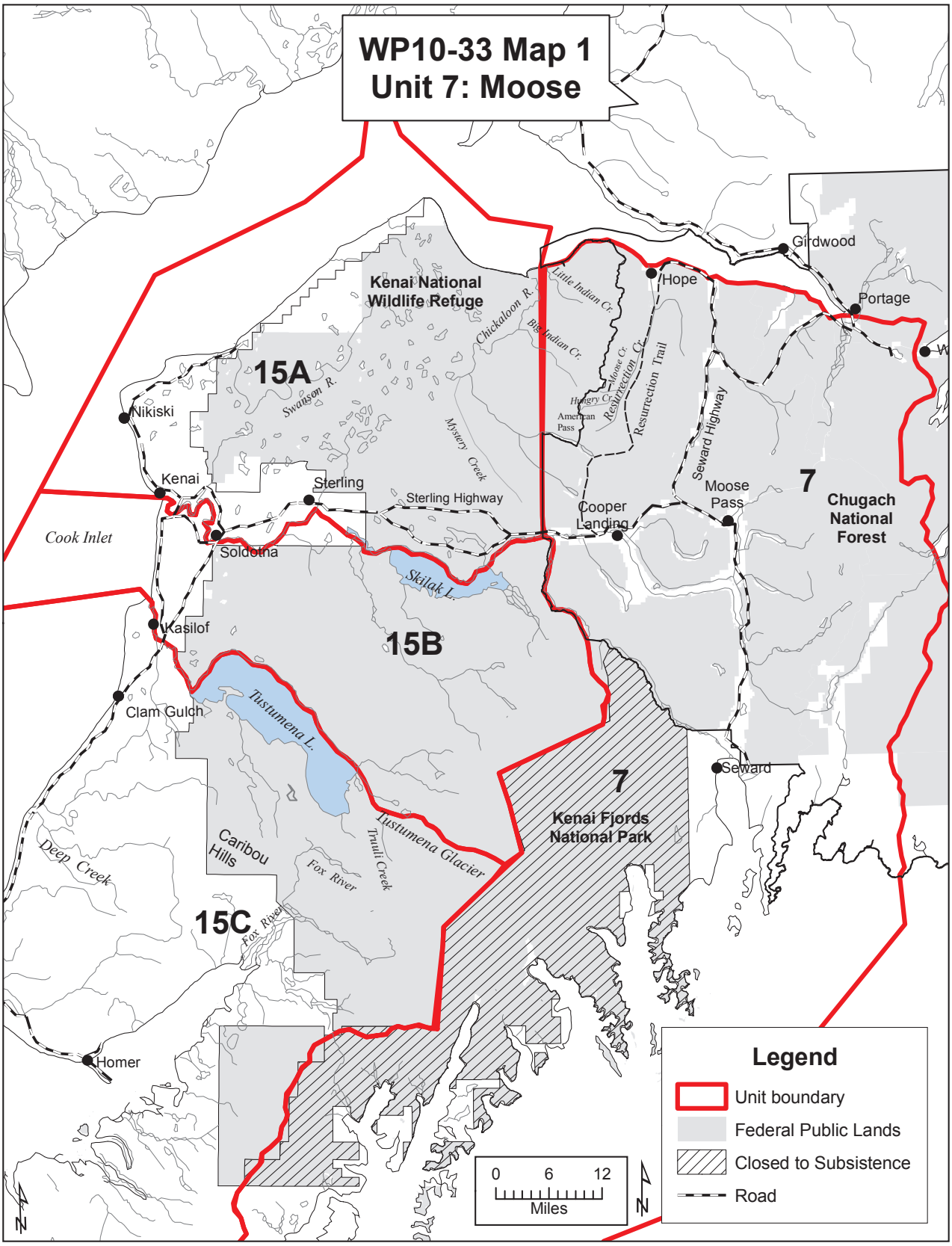
Community Characteristics

Hope is a small, unincorporated community located in Unit 7 within the Kenai Peninsula Borough with an estimated permanent year-round population of 148 in 2008 (ADCRA 2008). Hope is recognized as a rural community by the Federal Subsistence Board. Hope is located on the northern end of the Kenai Peninsula, on the south shore of the Turnagain Arm of Cook Inlet, 86 miles from Anchorage to the north and 103 miles from Kenai to the South (**Map 1**). The community is within the Chugach National Forest and is the northern terminus of the popular Resurrection Trail. Almost half (48%) of the houses in Hope are vacation houses or cabins. There is one school with eleven students. The school and local businesses are the only employment. Hope was founded in 1896 by miners and called "Hope City." At the turn of the 20th century, about half of Hope's residents were Native (Mishler 1985). The Hope post office began operating in 1987 (ADCRA 2008).

Sunrise is only seven miles from Hope and had a year-round population of 22 in 2008 (**Map 1**). Sunrise is a census designated place and has very little in the way of a community and is considered a "subcommunity" of Hope. Sunrise was established on Sixmile Creek and was the dominant community during the early part of the 20th century, but the population declined and had no residents in 1940 (Barry 1973). Gradually people have moved into Sunrise since the 1940s, but the population continues to be quite small. There are no schools, businesses, and government organizations. Any children in Sunrise would attend school in Hope; Sunrise residents receive their mail in Hope. Because of the close proximity of Sunrise to Hope and the interconnectedness between the two communities, Sunrise is considered a part of Hope for this analysis. All references in this analysis to Hope's uses of moose include Sunrise.

Dena'ina Athabaskans inhabited the Hope area long before the miners arrived (de Laguna 1975). The Dena'ina had a settlement at the mouth of the Resurrection River and one at Chickaloon Bay. Once the miners moved in, the Dena'ina communities declined due to out-migration and mortality from disease (Barry 1973). Some of the Dena'ina moved to Point Possession, another Athabascan community, 30 miles to the west. The inhabitants of Point Possession were decimated by the flu epidemic of 1918 and the community never recovered (Holmes 1985).

Hope became connected by road to Seward in 1951 (Buzzell and McMahan 1986). This road system greatly enhanced the opportunity for tourists and seasonal residents to enjoy the wildlife, scenery, and sport fishing available in the Hope area.


WP10-33 Map 1
Unit 7: Moose
Kenai National Wildlife Refuge
15A
Swanson R.
Chickaloon R.
Little Indian Cr.
Big Indian Cr.
Moose Cr.
Hungry Cr.
American Pass
Resurrection Cr.
Resurrection Trail
Mystery Creek
Girdwood
Hope
Portage
Seward Highway
Nikiski
Kenai
Sterling
Sterling Highway
Cooper Landing
Moose Pass
7
Chugach National Forest
Cook Inlet
Soldotna
Skilak L.
Kasilof
15B
Clam Gulch
Tustumena L.
Seward
7
Kenai Fjords National Park
Tustumena Glacier
Caribou Hills
Deep Creek
Fox River
Trutil Creek
15C
Homer
Legend
Unit boundary
Federal Public Lands
Closed to Subsistence
Road
0 6 12
Miles
N

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or seasonal restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

The Dena'ina of the Kenai Peninsula used the wild resources available to them (Osgood 1976 [1937], Ackerman 1975, and Holmes 1985). Dena'ina in the Hope area were harvesting resources at the time of contact with the Russians. Dena'ina communities were established at the mouth of Resurrection Creek and at Chickaloon Bay. Existing information indicates that Hope residents traditionally harvested the resources available to them, including moose. Hunting, fishing, trading, bartering, and trapping of resources were important activities for the early residents of Hope (Barry 1973) and continued to be an important part of Hope residents' lifestyle into the 1950s (Seitz et al. 1992). One resident in the early 1990s stated that in the 1940s when he was a child his family ate a great deal of moose, goat, bear, and fish. Another resident stated that his family depended heavily on moose meat. Knect-Levine (1983) noted that moose were hunted by Hope residents.

The contemporary harvest of moose is dictated by regulations and restrictions as well as the availability of moose. Because of the low moose populations, many Hope hunters no longer harvest moose. Many residents report that they no longer rely on moose as much as they did in the past; however, it continues to be a subsistence resource for Hope residents (Seitz et al. 1992). In a study conducted in Hope in 1991, 9% of households harvested moose, 25% of households attempted to harvest moose, and 68% used moose. An estimated 19 pounds per capita of moose were harvested during the study year (ADF&G 2009). Not all of the moose harvest is within Unit 7. From 1977 to 2009, 125 moose were harvested by Hope residents outside of Unit 7 (**Table 1**, ADF&G 2009 and 2010), compared to 46 moose harvested in Unit 7 during

Table 1. Moose harvests by Hope residents outside of Unit 7, 1977 – 2009 (ADF&G 2010).

Year	Number of Moose Harvested
1977	8
1978	3
1979	No data
1980	No data
1981	2
1982	4
1983	6
1984	9
1985	3
1986	5
1987	3
1988	4
1989	1
1990	3
1991	3
1992	5
1993	2
1994	1
1995	2
1996	5
1997	4
1998	4
1999	3
2000	1
2001	2
2002	2
2003	4
2004	4
2005	6
2006	7
2007	7
2008	8
2009	4
Total	125

Table 2. Moose harvests by Hope residents in Unit 7, 1977 – 2009 (ADF&G 2009 and 2010).

Year	Number of Permits Hunted	Number of Moose Harvested
1977	6	3
1978	11	5
1979	7	1
1980	No data	No data
1981	5	1
1982	7	1
1983	8	1
1984	13	1
1985	9	3
1986	9	3
1987	13	1
1988	7	1
1989	6	0
1990	9	2
1991	11	1
1992	8	2
1993	2	0
1994	4	1
1995	9	3
1996	10	2
1997	10	2
1998	4	1
1999	4	0
2000	8	1
2001	12	2
2002	8	2
2003	6	2
2004	5	0
2005	8	2
2006	12	0
2007	13	1
2008	10	1
2009	4	0
Total	258	46

the same time period (**Table 2**). However, while 46 moose were harvested in Unit 7, there were, in the same time period, 258 permits where the hunters hunted in Unit 7, but were not successful (**Table 2,** ADF&G 2009 and 2010). The overall hunter success rate in Unit 7 by Hope residents from 1977 to 2009 was 18%.

Prior to the implementation of regulations mandating moose hunting seasons, moose were traditionally hunted in late October and early November (Seitz et al. 1992). The Hope moose harvest area is within Unit 7 within a 50 miles arc south of the community (FWS 1993). The ADF&G harvest ticket database indicates that all of Hope residents who held moose permits from 1991 through 2007 hunted moose in Unit 7 (ADF&G 2007). Mapping conducted by ADF&G in 1991 indicated that Hope residents harvested moose in Unit 7 (ADF&G 1991, cited in FWS 1993).

No data are available on the methods and means used by Hope residents to harvest large mammals, other than a reference by McCart (1983) to a moose hunt in the 1930s where doglseds were the primary means of transportation with a few people using snowshoes.

The Hope area did not receive electricity until 1969 and canning was the best way to preserve most subsistence resources prior to the ability to freeze moose meat (Seitz et al. 1992).

No data are available concerning the handing down of knowledge of moose hunting skills, value, and lore from generation to generation.

In a study conducted in Hope in 1991, most households were involved in giving or receiving wild resources. About 90 percent of household received at least one kind of wild resource from another household. Moose was received by 62% of households and was given by 28% of households (ADF&G 1991). McCart also refers to a wide sharing of moose and other resources in the 1930s by Hope residents.

Residents of Hope depend on a wide diversity of fish and wildlife resources, harvesting an average of 9.1 different kinds of resources, similar to other road-connected communities on the Kenai Peninsula (Fall et al. 2000:240–245). Almost all Hope households (94%) hunted, fished, or gathered wild foods and 100% used at least one type of wild resource. The per capita harvest of wild resources, measured in pounds of useable weight, was 110.7 pounds while the mean household harvest was 262.2 pounds. The average number of wild resources used in the communities and areas in the Kenai Peninsula ranged from 7.6 to 21.5 (Fall et al. 2000:240–245).

Effects of the Proposal

If the proposal is adopted, the customary and traditional uses of moose in Unit 7 by residents of Hope residents would be recognized. This would enable Federally qualified subsistence users to harvest moose under Federal subsistence regulations from Federal public lands in Unit 7.

If the proposal is rejected, customary and traditional use of moose in Unit 7 by Hope residents would not be recognized. In this case, Hope residents would continue harvesting moose under State regulations.

OSM CONCLUSION

Support Proposal WP10-33.

Justification

Hope (including Sunrise) residents have a customary and traditional pattern of harvesting moose in Unit 7 and demonstrate a historic pattern of harvesting moose dating back to the turn of the 20th century. In a household subsistence use study conducted in 1990 to 1991, moose were widely used by 67% of the community. From 1977 through 2009, 46 moose were harvested by Hope residents in Unit 7 with an overall success rate of 18%. Moose hunting also occurs outside of Unit 7 due to the low availability of moose in Unit 7. Mapping of Hope's subsistence use areas also indicates that moose are harvested by Hope residents in Unit 7.

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APPENDIX A

Summary of the Regulatory History of the Federal Subsistence Board Customary and Traditional Use Determinations for Moose on the Kenai Peninsula

- 1990: Federal Subsistence Management Program established; State's customary and traditional use determinations adopted.
    - State recognized the communities of Nanwalek and Port Graham as having customary and traditional use of moose in an area in the extreme southwest of Unit 15C, but the road-connected portion of the Kenai Peninsula—which is most of Units 7 and 15—was determined by the State of Alaska to be a nonsubsistence area, thus the Federal Board determined that Units 7, 15A and 15B had "no subsistence" determinations for moose.
- April 1994: Federal Subsistence Board (Board) deferred all customary and traditional use determinations for all large mammals on the Kenai Peninsula, until a process and schedule for making customary and traditional use determinations statewide could be established (FSB 1994).
- July 1995: Board made a positive customary and traditional use determination for moose for Unit 15 for residents of Port Graham, Nanwalek, Seldovia, and Ninilchik, but the Board deferred customary and traditional use determinations for Hope and Cooper Landing.
- May 1996: After an extensive Federal process involving data gathering, public hearings, and court decisions, Board made the customary and traditional use determinations for Unit 15 moose for Nanwalek, Ninilchik, Port Graham and Seldovia.
    - Decisions on the remaining species and communities were deferred until rural determinations on the Kenai Peninsula could be made (FSB 1996).
- 1997: Board adopted Proposal 18B that provided a customary and traditional use determination for moose for the residents of Chenega Bay and Tatitlek in the Kings Bay drainage in Unit 7.
- Hope and Sunrise's customary and traditional use determinations for moose in Unit 7 were not considered in 1997.
- 2003: Board addressed customary and traditional use determinations for moose in Unit 15, but again deferred making customary and traditional use determinations until the completion of a report by the Institute for Social and Economic Research on rural determination and methodology and the subsequent review of rural determinations as required by regulation on a 10-year basis (FSB 2003:102).
- 2006: Board made its final rural determinations in 2006.
- 2008: Board considered Proposal WP08-22a and added Cooper Landing to the existing customary and traditional use determinations for Units 7 and 15.

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-33. The residents of Hope and Sunrise, based on an analysis of the eight factors, have demonstrated a customary and traditional pattern of harvesting moose in Unit 7.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-33

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-33
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-33: This proposal requests a positive customary and traditional use determination for residents of Hope and Sunrise for moose in Game Management Unit 7.

Customary and Traditional Determination: There is ethnographic documentation that the Hope-Sunrise area was traditional Dena'ana territory, and Dena'ana had a tradition of hunting moose. The report cites the appropriate literature on the Dena'ana and on the influx of miners starting in the late 1800s, as well as their use of wild resources. Most Dena'ana moved out of the communities nearly a half century ago.

The Division of Subsistence conducted a household survey in Hope and Sunrise in 1991 and found use of moose by the residents of Hope. The federal staff analysis appropriately cites that research (Seitz et al. 1992). However, studies indicate that the majority of moose harvested by Hope residents from 1977 to 2009 were harvested outside of Unit 7, indicating there is not a customary pattern of harvesting a moose population in Unit 7 by residents of Hope.

The federal staff analysis justifies presenting insufficient evidence specific to the customary and traditional use of moose by residents of Hope and Sunrise by stating: "*the Board makes customary and traditional use determinations based on a* ***holistic*** *application of these eight factors. . . . The Board makes customary and use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors."* The federal analysis provides no factual basis, not even facts generally supporting a "holistic application" of the eight factors that substantiates a finding of customary and traditional use of the population of moose in Unit 7 by the residents of Hope-Sunrise. The Ninth Circuit Court of Appeals confirmed that factual findings in a customary and traditional determination must be supported by substantial evidence in the record. Therefore, specific information is needed to support a claim that the community or area even "generally exhibit" the eight federal regulatory factors, such as specific references in the literature they cite.

In fact, the tables provided from state harvest reports indicate that **an average of less than 5% of the community of Hope** even acquired harvest tickets and reported hunting in Unit 7 for over 30 years. This indicates there is no community pattern of moose hunting in Unit 7.

Recommendation: Oppose/Neutral. Although the federal staff analysis tries to paint a picture of moose use by the community, the majority of moose hunting occurs outside of Unit 7, and there is insufficient evidence that people living in Hope-Sunrise "generally exhibit" or "holistically" meet the eight regulatory factors to make a positive customary and traditional determination of use of a moose population in Unit 7 by residents of Hope-Sunrise.

WP10-34 Executive Summary	
General Description	Proposal WP10-34 requests that the wolverine season be managed independently from the lynx season in Unit 11. *Submitted by Corey Schwanke*
Proposed Regulation	**Unit 11—Wolverine (Trapping)** *No limit* *Nov. 10.–Feb. 28* ~~*Special Provision: The Assistant Regional Director for Subsistence Management, FWS, is authorized to align the Federal subsistence wolverine trapping season with the Federal subsistence lynx seasons in Unit 11.*~~
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**5 Support**

STAFF ANALYSIS
WP10-34

ISSUES

Proposal WP10-34, submitted by Corey Schwanke, requests that the wolverine season be managed independently from the lynx season in Unit 11.

DISCUSSION

The proponent states that it is a disservice to trappers to align wolverine seasons with lynx seasons. He notes that lynx populations are cyclic, while wolverine populations are not. The proponent requests independent seasons for both species using abundance based information.

Existing Federal Regulation

Unit 11—Wolverine (Trapping)

No limit	*Nov. 10.–Feb. 28*
Special Provision: The Assistant Regional Director for Subsistence Management, FWS, is authorized to align the Federal subsistence wolverine trapping season with the Federal subsistence lynx seasons in Unit 11.	

Proposed Federal Regulation

Unit 11—Wolverine (Trapping)

No limit	*Nov. 10.–Feb. 28*
~~*Special Provision: The Assistant Regional Director for Subsistence Management, FWS, is authorized to align the Federal subsistence wolverine trapping season with the Federal subsistence lynx seasons in Unit 11.*~~	

Existing State Regulation

Unit 11—Wolverine (Trapping)

No limit	*Nov. 10.–Jan. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11and consist of 97% National Park Service (NPS), 3% Department of Agriculture, U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) lands (**Unit 11 Map**).

Customary and Traditional Use Determinations

All rural Alaska residents are eligible to trap wolverines under Federal subsistence regulations in Unit 11. However, in order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

In 1990, the Federal Subsistence Board (Board) adopted temporary subsistence regulations for wolverine trapping that aligned with State regulations. The Unit 11 wolverine trapping season was from November 10 through February 28 with no harvest limit. For regulatory year 1992/93, the Federal subsistence wolverine trapping season was reduced by 28 days to November 10 through January 31, and the harvest limit was reduced to 2 wolverines in response to State and National Park Service manager's perception that the wolverine population had declined. At the same time, Federal public lands were closed to wolverine trapping except by Federally qualified rural Alaska residents. Likewise, State regulations shortened the season and reduced the harvest limit to two animals on non-Federal public lands.

In April 1994, the Board rejected a proposal to allow non-Federally qualified trappers to take wolverines in Unit 11 on Federal public lands. In 1997, the Board adopted WP97-32, removing the closure for trapping wolverines on Federal public lands by non-rural trappers in Unit 13 and modified it to include Unit 11. In addition, in 1997 both the Federal Board and the State dropped the harvest limit that had restricted trappers to 2 wolverines.

The issues raised in WP10-34 were addressed during the 2008 Federal Subsistence Management Program wildlife regulatory process through two proposals (WP08-03 and WP08-04) that were submitted by local trappers. At its public meeting in Cordova in March 2008, the Southcentral Alaska Subsistence Regional Advisory Council supported WP08-03/04 noting that, "…trappers prefer to have the trapping season for wolverine aligned with the lynx season so that subsistence trappers can keep wolverine caught incidentally in traps set for lynx." At its public meeting in Tok in March 2008, the Eastern Interior Alaska Subsistence Regional Advisory Council supported WP08-03/04 noting that "Passage of this proposal would provide an additional opportunity for subsistence users to keep wolverines incidentally harvested when trapping for lynx where presently they have to surrender them to the Alaska Department of Fish and Game."

At the spring 2008 Board meeting, ADF&G opposed proposal WP08-03/04, but noted that it "… can support in-season authority being delegated to either the National Park Service or to the Office of Subsistence Management to adjust the wolverine trapping season so that it matches the lynx trapping season"(FSB 2008). Southcentral Regional Advisory Council (Council) Chair Ralph Lohse explained to the Board that, "There's no way you can trap lynx without catching wolverine but there's no way you can trap wolverine without catching lynx." Chairman Lohse also noted that the idea of WP08-03/04 "… was to align the lynx and wolverine season so that somebody's not tempted to keep a wolverine after the lynx season is closed, or to keep lynx after the wolverine season's closed"(FSB 2008). On April 30, 2008, the Board voted to align the Federal subsistence wolverine trapping season with the Federal subsistence lynx seasons in Unit 11 and delegated its authority to do so to the Assistant Regional Director, Office of Subsistence Management in coordination with the State of Alaska regulations based on health of the lynx population in Unit 11. Based on the lynx season at that time, this resulted in the wolverine trapping season in Unit 11 being extended through the month of February.

At its public meeting in Anchorage in March 2010, the Council supported WP10-34. Chairman Lohse and other Council members did not feel that there are wolverine conservation issues associated with this proposal.

Biological Background

Little research has been done on wolverine (*Gulo gulo)* in Unit 11. Knowledge about the biology of this species comes from other parts of Alaska, North America, and Scandinavia. Wolverines occur at low densities of 8 to 13 animals/1,000 mi^2 in parts of Southcentral Alaska (Golden 2007, Becker 1991, and Becker and Gardner 1992). Wolverines have an extremely large home range that varies from about 19 to 154 mi^2 for females and 89 to 610 mi^2 for males (Hornocker and Hash 1981, Gardner et al. 1993, Magoun 1985, Whitman et al. 1986, Banci 1987, Copeland 1996). Wolverines are opportunistic predators and scavengers, eating just about anything they can find or kill. They have a seasonal pattern to primarily scavenge in winter and use a variety of prey in summer, e.g. rodents, snowshoe hares, birds, and carrion. In a study in the Yukon Territory, snowshoe hare contributed the highest proportion of any single prey species to the wolverine's diet (Banci 1987).

Wolverines are solitary creatures throughout most of the year, and are active at any time of the day, year-round. Male wolverines range widely throughout most of the year (Golden 1997). Wolverines are polygamous and exhibit delayed implantation; they mate in summer, and fertilized eggs remaining in the blastocyst stage until early to mid-winter. The reproductive capacity of wolverines is limited; the abundance of food determines whether pregnancy will be maintained, and the number of young that will be born. Wolverine research in North America and Scandinavia found that only 38–57% of the females reproduced each year, and that the annual birth rate was only 0.4–0.9 kits/female (Magoun 1985, Copeland 1996, Persson 2003, and Krebs and Lewis 1999). Pregnant females den primarily in higher elevations of alpine, subalpine, taiga, or tundra habitat (Magoun and Copeland 1998). Council Chairman Ralph Lohse reported that in Unit 11 pregnant female wolverines den mostly in the inaccessible higher mountainous areas (FSB 2008). In Alaska and the Yukon Territory, wolverine kits are born predominantly from mid-February through March (Rausch and Pearson 1972). Juveniles are weaned in 9 to 10 weeks, begin to travel with their mothers in early summer, and are independent by late summer. Persson (2003) found that the annual recruitment of juveniles to one year of age was only 0.5 kits/female.

Human caused mortality is an important source of adult wolverine mortality according to many North American studies (Hornocker and Hash 1981, Whitman and Ballard 1983, Magoun 1985, Banci 1987). Banci (1994) and Copeland (1996) reported that starvation and predation are the most common natural causes of wolverine mortality. Persson (2003) found that predation by adult wolverines was the most important cause of juvenile wolverine mortality during their first summer. It appears that few wolverines live longer than 5 to 7 years in the wild, however some do survive to 13 years of age (Banci 1987, Liskop et al. 1981, Rausch and Pearson 1972).

Reports by hunters and trappers, harvest records, and field observations by ADF&G biologists are the main source of wolverine abundance information for Unit 11 (Schwanke and Tobey 2007). The species relative abundance index is used for all species of furbearer and is derived from a comparison of snowshoe hare densities obtained during fieldwork and trapper questionnaire responses (Brand and Keith 2007).

Wolverines are considered common in the mountainous regions of Units 11 and 12 and relatively scarce in the lower elevations (Schwanke and Tobey 2007). Some adult females may not be active prior to giving birth and subsequently the likelihood of being trapped remains small (Golden 2007).

Long distance dispersal of wolverine has been documented in Unit 13 (Golden 1997) and is a potential source of population redistribution into vacant habitat. Cross immigration between Units 11 and 12 could occur since Unit 12 is adjacent to Unit 11. Research in Southeast Alaska showed that there is little interchange of genetics between wolverine populations in Alaska and adjacent Canadian provinces (Magoun et al. 2008).

Habitat

In Alaska, wolverine dens are usually long complex snow tunnels covered by at least one meter of snow. It appears that wolverines are able to reduce predation on the kits by retreating into mountainous regions with long-lasting, deep snow cover; such areas have lower late-winter populations of wolves (Magoun and Copeland 1998). Snow cover that persists through the spring denning period appears to be vital to wolverine reproduction (Ruggiero et al. 2007). Hornocker and Hash (1981) found that wilderness and remote country are essential to wolverine population viability. It is important that female wolverine have suitable habitat for refugia to successfully den and rear kits without having to make excursions into trapping areas (Magoun et al. 2008, Persson 2003). Most of Wrangell St. Elias National Park and Preserve is remote with difficult access and lack of roads. Therefore, the trapping pressure in Park and Preserve is light (Schwanke and Tobey 2007) and there are large areas of unfragmented refugia.

Harvest History

Since 1971, the State has required that wolverine be sealed; this has been the primary means for tracking harvest data. Based on general observations and trapper reports, it appears that wolverine numbers are stable in the mountainous areas of Unit 11. The majority of harvested animals in Unit 11 are from trapping (**Table 1**). Since 2001, an average of 10 wolverine per year have been harvested primarily from the foothills in Unit 11 with an average of 70% being male (**Table 1**; Schwanke and Tobey 2007, ADF&G 2009). The extension of the wolverine trapping season that the Board implemented in spring 2008 began in February 2009. In February 2009, 3 wolverines were harvested in Unit 11 under this new Federal regulation; all were males.

Table 1. Unit 11 wolverine harvest, 2001–2005 (Schwanke and Tobey 2007) 2005–2009 (ADF&G 2009 and 2010)

Regulatory Year	Reported Harvest						Method of Take				
	Male	%	Female	%	Unk	Total	Trap-snare	%	Shot	%	Unk
2001/02	2	40	3	60	1	6	5	83	1	17	0
2002/03	2	67	1	33	0	3	3	100	0	0	0
2003/04	7	78	2	22	0	9	8	89	1	11	0
2004/05	13	81	3	19	0	16	16	100	0	0	0
2005/06	10	83	2	17	0	12	11	92	1	8	0
2006/07	2	29	5	71	0	7	6	86	1	14	0
2007/08	15	75	5	25	0	20	20	100	0	0	0
2008/09	6	75	2	25	0	8	8	100	0	0	0

Effects of the Proposal

Board action on that Proposal WP08-03/04 resulted in a 1 month extension to the Unit 11 wolverine trapping season beginning with trapping during the month of February 2009. The current regulation allows trappers to retain wolverine that are taken during the lynx trapping season. The 2008 Board decision was based on an understanding that the current wolverine population in Unit 11 would be able to support the 1 month extension to the trapping season.

Lynx trapping seasons for Unit 11 are currently adjusted by the Assistant Regional Director, Office of Subsistence Management in coordination with the State of Alaska regulations based on health of the lynx population in Unit 11. If Proposal WP10-34 were adopted, the Unit 11 wolverine trapping season would not be linked with the Unit 11 lynx trapping season, and it would extend from November 10 to February 28. If WP10-34 were adopted and the Unit 11 lynx season is shortened in the future, lynx that are caught in wolverine sets after the close of lynx season could not be retained by a trapper. A difference between Federal and State regulation could create enforcement issues in areas of mixed land ownership.

At its public meeting in Anchorage in March 2010 the Council supported WP10-34 and did not feel that there are conservation issues associated with this proposal. When the Unit 11 lynx population declines and the lynx season is shortened, it does not appear that incidental harvest of lynx in wolverine sets would create a conservation concern. The Council discussed the fact that the female wolverine are denning in the high country while trapping occurs in the lowlands. Only male wolverine were harvested during the 1 month extension to the Unit 11 wolverine trapping season in February 2009. Assessments based on one year's data are limited.

OSM CONCLUSION

Support Proposal WP10-34

Justification

The Council supported WP10-34. It does not appear that there are conservation concerns associated with the proposal. Based on harvest data from February 2009, only male wolverine were taken during the 1 month extension to the trapping season. It will be important to continue to closely monitor the wolverine harvest into the future.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support proposal WP10-34. The current wolverine population is stable and no conservation concern exists. Local trappers support having the wolverine season managed independently from the lynx season.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-34

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-34
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-34 Unit 11: This proposal would remove a special provision allowing the Assistant Regional Director for Subsistence Management to align the wolverine trapping season with the lynx season and would set a permanent date for the federal subsistence wolverine trapping season in Game Management Unit 11 that extends through February 28.

Introduction: Reported wolverine harvest in Unit 11 during the last 24 years ranged from 2 to 27 annually and averaged 10 per year. Wolverine harvests since initiating sealing requirements in 1971 to the reduction in season length in 1985, averaged 28 per year (range = 12–55).

Impact on Subsistence Users: If adopted, federal subsistence trappers will have the opportunity to continue harvesting lynx and wolverine despite low lynx abundance in Unit 11, when the federal subsistence trapping season for wolverine will not be shortened along with lynx.

Opportunity Provided by State: State regulations authorize wolverine trapping from November 10 through January 31, with no bag limit. Lynx trapping seasons are adjusted yearly under the Lynx Harvest Tracking Strategy that reduces trapping season length during lynx cyclic lows.

Conservation Issues: During the 1970s and early 1980s, the Department became concerned about likely overharvest of wolverines in many Game Management Units in Southcentral Alaska, including Unit 11. It was apparent that wolverines were particularly vulnerable to trapping by aircraft after January when daylight lengthens and trappers can follow wolverines to dens and set Connibear traps at den holes. Wolverines are also vulnerable to being taken at any baited set, particularly lynx sets. Recent research has also shown that when female wolverines have their kits (mid-February to mid-March), they increase their hunting and traveling in order to supply their increased energetic demands of lactation. Increasing harvests during February could reduce productivity and kit survival and reduce long term harvest opportunities for all users**.**

Enforcement Issues: Differences in federal and State regulations resulting from adoption of this proposal would further complicate trapping regulations and create enforcement issues in areas of mixed land ownership. Chair of the Southcentral Regional Advisory Council stated to the Federal Subsistence Board April 29, 2008, (transcript p. 165) "*if you're trapping lynx, you can't help but catch a wolverine. So if the one season's open, the other one should be open. If the one season's closed, the other one should be closed.*"

Other Comments: On April 30, 2008, the Federal Subsistence Board voted to align the federal subsistence wolverine trapping season with the federal subsistence lynx seasons in Unit 11 and delegated authority to coordinate with State regulations based on health of the lynx population in Unit 11. The current season dates for wolverine were adopted during that Federal Subsistence Board meeting after considerable deliberation and supported by the Regional Advisory Councils. No new data or extenuating circumstances justify changing it.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-34**.** Two years ago, Mr. Wilson and I submitted proposals to change the wolverine season in Unit 11 to the period from November 10 through February 28. Although the board temporarily made this change, they tied it to the lynx season so that when the lynx season is shortened the wolverine season will also shorten. This was not the intent of our proposals. I would like the wolverine season to begin November 10 and end February 28 without being tied to lynx season. My reasons for wanting this change are still the same, so I will only briefly mention them here.

1. Unit 11 has a healthy wolverine population with vast areas so remote that there is no trapping pressure.
2. Most serious traplines in Unit 11 require river travel, which is usually not possible before mid- to late-December. This inevitably cuts off the first five weeks of trapping season.
3. All GMUs in Alaska which have a wolverine season (except Unit 13) are open until Feb. 28 or later and are not tied to the lynx season.
4. It appears that the wolverine season was tied to lynx season in order to eliminate by-catch of lynx in wolverine sets when the lynx cycle is low. However, as a trapper, I find it extremely rare to catch lynx in purpose-made wolverine sets when the lynx population is high and completely improbable when the lynx population is low.

The above reasons are also supported by the McCarthy-area trappers.

Kieth Rowland, McCarthy, Alaska

Support Proposal WP10-34**.** When I and Mr. Rowland submitted our proposal a couple years ago to extend the wolverine season to the end of February, the proposal did not include an extension of the season to be tied to the lynx season. The board took it upon themselves to mate up the two seasons without either proponent requesting it.

As a trapper in Unit 11, I assure you that trappers in this unit are rare compared to unit 13. Access and native lands restrict use; trappers take few too few wolverine to affect the population as a whole or in specific trapping areas. Trappers in Unit 11, south of the Wrangell Mountains, do not parallel each other's traplines so there is plenty of open country where wolverines are untargeted. I estimate that over 99% of unit 11 south of the Wrangell's is free of trappers. I will be fortunate to get six weeks of trapping in those areas and if this proposal doesn't pass, that six weeks will be two weeks or none at all in the future.

In regards to by-catch issues, I put out sets specifically targeting wolverine and rarely catch a lynx. It's hard to get a lynx to crouch into a box or bucket and get caught. Footholds traps for wolverine are set where wolverine are present and cats are not. Limiting the wolverine trapping season on the basis of by-catch in Unit 11 is a far stretch for game management of this valuable resource. Trappers don't come close to making a dent in the wolverine population from their catch in unit 11. Lynx populations are very cyclic and wolverine populations are, for the most part, not, so they need not be tied together in any way.

Dean Wilson Jr., Kenny Lake

Support Proposal WP10-34**.** Unit 11 is 12,800 square miles, rugged, and remote, with only a few small communities. Why unnecessarily restrict the few who trap there? The 20-year mean annual wolverine harvest is 9.8 wolverine, and harvest density is low. The population is one of the healthiest in the state. The female take in the harvest is small, 10-year mean of 30%, and validates the health of the population. Overharvest in the unit is absolutely not a concern and aligning the wolverine season with lynx was unnecessary.

Using the lynx harvest tracking strategy, when lynx are not at or near their peaks, will shorten the season as 45 days; it will probably be the shortest in the entire state. This makes no sense considering it is one of the state's healthiest wolverine populations. All adjacent GMUs, except Unit 13, and over 90% of the state have permanent wolverine seasons lasting into February. All of the managers in those areas are fine with a wolverine season ending February 28th, and even later in March (as with Unit 12) or as late as April 15 in more remote parts of the state. No other furbearer season, except lynx during non highs, closes prior to February 28th, and most land furbearer trapping seasons end Feb 28th in Unit 11 (fox, marten, mink, ermine, etc.). Trappers will now face difficulties associated with a short wolverine trapping season.

Under the current federal management strategy, federal subsistence users are going to have a shorter wolverine trapping season than state users during times of non lynx highs, which is over half the time during a typical lynx cycle. Yet the Board did not discuss the negative effects of a very short wolverine season during lynx lows. The Board was hung up on "by-catch" issues in 2008, which was a very small factor in my proposal. Lynx are rarely, if ever, caught in wolverine sets during lynx lows. The main reason I submitted this proposal was to provide more opportunity to trap wolverine under the sustainability guideline. Harvest might increase slightly, but will probably just occur later when a season extends into February. When the season was shortened in 1992, harvest did not change much. The season I propose will allow trappers to handle cases where wolverine are destroying their marten sets and eating their valuable furs.

During the Board of Game meeting in March 2009, ADF&G stated on record that during the next lynx low, the lynx season will be reduced on the back end, not the front end as is typically done in Unit 11 and 13. So if a 45-day lynx season is warranted, it will more than likely be a November 10–December 31 season. If the wolverine season stays aligned with the lynx season, opportunity to trap wolverine on most of Unit 11 trapper's "hard to reach" lines will be reduced to almost nothing. These lines are in prime wolverine areas.

ADF&G's concern about "vulnerability when denning" is questionable when referring to a season closing on February 28th. Plenty of testimony was offered in 2008 suggesting denning females are less prone to get caught, something I wholeheartedly agree with. Females typically den up high and their ranges shrink considerably once birth takes place, which makes them less vulnerable to catch. However, I do not think wolverine in Unit 11 even den in February. The 2008 Federal Board's transcripts on the matter show that Mr. Reakoff and Mr. Lohse have similar thoughts).

Corey Schwanke of Glennallen

Support Proposal WP10-34. The commission heard public comment in support of the proposal. The two species are on different cycles and consequently should be managed independently. The proposal protects subsistence opportunity. If it is not approved, the wolverine season could be unnecessarily shorted when the lynx season dates are adjusted.

Wrangell-St. Elias National Park Subsistence Resource Commission

Support Proposal WP10-34. We support WP10-34 to separate the wolverine trapping season for Unit 11 from the lynx trapping season. This proposal does not shorten the wolverine season, and so we support it. If the lynx season was changed, then the wolverine season would change, too. This could shorten the wolverine season, if the lynx season was changed to a shorter trapping season. Two species with different cycles should be managed differently. We would not support a shorter season for wolverine though.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-35 Executive Summary	
General Description	Proposal WP10-35 requests that the harvest limit of 1 antlered bull moose for Unit 13E be extended to Traditional Use Areas (TUAs) in Denali National Park and an additional harvest season be established from Dec. 1–Jan. 15. *Submitted by the Native Village of Cantwell*
Proposed Regulation	**Unit 13E (TUA Denali NPS lands) — Moose** *1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household* — *Aug. 1–Sept. 20* ***OR*** ***The Denali National Park and Preserve Superintendent will announce the closure when the quota of 10 bull moose is reached.*** — ***Dec. 1–Jan. 15*** **Unit 13E — Remainder — Moose** *1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household* — *Aug. 1–Sept. 20*
OSM Conclusion	**Support** Proposal WP10-35 **with modification** to clarify the regulatory language and remove the quota of 10 bull moose to allow managers flexibility in setting a sustainable harvest depending upon annual moose population fluctuations. **Unit 13E (TUA Denali NPS lands)—Moose** *1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household* — *Aug. 1–Sept. 20* *OR* ***Quotas and any needed closures may be announced by the Superintendent of the Denali National Park and Preserve, in consultation with ADF&G.*** — ***Dec. 1–Jan. 15*** **Unit 13E—Remainder—Moose** *1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household* — *Aug. 1–Sept. 20*

continued on next page

WP10-35 Executive Summary *(continued)*	
Southcentral Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**Proponent's request to withdraw proposal** **1 Support**

STAFF ANALYSIS
WP10-35

ISSUES

Proposal WP10-35, submitted by the Native Village of Cantwell, requests that the harvest limit of 1 antlered bull moose for Unit 13E be extended to Traditional Use Areas (TUAs) in Denali National Park and an additional harvest season be established from Dec. 1–Jan. 15.

DISCUSSION

The proponent requests that a winter season be established to allow for moose harvest via snowmachine in the Denali National Park. In 2008, the Denali National Park and Preserve placed limits on off-road vehicle (ORV) use within the Park and restricted ORV use to four routes within the Cantwell TUA. The new regulation does not affect the use of snowmachines for subsistence use within the area, but the season for moose in Unit 13E is prior to snowfall. The proponent requests a winter moose season from Dec. 1 to Jan. 15 with the Superintendent of Denali National Park having delegated authority to close the hunt via emergency closure when a quota of 10 moose for both the fall and winter season is reached to allow managers to have adaptive management to maintain conservation goals.

Existing Federal Regulation

Unit 13E — Moose

1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1–Sept. 20*

Proposed Federal Regulations

Unit 13E(TUA Denali NPS lands) — Moose

1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1–Sept. 20*
	OR
The Denali National Park and Preserve Superintendent will announce the closure when the quota of 10 bull moose is reached.	***Dec. 1–Jan. 15***

Unit 13E — Remainder — Moose

1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1–Sept. 20*

Existing State Regulations

Unit 13—Moose

1 bull by Community permit for residents	*Aug. 10–Sept 20*
OR	

One bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tine on at least one side for residents	*Sept. 1–Sept. 20*
One bull by drawing permit	*Sept. 1–Sept. 20*
One bull with 50-inch antlers or antlers with 4 or more brown tine on a at least one side for non-residents by drawing permit	*Sept. 1–Sept. 20*

Extent of Federal Public Lands

Federal lands comprise 6% of Unit 13E and are managed by the Denali National Park (See **Unit 13 map**). The Cantwell Traditional Use Area within Denali National Park is represented in **Figure 1**.

Customary and Traditional Use Determinations

Rural residents of Unit 13, Chickaloon, McKinley Village, Slana and the area along the Parks Highway between mileposts 216 and 239 have a positive customary and traditional use determination for moose in Unit 13E. There is no Federal subsistence priority for residents of Denali National Park headquarters.

Regulatory History

Since 1998, the Federal subsistence moose hunting regulations for Unit 13E have allowed one antlered bull moose per household by Federal registration permit only, from Aug. 1 to Sept. 20.

The State general harvest regulations for moose in Unit 13E were changed in 2000 when the designation of a legal bull went from 3 or more brow tines or 50-inch antler spread to a 4- or more brow tines or 50-inch antler spread and has been in effect ever since. The same year, non-resident general moose hunting was eliminated from Unit 13 due to low moose population numbers. In addition, ADF&G also managed a State Tier II hunt (TM300) for one bull moose by permit Aug. 15–Aug. 31 between 1995 and 2008.

In 2008, the State Tier II hunt was changed to add a community harvest (CM300) and the season was modified to Aug. 10–Sept. 20 with an upper harvest limit of 15 any-bull moose for Unit 13E and an unlimited number spike/fork, 50”, and 4 or more brow tine moose. For residents, drawing permit hunts (DM330-334) for one bull moose from Sept. 1 to Sept. 20 were added as a new harvest option in select areas where moose numbers have increased. For non-residents, drawing permit hunts (DM 335-339) were established to harvest one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side from Sept. 1 to Sept. 20. These three hunts are in addition to the State general harvest of one bull moose with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side from Sept.1 to Sept. 20 for residents.

Management Direction

Current ADF&G management objectives for the moose population in Unit 13 are to increase to 20,000–25,000 with a minimum of 25 bulls:100 cows and 25–30 calves:100 cows, and 10 yearling bulls:100 cows in the fall. In addition, the human use management objective includes providing the potential to harvest bulls and cows to a combined total of 1,200–2,000 animals and provide subsistence harvest of 300–600 moose per year.

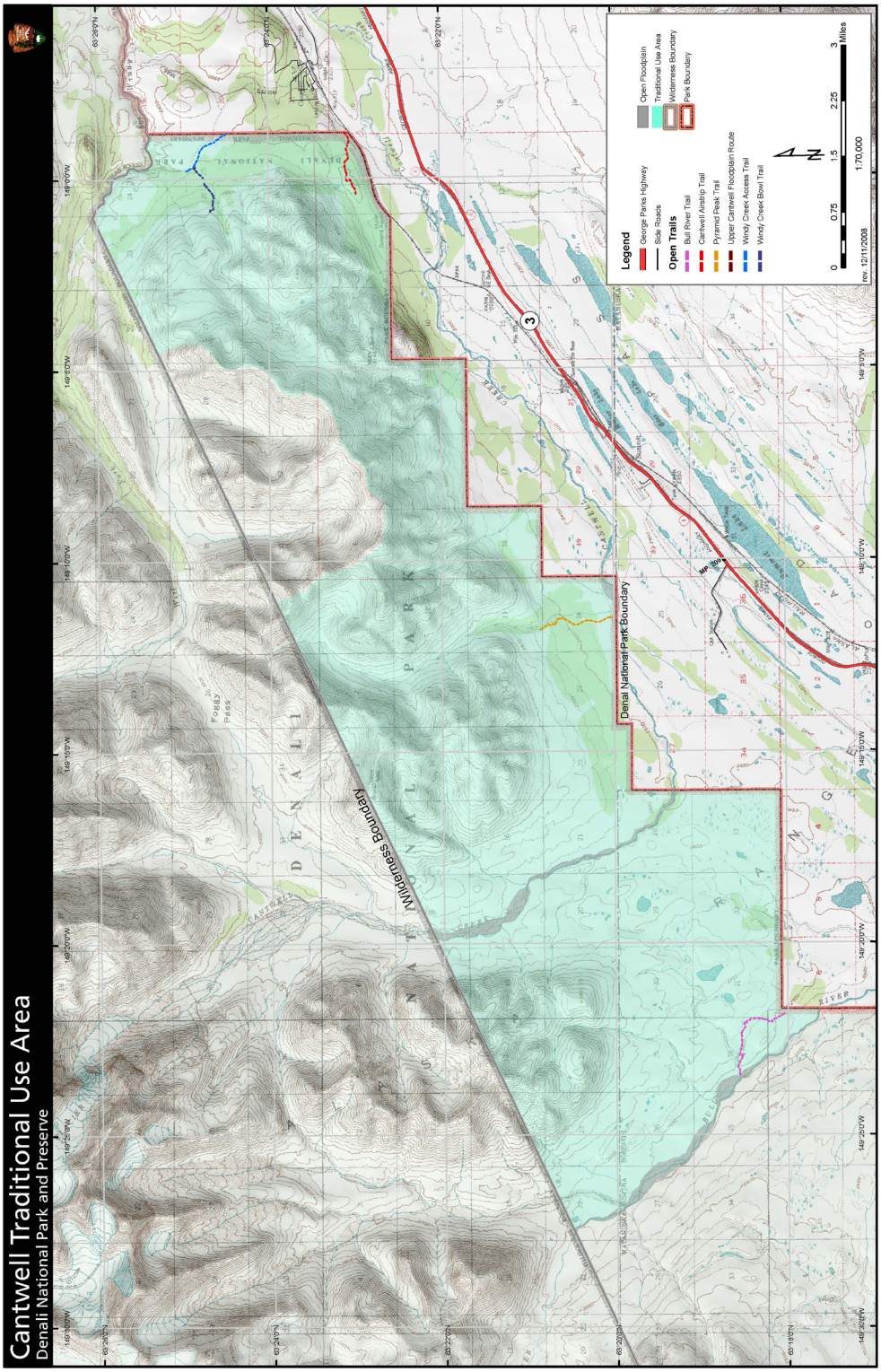

Figure 1. 2008 Denali National Park and Preserve Cantwell Area Moose Survey Units. (Courtesy of NPS)

Biological Background

In 2008, the NPS conducted aerial surveys in the fall to acquire composition data and population trend data for the Cantwell area 1,085 km^2 (**Figure 1**) and estimated the moose density at 0.61 moose/mi^2. In the Cantwell survey area the calf:cow ratio was 28:100 and the bull:cow ratio was 40:100 (n= 255 moose) (**Table 1**). Calves, bulls, and cows represented 17%, 24%, and 59% of the estimated population, respectively (Owen and Meier 2009). Four percent of the Cantwell population estimate would allow a harvest of ten antlered bull moose which is a conservative percentage for sustainable harvest for moose populations. ADF&G has developed a winter severity index for Unit 13 that records snow depths to determine snow pack and severe conditions that might effect moose survival (Testa 2004). The winter of 2004–2005 was classified as severe with record snow depths in Unit 13E and subsequent lower moose survival (Tobey and Schwanke 2008). Deep snow depths is correlated with direct mortality of juvenile and adult moose either from malnutrition (Ballard et al. 1996, Modafferi and Becker 1997) and/or winter cumulative effects of malnutrition on recruitment (Solberg 1999) or susceptibility to predators (Paragi and Kellie 2008, Tobey and Kelleyhouse 2006).

Table 1. Moose cohort ratios and estimated populations, and densities (± 90% confidence intervals) for Cantwell area moose surveys, Denali National Park and Preserve, 1992–2008. (Owen and Meier 2009).

Year	Calves: 100 cows	Bulls: 100 cows	Estimated population	Density Estimate moose/ km^2
1992	28	29	317 ± 13	0.51
1993	59	71	223 ± 10	0.37
1995	24	28	200 ± 16	0.36
2003	28	38	271 ± 98	0.26
2005	19	47	257	0.25
2008	28	40	255	0.24

Harvest History

Historically, Unit 13 has been an important area for moose hunting in Alaska due to the proximity to major human populations within the State. Throughout the 1960s and early 70s, annual harvests averaged more than 1,200 bulls and 200 cows (Tobey 2004). During this time, harvests occurred in both fall and winter seasons, however moose numbers began to decline. By the late 1970s harvests were reduced to approximately 775 bulls annually, cow harvests and the winter season were eliminated, but the bull:cow ratios were still low. In response, the ADF&G changed the harvest of any bull to a harvest of a bull with an antler spread of at least 36 inches or 3 brow tines on at least one antler in 1980. This harvest regime helps to promote growth of the moose population. Subsequently the harvests increased as well, peaking in 1998 when 1259 moose were reported harvested (Tobey 2004). However, since 1990 the State harvest regulations have been revised several times in response to low bull:cow ratios, severe winter mortality, and increased predation. Since 2001, moose harvest and population levels have continued to increase throughout Unit 13, but Unit 13E still has low bull:cow ratios (Tobey and Schwanke 2008).

Currently, the Federal harvest season in Unit 13 is from Aug. 1–Sept. 20 which allows for a longer subsistence opportunity for Federally qualified subsistence users than for State users. The State general

harvest season is from Sept. 1–Sept. 20 in Unit 13 and is the predominate source of harvest under State regulations (**Table 2**). Currently Federally qualified subsistence users on average harvest four bull moose during the fall season within Unit 13E which would allow, on average, six bull moose to be harvested in the winter season (**Table 2**). Prior to 2009, the State Tier II hunt (TM300) provided a State subsistence opportunity from Aug. 15–Aug. 30. This has been eliminated and a community harvest (CM300) from Aug. 10–Sept. 20 was established for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina and Kluti Kaah. In addition, Alaskan residents may participate in the Sept. 1–Sept. 20 season for spike-fork or 50-inch antlers or antlers with 4 or more brow tine on at least one side bull moose.

Current Events

At the Southcentral Regional Advisory Council meeting in March 2010, the Subsistence Manager for the Denali National Park and Preserve informed the Council that the Denali Subsistence Resource Commission opposed the proposal due to recent information that the Native Village of Cantwell may no longer support its own proposal. The Subsistence Manager for the Denali National Park and Preserve had polled some Cantwell residents who expressed concern that the State may limit the new Ahtna Community hunt administered under State regulations if the proposal was supported. Some people also expressed concerns over the potential unethical behavior of hunters using snowmachines to harass winter moose. At least one member of the Council confirmed that the Native Village of Cantwell had changed its position on its own proposal, due in part to concerns about adverse implications for the Ahtna Community Harvest permit if it continued to support the proposal (FWS 2010). Despite this new information, the National Park Service still supports the proposal and believes it would be beneficial for Federal subsistence users and the best way to address ORV use in the Cantwell Traditional Use Area.

Effects of the Proposal

Since 2008, there has been access restrictions placed on the Cantwell Traditional Use Area due to resource damage from ORV's which has reduced the ability for Federal qualified subsistence users to harvest moose during the fall season. However, snowmachines are exempt from the TUA area restriction, if this proposal is adopted it would allow subsistence users the opportunity to utilize snowmachines to harvest moose after snowfall. It would also establish a winter season which would provide an additional 45 days of opportunity for Federally qualified subsistence users. Because the winter season would be managed through a quota that encompasses both the fall and winter seasons, the additional opportunity in the form of hunting days would have limited effects on the moose population in Unit 13E.

OSM CONCLUSION

Support Proposal WP10-35 **with modification** to clarify the regulatory language and remove the quota of 10 bull moose to allow managers flexibility in setting a sustainable harvest depending upon annual moose population fluctuations.

Unit 13E (TUA Denali NPS lands)—Moose

1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1–Sept. 20*

OR

Table 2. Results of State and Federal moose hunts in **Unit 13E** from 2004–2007 (ADFG 2009 and FWS 2009).

Year	State Tier II harvest (TM300) Sept 1–Sept 20	General harvest Sept 1–Sept 20	# of State hunters reported [a]	Total **State** Bull Harvest	Federal subsistence harvest (BLM/ FM 313/314[b]) Aug 1 –Sept 20	# of Federal hunters reported	Total **Federal** Bull Harvest
2004	12	103	591	115	3	10	3
2005	7	98	652	105	4	12	4
2006	8	144	755	152	4	22	4
2007	8	126	729	134	3	15	3

[a] Actual number of hunters who hunted both unsuccessfully and successfully
[b] Federal subsistence harvest 314 is for Delta Junction residents only

Quotas and any needed closures may be announced by the Superintendent of the Denali National Park and Preserve, in consultation with ADF&G.	***Dec. 1–Jan. 15***
Unit 13E—Remainder—Moose	
1 antlered bull moose by Federal registration permit only; only 1 permit will be issued per household	*Aug. 1–Sept. 20*

Justification

Since 2008, there has been access restrictions placed on the Cantwell Traditional Use Area due to resource damage from ORV's. Snowmachines are exempt from the TUA area restriction; however, the current moose season falls before snowfall, therefore making it impossible to utilize snowmachines to harvest moose. Removing the specific quota of ten animals allows the superintendent more management flexibility to change the quota based on the health of the moose population. A harvest quota of four percent of the observed population of moose in the are would allow ten bull moose to be harvested between the current fall season and the proposed winter season in Unit 13E. By establishing a winter season, it would provide an additional 45 days of opportunity for Federally qualified subsistence users. Because the winter season would be managed through a quota that encompasses both the fall and winter seasons, the additional opportunity in the form of hunting days would have limited effects on the moose population in Unit 13E.

Currently Federally qualified subsistence users on average harvest four bull moose during the fall season within Unit 13E which would allow, on average, six bull moose to be harvested in the winter season. In 2008, population estimates by DNP observed 250 moose in the proximate areas of the Cantwell TUA, a subarea within unit 13E, and in 2007; ADF&G estimated 346 moose within all of Unit 13E.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-35. The Native Village of Cantwell had changed its position on the proposal and opposed its own proposal. There was some concern that if the community supported its own proposal, they may lose access to the Ahtna Community Harvest hunt. The Council found this information compelling, so did not support the proposal even though Denali National Park staff continued to support it.

The late winter hunt, and easy access during the winter season, will affect the moose population in that area.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-35

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-35
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-35: This proposal would allow residents of the Native Village of Cantwell to harvest an antlered bull moose December 1 through January 15 on federal public lands in Denali National Park with a harvest quota of 10 bulls in addition to their existing season.

Introduction: This community qualifies for federal subsistence, and this proposal would extend the federal subsistence season and increase allocation. The proposal indicates, incorrectly, that a winter hunt is being sought because the proponent believes off road vehicle use in traditional use areas was banned by the National Park Service in 2008 and it is easier to harvest and transport moose with snowmachines during winter in Denali National Park lands. Recent National Park Service regulations for Denali National Park were cooperatively developed with residents of Cantwell to allow continued use of off road vehicles on designated trails in the park for federally qualified subsistence users to access traditional subsistence resources such as moose. The current federal subsistence moose hunting season for Unit 13E is August 1 through September 20, one antlered bull per household.

Impact on Subsistence Users: A winter take of bulls by a portion of eligible federal subsistence hunters could reduce the number of animals available to all subsistence hunters during fall season.

Opportunity Provided by State: The state provides for a community harvest hunt administered by Ahtna in which the Native Village of Cantwell is a member. The bag limit is 100 any-bull moose in GMU 11 and 13, plus an unlimited number of bull moose with an antler configuration of spike, fork, or antler spread of 50 inches or larger. Cantwell residents participating in the 2009 community harvest program harvested a total of 22 bull moose of which 11 were "any bulls" (not currently legal under general state hunting regulations). The residents of Cantwell harvested 24% of the 94 moose harvested during the community harvest program in 2009. Harvest quotas for moose were not met during the fall 2009 moose hunting season suggesting that current federal and state subsistence hunts are meeting the needs of local rural residents.

Conservation Issues: There are conservation concerns with all winter moose hunts, particularly when the population is relatively low. Moose movements to winter areas can easily result in overharvests and reduce fall hunting opportunity in future years. Also, hunting during periods of deep snow adds stress to moose populations in wintering areas that could impact overall survival. Winter hunts are not generally recommended unless moose populations are exceeding the carrying capacity of the area and reductions need to be made.

Enforcement Issues: Enforcement of winter hunts is difficult because of logistics and weather conditions, and user accountability diminishes as winter harvest reports are more difficult to acquire from the public.

Other Comments: Before a winter hunt is established, it is always recommended that the movement patterns of the affected moose population be studied.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-35. We support WP10-35 to allow a winter hunting season for moose in Unit 13E with season dates of Aug. 1–Sept. 20 and Dec. 1–Jan. 15 on Federal public lands in the Denali National Park for a 1 antlered moose, with a quota of 10 and emergency closure by the Superintendent of the Denali National Park. This will allow the Federally qualified subsistence users an opportunity to hunt during the winter months, and provide moose meat for their families. It is difficult to harvest a moose on Federal public lands in Denali Park with the regulations that ORVs have to be driven on existing trails. Moose do not stay on existing trails, and it makes it hard to harvest one off of the trails in the hard park.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Native Village of Cantwell

PO BOX 94 CANTWELL, AK 99729 (907) 768-2591 (FAX) 768-1111

March 31, 2010

US Fish & Wildlife Service
Federal Subsistence Board
ATTN: Theo Matuskowitz
Office of Subsistence Management
1011 E. Tudor Rd., MS 121
Anchorage, Alaska 99503

To the Federal Subsistence Board:

We withdraw WP10-35 to allow a winter hunting season for moose in Unit 13E with season dates of Aug. 1-Sept. 20 and Dec. 1-Jan. 15 on federal public lands in the Denali National Park for a 1 antlered moose, with a quota of 10 and emergency closure by the Superintendent of the Denali National Park.

This proposal will allow Federally Qualified Subsistence hunters to harvest moose from the 100 quota Any Bull Moose in Unit 13 under the Ahtna Community Harvest Moose hunt. The Ahtna Community harvest hunt provides an opportunity for the community of Cantwell to harvest a moose.

Additionally, this proposal will reduce the opportunity to take a moose under the Ahtna Community Harvest Moose Hunt because of the shared allocation between the Ahtna Community Harvest Hunt and the Unit 13 Federal Moose hunt.

Sincerely,

Nicholas

Veronica Nicholas, President
Native Village of Cantwell
hallvc@mtaonline.net

WP10-36/37/41 Executive Summary	
General Description	Proposals WP10-36 and -37 seek to shorten wolf seasons and lower harvest limits for wolves in Unit 13D. Proposal WP10-41 was submitted by the Alaska Wildlife Alliance and seeks to close the Unit 14C wolf hunting season. *Submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance*
Proposed Regulation	
Proposal WP10-36	**Unit 13D—Wolf Trapping**
	No limit — ***Nov. 1–Mar. 31*** ~~*Oct. 15–April 30*~~
Proposal WP10-37	**Unit 13D—Wolf Hunting**
	~~*10*~~***5*** *Wolves* — ***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~
Proposal WP10-41	**Unit 14C—Wolf Hunting**
	~~***5 Wolves***~~ — ***No Federal open season*** ~~*Aug. 10–April 30*~~
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**2 Oppose** Proposal WP10-36 **2 Oppose** Proposal WP10-37 **1 Oppose** Proposal WP10-41

STAFF ANALYSIS
WP10-36, -37 AND -41

ISSUES

Proposals WP10-36 and -37, submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance, seek to shorten wolf seasons and lower harvest limits for wolves in Unit 13D. Proposal WP10-41 was submitted by the Alaska Wildlife Alliance and seeks to close the Unit 14C wolf hunting season.

DISCUSSION

Proposal WP10-36 requests that the wolf trapping season in Unit 13D be changed from October 15–April 30 to November 1–March 31. Proposal WP10-37 requests that wolf hunting season in Unit 13D be changed from August 10–April 30 to November 1–March 31, and that the harvest limit be reduced from 10 wolves to five. The proponents note that by late April, in Units 13D, hides are rubbed and pregnant females are approaching full term. The proponents note that pups are only half grown at the start of the current wolf hunting seasons in Unit 13D and that in August, hides are not suitable for commercial sale or trophies.

Proposal WP10-41 requests that wolf hunting season be closed in Unit 14C to provide for more wildlife viewing opportunities.

Existing Federal Regulation

Unit 13D—Wolf Trapping	
No limit	*Oct. 15–April 30*
Unit 13D—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 14C—Wolf Hunting	
5 Wolves	*Aug. 10–April 30*

Proposed Federal Regulation

Proposal WP10-36

Unit 13D—Wolf Trapping	
No limit	***Nov. 1–Mar. 31*** ~~*Oct. 15–April 30*~~

Proposal WP10-37

Unit 13D—Wolf Hunting	
~~*10*~~***5*** *Wolves*	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~

Proposal WP10-41:

Unit 14C—Wolf Hunting

~~5 Wolves~~	***No Federal open season*** ***~~Aug. 10–April 30~~***

Existing State Regulation

Unit 13D— Wolf Trapping

No limit	*Oct. 15–April 30*

Unit 13D—Hunting

10 Wolves per day	*Aug. 10–April 30*

Unit 14C remainder (outside special management areas)—Wolf Hunting

5 Wolves	*Aug. 10–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 8% of Unit 13D and consist of 86% U.S. Forest Service (USFS) and 14% Bureau of Land Management (BLM) lands (see Unit 13 Map). Federal public lands comprise approximately 17% of Unit 14C and consist of 75% USFS, 25% BLM and <0.1% U.S. Fish and Wildlife Service (FWS) lands (see Unit 14 Map).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 13D. All rural residents have a positive customary and traditional use determination to harvest wolves in Unit 14C.

Regulatory History

The Federal subsistence wolf trapping season in Unit 13D extended from November 1–March 31 in regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Southcentral Alaska Subsistence Regional Advisory Council (Council) changed the season to November 10–March 31 beginning in regulatory year 1994/95. Action taken on a proposal from the Office of Subsistence Management (Proposal 2), and supported by the Council, changed the season to October 15–April 30 in regulatory year 2000/2001. There has been no harvest limit under wolf trapping regulations in Unit 13D since 1990.

The Federal subsistence wolf hunting season in Unit 13D has extended from August 10–April 30 since 1990. There was no harvest limit for wolf hunters in Unit 13D in regulatory years 1990/91 and 1991/92. The harvest limit was reduced to ten wolves in regulatory year 1992/93. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council reduced the Unit 13D harvest limit to five wolves in regulatory year 1994/95. Action taken on a proposal from the Eastern Interior Alaska Subsistence Regional Advisory Council (Proposal 24) and supported by the Southcentral Alaska Subsistence Regional Advisory Council increased the harvest limit for hunters in Unit 13D to ten wolves in regulatory year 2000/01.

The Federal subsistence, Unit 14C, wolf hunting season has been August 10–April 31 since 1990. The Unit 14C wolf hunting harvest limit was one wolf for regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council changed this harvest limit to 5 wolves in regulatory year 1994/95.

Trappers may shoot a free ranging wolf on USFS, BLM and FWS lands in these units during trapping season. The Federal subsistence wolf trapping season in Unit 14C is November 10–February 28. Hunters and trappers may harvest wolves under State regulations on USFS, BLM, and FWS lands in these units.

The proponent of WP10-41 is seeking to provide more wildlife viewing opportunities Unit 14C. The Federal Subsistence Board restricted subsistence to provide for wildlife viewing once before. In 1996, the U.S. Department of Agriculture, U.S. Forest Service submitted a proposal to close a portion of Anan Creek in Unit 1B to brown bear hunting and to modify a closure to black bear hunting to provide for wildlife viewing. The change was requested to align with State regulations and to address potential safety hazards of bear hunting near a viewing area. The Southeast Alaska Subsistence Regional Advisory Council supported that proposal and it was adopted by the Board in April 1997.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Council's March 2005 meeting in Anchorage, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005).

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 13D and 14C. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, beaver, and salmon. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs and territories when they locate dispersers of the opposite sex from another pack and an unoccupied territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. Kelleyhouse (2006) noted that radio-collared wolves from the Kenai Peninsula, Denali National Park, and Units 20 and 12 have been observed or harvested in Unit 13.

The home range size is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed

by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 13D

Kelleyhouse (2006) presented the wolf population data for Unit 13 as a whole, and did not break out the information for Unit 13D. While information is limited, she estimated that in Unit 13 there were 220–520 wolves in 50–70 packs in regulatory years 1997/98 to 2004/2005. This represented a density of approximately 14–32 wolves/1000 mi.^{2}. Wolf territory, size and productivity are thought to be primarily a function of moose density (Kelleyhouse 2006).

Unit 14C

ADF&G (2010a) reported that based on an aerial survey in 1995 and anecdotal reports, Unit 14C has at least 25–30 wolves in 4–5 packs. One of these packs uses the Twentymile River drainage in the southeastern corner of the subunit, which is in the Chugach National Forest. ADF&G noted that a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide refugium for one of the subunit's packs and partial refugium for at least two other packs. Peltier (2006) noted that ADF&G's objective was to maintain a minimum population of 20 wolves in Unit 14C.

Harvest History

Stratton and Georgette (1984) provide some subsistence harvest information for communities in the Copper River Basin. Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. Once snow-cover and ice are adequate for snowmachine travel, trappers began establishing and maintaining trap lines. Wolf harvest by trappers is normally spread throughout the winter and declines as snow and ice conditions deteriorate.

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are low.

Unit 13D

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 13D ranged from 7 to 22 wolves per year (**Table 1**). Of the 139 wolves harvested during these years, 88 were taken using traps or snares, and 51 were shot. Forty (29%) were taken during the months of August, September, October and April (**Table 1)**. Since 2001, the estimated annual harvest rate of wolves in Unit 13D has been 9–38% (average 23%) (ADF&G 2010a). Wolf numbers in Unit 13D are stable (ADF&G 2010a).

Table 1. Reported wolf harvest and method of take for Unit 13D (ADF&G 2009 and 2010b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of take for total harvest from Unit 13D				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	10	3	4	40	6	60	0
2000/01	8	2	6	75	2	25	0
2001/02	19	2	13	69	6	31	0
2002/03	13	3	7	54	6	46	0
2003/04	8	3	4	50	4	50	0
2004/05	7	4	3	43	5	57	0
2005/06	22	9	17	77	5	23	0
2006/07	19	4	10	53	9	47	0
2007/08	16	4	11	69	5	31	0
2008/09	17	6	13	76	4	24	0

Unit 14C

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 14C ranged from 0 to 4 wolves per year (**Table 2**). Most of these wolves were shot. Peltier (2006) estimated that Unit 14 wolf harvest rates were approximately 22–35% in regulatory years 2002/03 to 2004/05. He observed that weather and trapping conditions can greatly affect the number that are taken with traps and snares, whereas the number shot is more dependent on travel conditions. In Unit 14, hunters take a significant portion of the annual wolf harvest incidental to hunting for other species. Peltier (2006) noted that an ADF&G primary goal for this species in Unit 14C is to provide opportunity people to view, photograph, and enjoy wolves.

Effects of the Proposal

If adopted, these proposals would decrease the opportunity to harvest wolves under Federal subsistence regulations in Units 13D and 14C.

If proposals WP 10-36 and -37 are adopted the Federal wolf trapping and hunting seasons in Unit 13D will be shortened and harvest limits will be reduced. If Proposal WP10-36 is adopted, it would close Federal wolf trapping October 15–31 and April 1–30 in Unit 13D, thereby shortening the existing season by 47 days. If Proposal WP10-37 is adopted, the Federal wolf hunting season in Unit 13D would be closed August 10 to October 31 and April 1–30 thereby shortening the existing season by 113 days. Between regulatory years 1999/2000 and 2008/09, 29% of the reported Unit 13D wolf harvest occurred in August, September, October and April (**Table 1)**. Proposal WP10-37 would eliminate the opportunity for subsistence users to harvest wolves under Federal regulations during the fall and early spring when they are hunting other species.

If proposal WP10-41 is adopted, the Federal wolf hunting season in Unit 14C would be closed.

Proposals WP10-36 and -37 would make the Federal subsistence wolf hunting and trapping seasons shorter than the State seasons. WP10-37 would make the Federal subsistence wolf hunting harvest limit

Table 2. Reported wolf harvest and method of take for Unit 14C (ADF&G 2009 and 2010b).

Regulatory Year	Reported Total Harvest	Method of take for total harvest from Unit 14C				
		Trap/snare	(%)	Shot	%	Unk
1999/2000	1	0	0	0	0	1
2000/01	1	0	0	1	100	0
2001/02	0	0	0	0	0	0
2002/03	0	0	0	0	0	0
2003/04	0	0	0	0	0	0
2004/05	2	1	100	0	0	1
2005/06	0	0	0	0	0	0
2006/07	1	0	0	1	100	0
2007/08	4	0	0	4	100	0
2008/09	0	0	0	0	0	0

lower than the State regulations. The proposed closure of wolf hunting in Unit 14C would make the Federal subsistence regulations more restrictive than the State regulations.

OSM CONCLUSION

Oppose Proposals WP10-36, -37 and -41.

Justification

The wolf populations in Subunits 13D and 14C are thought to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf populations in these units are thought to be regulated more by natural factors than by hunters and trappers.

Wolves are an important subsistence resource in Units 13D and 14C. The harvest of wolves and the use, barter, and sale of wolf pelts is a long standing component of the subsistence economy.

Even if these proposals were adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on USFS, BLM, and FWS lands in these two units. Therefore, adoption of these proposals by the Federal Subsistence Board would not have the effect sought by the proponents.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-36/37/41. No conservation concerns exist and the current wolf population is stable.

INTERAGENCY STAFF COMMITTEE COMMENTS WP10-36/37/41

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-36, WP10-37, and WP10-41
April 30, 2010, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-36: This proposal shortens the federal wolf trapping season in Unit 13D by 47 days with season dates changed from October 15 through April 30 to November 1 through March 31.

Wildlife Proposal WP10-37: This proposal shortens the federal subsistence wolf hunting season in Unit 13D by 113 days with season dates changed from August 10 through April 30 to November 1 through March 31.

Wildlife Proposal WP10-41: This proposal prohibits wolf hunting on federal public land, Chugach National Forest, located in the southwestern corner of Unit 14C.

Introduction: Contrary to the proponent's claim in proposal WP10-36, trapping is not an effective predator control method when the objective is to reduce wolves to low densities. Long seasons allow trappers to take wolves when they encounter them on their lines and to make sets when it is appropriate. The value of a hide depends on who the trapper intends to sell it to and what it is to be used for. Proposal WP10-37 incorrectly assumes federal subsistence wolf hunting seasons and bag limits were established to benefit prey species. The federal subsistence wolf hunting season opening and closure dates are traditional, allowing federal subsistence hunters the opportunity to take a wolf for subsistence on federal lands under ANILCA provisions, while hunting other big game in both the spring and fall. Hide value depends on what the wolf will be used for.

Based on an aerial survey in 1995 and anecdotal reports, the department estimates Unit 14C has at least 25-30 wolves in 4-5 packs. One pack uses the Twentymile River drainage in the southeastern corner of the subunit, which is in Chugach National Forest. The territory of a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Fur sealing records indicate 37 wolves were sealed from Unit 14C during 1984–2007. Eleven of these wolves were harvested in the Twentymile River drainage. Nearly half of the wolves (16/37) were taken by hunters and 6 of these wolves were shot in the Twentymile River drainage. Thus, in the past 24 years an average of 1.5 wolves per year were reported harvested by all methods, including 4 killed by vehicles, in Unit 14C. A wolf population of 25-30 individuals will not be reduced by annual harvest rates of 1.5 wolves (5-6%). Since statehood, there has been no effort to reduce wolf populations in Unit 14C under the state's predator control programs. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide a refugium for one of the subunit's packs and partial refugium for at least two other packs.

Impact on Subsistence Users: Adoption of proposal WP10-36 reduces federal subsistence opportunity to trap wolves. Proposal WP10-37 would shorten the wolf hunting season from 263 days to 150 days per year, reducing some opportunity for federal subsistence hunters. If adopted, the federal subsistence wolf bag limit would be reduced by 50% to five wolves. Regarding WP10-41, it is not clear how many of the 6 wolves shot in the Twentymile River drainage in the past 24 years were taken by subsistence hunters.

Opportunity Provided by State: In Unit 13D, the state provides an October 15 through April 30 trapping season and harvest is not limited. The state provides an August 10 through April 30 hunting season and harvest is ten wolves. The state wolf hunting season for Unit 14C remainder, outside of more restrictive special management areas, is August 10 through April 30 with a harvest limit of five. The state wolf trapping season for Unit 14C remainder, outside of more restrictive special management areas, is November 10 through February 28, and harvest is unlimited. Most wolves are taken in the Peters Creek, Knik River, and Lake George areas.

Conservation Issues: Wolf numbers in 13D are not controlled under a predator management program and wolf numbers are stable. Unit 13D was not included in the predator program because it is heavily timbered which makes airplane based management very difficult. However, wolves are important predators in 13D, with sheep and moose numbers low enough to be impacted by wolf predation. Since 2001, the average annual take of wolves in 13D has been 23% (range = 9% – 38%). It is well documented that this range is sustainable. The long season dates provide maximum opportunity for trappers and have no impact on population health in 13D. At present harvest levels in Unit 14C and with the existing refugium provided by Chugach State Park, there are no conservation issues.

Enforcement Issues: Differences in federal and State regulations resulting from adoption of these proposals will create enforcement issues in areas with mixed land ownership. Enforcement of seasons along traplines running through both federal public lands and non-federal public lands by both federal subsistence and non-federal subsistence trappers would be very difficult.

Other Comments: It is unlikely that all adults would be taken out of a pack by the hunting or trapping addressed in these proposals. Adults have learned to avoid man through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adults kill large prey, thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides support to pups.

Subsistence trappers know their lines and wolf movements so should be allowed to choose the time to set the line provided there are no conservation concerns.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposals WP10-36/37/41. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose Proposal WP10-36. We oppose WP10-36 to shorten the wolf trapping season in subunit 13D from Oct. 15–Apr. 30 to Nov. 1–Apr. 30. A longer wolf trapping season is needed in subunit 13D to harvest more wolves by trappers. There isn't a predator management control program in subunit 13D to protect the calves of moose. The moose population needs to increase in Unit 13, and a longer wolf trapping season will aide in the recovery of the moose population.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Oppose Proposal WP10-37. We oppose WP10-37 to shorten the wolf hunting season from Aug. 10–Apr. 30 to Nov. 1 –Mar. 31 in subunit 13D with a reduced bag limit (10) and a take of 5 wolves. We oppose the 5 wolf bag limit, which is a reduction down from 10 bag limit. See comments on WP10-36.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-38 Executive Summary	
General Description	Proposal WP10-38 seeks to shorten wolf hunting seasons in Units 11 and 12. *Submitted by the Defenders of Wildlife and the Alaska Wildlife Alliance*
Proposed Regulation	**Unit 11—Wolf Hunting** *10 Wolves* ***Nov. 1-Mar. 31*** *~~Aug. 10-April 30~~* **Unit 12- Wolf Hunting** *10 Wolves* ***Nov. 1-Mar. 31-*** *~~Aug. 10-April 30~~*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**4 Oppose**

STAFF ANALYSIS
WP10-38

ISSUES

Proposal WP10-38, submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance, seeks to shorten wolf hunting seasons in Units 11 and 12.

DISCUSSION

Proposal WP10-38 requests that wolf hunting not be allowed in Units 11 and 12 in the months of August, September, October, and April. The proponents wish to apply this restriction in the part of Unit 12 that is outside of the State's predator control program (U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) lands). The proponents note that by late April, in Units 11 and 12, hides are rubbed and pregnant females are approaching full term. They note that pups are only half grown at the start of the current wolf hunting seasons in Units 11 and 12 and that in August, hides are not suitable for commercial sale or trophies.

Existing Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 12—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*

Proposed Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~
Unit 12— Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~

Existing State Regulation

Unit 11—Wolf Hunting	
5 Wolves	*Aug.10–April 30*
Unit 12—Wolf Hunting	
5 Wolves	*Aug.10–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) lands (see **Unit 11 Map)**. Federal public lands comprise approximately 59% of Unit 12 and consist of 82% National Park Service (NPS) and 18% U.S. Fish and Wildlife Service (FWS) lands (see **Unit 12 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 11 and 12. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf hunting seasons in Unit 11 and 12 have been from August 10 to April 30 since 1990. The harvest limit in both Units 11 and 12 was 10 wolves in regulatory year 1990/91. This was reduced to five wolves from regulatory years 1992/93 to 1998/99. In regulatory year 1999/2000, the Federal Subsistence Board changed the harvest limits in Units 11 and 12 to 10 wolves based on recommendations from the Eastern Interior Alaska Subsistence Regional Advisory Council and the Southcentral Alaska Subsistence Regional Advisory Council.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southcentral Alaska Subsistence Regional Advisory Council and Eastern Interior Alaska Subsistence Regional Advisory Council both opposed that proposal, as did six other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Southcentral Alaska Subsistence Regional Advisory Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Southcentral Alaska Subsistence Regional Advisory Council's March 2005 meeting, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005). At its March 2005 meeting, Eastern Interior Alaska Subsistence Regional Advisory Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

Biological Background

Wolves (*Canis lupus*) have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 11 and 12. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles.

The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 11

In the early 1970s, McIlroy (1975) estimated that the wolf density in Unit 11 was 12/1000 mi^2. Kelleyhouse (2006) estimated that there were 10 to 20 wolf packs in regulatory years 1997/98 to 2004/2005. She estimated that there were 70-130 wolves during that time-period and observed that wolf numbers were higher in the northern portions of the unit because of the higher density of caribou, moose and sheep. In 2008, the spring density of wolves in Unit 11 was approximately 6 wolves/mi^2 (ADF&G 2010).

Unit 12

Hollis (2006) estimated that there were 240-255 wolves in Unit 12. Wolf density estimates for 2001 to 2004 ranged from 14 to 50/1000 mi^2 (Hollis 2006). Hollis (2006) estimated that, in regulatory year 2002/03, there were a total of 31 packs in Unit 12 with an average pack size of 7.0-7.4 wolves. The current fall wolf population estimate for Unit 12 is 179-192 wolves (18 to 19/1000 mi^2) (ADF&G 2010). The Unit 12 wolf population has benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998-2001 and 2007-2009 (ADF&G 2010). The Chisana caribou herd has been a reliable food source for wolves in eastern Unit 12. Caribou from the Mentasta, Nelchina, and Macomb herds also have used portions of the unit and provide a food source for wolves (Hollis 2006)

Harvest History

Halpin (1987) and Stratton and Georgette (1984) provide some subsistence harvest information for communities in Units 11 and 12. Hunters occasionally take wolves in the fall and early spring when they are hunting other species. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines. Wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. Hollis (2006) observed that in Unit 12, few trappers specifically target wolves, but noted that during years when marten and lynx pelt prices are low and wolf prices are adequate, more trappers concentrate on wolves. Harvest rates in remote areas are dependent on fur prices and weather conditions. Trapping pressure is high along the road system and around communities in Units 11 and 12 (Kelleyhouse 2006, Hollis 2006).

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Kelleyhouse (2006) observed that in Unit 11, illegal and unreported wolf harvest was probably minimal.

There have been a number of wolf control programs in Units 11 and 12 since the 1940s (Kelleyhouse 2006, Hollis 2006). The Alaska Board of Game authorized aerial wolf control in northern Unit 12 in 2004 (Hollis 2006).

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Unit 11

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 11 ranged from 15 to 35 wolves per year (Table 1). Most of the wolves were taken using traps or snares. Kelleyhouse (2006) observed that the reported harvest was relatively low when compared to the estimated Unit 11 wolf population size. She estimated that the annual harvest rate averaged about 14% for regulatory years 2002/03 to 2004/05.

Of a total of 212 wolves taken in Unit 11 during regulatory years 1999/2000 to 2008/09, 20 were shot during the months of August, September, October and April (**Table 1**).

Table 1. Reported wolf harvest and method of take for Unit 11 (ADF&G 2009).

Regulatory Year	Reported Total Harvest	Shot Aug.–Oct. & April Harvest	Method of take for total harvest from Unit 11				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	23	2	21	91	2	9	0
2000/01	35	4	31	89	4	11	0
2001/02	23	1	21	91	2	9	0
2002/03	19	1	18	95	1	5	0
2003/04	15	2	11	73	3	20	1
2004/05	15	3	12	80	3	20	0
2005/06	26	2	22	85	4	15	0
2006/07	15	1	14	93	1	7	0
2007/08	23	3	19	83	4	17	0
2008/09	18	1	17	94	1	6	0

Unit 12

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 12 ranged from 25 to 58 wolves per year (Table 2). Most of the wolves were taken using traps or snares. The harvest was relatively low when compared to the estimated Unit 12 wolf population size.

Of a total of 415 wolves taken in Unit 12 during regulatory years 1999/2000 to 2008/09, 42 were shot during the months of August, September, October and April (**Table 2**).

Effects of the Proposal

If Proposal WP10-38 is adopted, the Federal wolf hunting seasons in Units 11 and 12 will be shortened. The proposals seek to close the Federal wolf hunting seasons in these units from August 10–October 31 and April 1-30, thereby shortening the existing season by 113 days. Between regulatory years 1999/2000 and 2008/09, in both Unit 11 and Unit 12, 10% of the reported wolf harvest occurred in the months

Table 2. Reported wolf harvest and method of take for Unit 12 (ADF&G 2009).

Regulatory Year	Reported Total Harvest	Shot Aug.–Oct. & April Harvest	Method of take for total harvest from Unit 12				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	54	11	40	74	13	24	1
2000/01	58	2	51	88	7	12	0
2001/02	39	4	32	82	7	18	0
2002/03	53	2	49	92	4	8	0
2003/04	25	2	23	92	2	8	0
2004/05	29	1	27	93	2	7	0
2005/06	39	8	22	56	15	38	2
2006/07	30	2	24	80	6	20	0
2007/08	49	5	40	82	9	18	0
2008/09	39	3	29	74	7	18	3

of August, September, October and April (Tables 1 and 2). Proposal WP10-38 would eliminate the opportunity for Federally qualified subsistence users to harvest wolves under Federal regulations during the fall and spring when they are hunting other species. This proposal would make the Federal subsistence wolf hunting season in Unit 11 shorter than the State season. The Federal hunting season for wolves in Unit 12 is already shorter than the State season; this proposal seeks to make it even shorter.

OSM CONCLUSION

Oppose Proposal WP10-38.

Justification

The wolf populations in Units 11 and 12 are thought to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are an important subsistence resource in Units 11 and 12. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. While only a small part of the wolf harvest occurs in the months of August, September, October and April, the opportunity for hunters to take wolves in these months is important to Federally qualified subsistence users.

Even if this proposal were adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on FWS, BLM, USFS and Wrangell-St. Elias Preserve lands in these two units. Therefore, adoption of this proposal by the Federal Subsistence Board would not have the effect sought by the proponents.

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REGIONAL COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-38. Council noted that all public and Advisory Committee comments were in opposition to this proposal. There is no conservation issue for wolves and this would be an unnecessary restriction on subsistence use.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-38. No conservation concerns exist on the current wolf population and no public support for this proposal was provided.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-38

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-38: This proposal would significantly shorten the federal subsistence wolf hunting seasons in Game Management Units 11 and 12. The proposed hunting season for both units is November 1 through March 31.

Introduction: This proposal assumes federal subsistence wolf hunting seasons opening August 10 are solely for predator control. August openings are traditional, allowing federal and state subsistence hunters the opportunity to take a wolf while hunting other big game. Hide value depends on what the wolf will be used for.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the opportunity to take a wolf for subsistence while big game hunting, specifically during the fall. This loss of fall hunting opportunity could seriously impact subsistence users who have limited means to hunt during winter months.

Opportunity Provided by State: The State provides an August 1 through April 30 hunting season with a bag limit of 5 wolves in Unit 11 and an August 10 through May 31 hunting season also with a bag limit of 5 wolves in Unit 12.

Conservation Issues: Current seasons and bag limits for wolf hunting in Units 11 and 12 have virtually no impact on wolf numbers. Since 1999, an average of two wolves per year were taken in Unit 11 and seven in Unit 12 by hunting. Hunting accounts for approximately 11% of the total wolf take in Unit 11 and 2% of the total wolf take in Unit 12. Wolf numbers and total harvests have been relatively stable in both units for many years, and there are no current conservation concerns.

Fall wolf population estimates in Unit 11 ranged from 78-122 since the mid 1990s. For the size of the unit (33,112 km^2), this represents a very low natural density of wolves (3.3-3.6 wolves / 1000 km^2). Given the amount of high elevation terrain in Unit 11, the actual density of wolves in available wolf habitat is slightly higher. The annual harvest rate in Unit 11 since 2001 has averaged 19% (range = 12-24%), well within the range of sustainability regardless of the long hunting and trapping seasons. This stable pattern is due to the low density dynamic equilibrium predator/prey situation among wolves, moose, caribou, and sheep in the area.

The current fall wolf population estimate in Unit 12 is 179–192 wolves (7–7.5 wolves/1000 km^2). Despite active wolf reduction efforts in a portion of northern Unit 12 and in neighboring units, the minimum fall population of wolves residing entirely within Unit 12 has changed little since 1998. Harvest rates in Unit 12 have been $\leq$24% since 1998, well within the range of sustainability. Wolf numbers in Unit 12 have also benefited from higher numbers of Fortymile caribou since 1997, increasing migrating Nelchina caribou, and highs in snowshoe hare cycles in 1998–2001 and 2007–2009.

The proposer states that adjacent Unit 13 and 20E have very low wolf densities due to active predator management. While wolves have been reduced in Unit 13 in recent years, it was not by 80% as the proposer suggests. The unit-wide fall wolf density in Unit 13 has been reduced

approximately 50% between 1999 (520 wolves, pre-control) and 2009 (273 wolves); and wolf population objectives are currently being met. For comparison to other units, the most recent fall density of wolves for all of Unit 13 was 4.5 wolves / 1000 km^2 in 2008.

It is very important to note the difference between fall and spring wolf estimates when discussing wolf population dynamics and comparing areas. Wolf populations decline over the course of a winter due to human take, natural mortality, and dispersal; spring estimates do not yet include new pups. Wolf control areas are evaluated based on spring estimates. The most recent spring estimates for wolves in Unit 13 and the Upper Yukon-Tanana Wolf Predation Control Area in Unit 20E are 2.4 and 3.3 wolves/1000 km^2 respectively. (These estimates are unit-wide and are not based on available habitat.)

Although Units 13 and 20E have active wolf management programs, the wolf population dynamics of Units 11 and 12 are not significantly affected by these activities. Shortening the wolf hunting or trapping seasons in Units 11 and 12 at this time would have no effect on the wolf populations in these areas. The current hunting seasons are sustainable and allow federal subsistence hunters to take wolves opportunistically.

Enforcement Issues: Significant differences in federal and State regulations resulting from adoption of this proposal would create enforcement issues in areas with mixed land ownership, as well as lands such as the Tetlin Refuge and the Wrangell-St. Elias Preserve where both State and federal regulations apply.

Other Comments: It is unlikely that all adults would be taken out of a pack by the hunting addressed in this proposal. Adults have learned to avoid man through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adults kill large prey, thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support to pups.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-38**.** Please do not shorten wolf hunting season. I live in McCarthy and utilize subsistence resources. Wolves prey heavily on moose and sheep in my area, leaving less opportunity for local residents. Please keep wolf hunting as liberal as possible. (Airplanes or helicopters, anyone?)

Kieth Rowland, McCarthy

Oppose Proposal WP10-38. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose Proposal WP10-38. The proposal would adversely affect subsistence users by reducing subsistence opportunity and there is not a conservation concern. Although hides are not necessarily prime during the months in question, they can still be valuable for the harvester. The hides of wolves harvested in April may have less under mat; however, they are not rubbed and can be used by skin sewers.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-38. We oppose WP10-38 to shorten the wolf hunting season in Unit 11, and portion of Unit 12 not part of the State's predator control program, from Aug. 10–Apr. 30 to Nov. 1–Mar. 31. See comments under WP10-36.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-39 Executive Summary	
General Description	Proposal WP10-39 requests that Federal subsistence regulations be clarified to show the requirements for harvest salvage, reporting and sealing for Dall sheep in Units 11 and 12. *Submitted by the Alaska Department of Fish and Game*
Proposed Regulation	***§__.6 Licenses, permits harvest tickets, tags, and reports.*** *(3) Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part.* ***§__.26 Subsistence taking of wildlife.*** *(g) Evidence of sex and identity. (1) If subsistence take of Dall sheep is restricted to a ram, you may not possess or transport a harvested sheep unless both horns accompany the animal.* *(k) Sealing of beaver, lynx, marten, otter, wolf, and wolverine. No person may possess or transport from Alaska the untanned skin of a marten taken in Units 1, 2, 3, 4, 5, 7, 13E, 14, 15 and 16 or the untanned skin of a beaver, lynx, otter, wolf or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative.* ***(3) A person may not possess, transport, or export from the state, the horns of a Dall sheep ram taken in Units 11 and 12 unless the horns have been permanently sealed by an authorized ADF&G representative within 30 days of harvest.***
OSM Conclusion	**Take no action**
Southcentral Regional Council Recommendation	**Take no action**
Eastern Interior Regional Council Recommendation	**Take no action**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Take no action**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP10-39

ISSUES

Proposal WP10-39, submitted by the Alaska Department of Fish and Game, requests that Federal subsistence regulations be clarified to show the requirements for harvest salvage, reporting and sealing for Dall sheep in Units 11 and 12.

DISCUSSION

The proponent requests that Federal subsistence regulations specifically state that horns of a Dall sheep must be salvaged, and that a person may not possess, transport, or export from the state, the horns of a Dall sheep ram taken in any hunt where there is a horn configuration bag limit or a ram-only bag limit in Units 11 and 12, unless the horns have been permanently sealed by a department representative within 30 days of taking. The proponent suggests that this requirement will lead to improved conservation and management of Dall sheep.

The proponent states that most of the Dall sheep harvested in Units 11 and 12 under Federal subsistence regulations are taken under the State harvest ticket system, with the exception of a small number of rams taken under elder permit hunts. Given the lack of clarity, sealing requirements have not been enforced against federal subsistence hunters, and wildlife managers cannot easily check to see if a hunter is abiding by the State salvage and sealing regulations. The proponent also states that, if these rams are not brought in to be sealed, valuable information, such as detailed size measurements, age, and genetic material is not collected. These data are used to assess population health and dynamics through monitoring of the age structure of the harvest and, as well as to support ongoing genetic research in the Wrangell St. Elias Park and Preserve. The proponent states that the USGS Biological Science Center is conducting research to assess genetic patterns, distribution, and variability within the park and preserve. This study will help give managers a better understanding of sheep movements and the ability the population to recover from severe declines or die-offs should disease become a problem in the future.

Existing Federal Regulations

§__.6 Licenses, permits harvest tickets, tags, and reports.

(3) Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part

§__.26 Subsistence taking of wildlife.

(g) Evidence of sex and identity. (1) If subsistence take of Dall sheep is restricted to a ram, you may not possess or transport a harvested sheep unless both horns accompany the animal.

(k) Sealing of beaver, lynx, marten, otter, wolf, and wolverine. No person may possess or transport from Alaska the untanned skin of a marten taken in Units 1, 2, 3, 4, 5, 7, 13E, 14, 15 and 16 or the untanned skin of a beaver, lynx, otter, wolf or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative.

Proposed Federal Regulations

§__.6 Licenses, permits harvest tickets, tags, and reports.

(3) Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part.

§__.26 Subsistence taking of wildlife.

(g) Evidence of sex and identity. (1) If subsistence take of Dall sheep is restricted to a ram, you may not possess or transport a harvested sheep unless both horns accompany the animal.

(k) Sealing of beaver, lynx, marten, otter, wolf, and wolverine. No person may possess or transport from Alaska the untanned skin of a marten taken in Units 1, 2, 3, 4, 5, 7, 13E, 14, 15 and 16 or the untanned skin of a beaver, lynx, otter, wolf or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative.

(3) A person may not possess, transport, or export from the state, the horns of a Dall sheep ram taken in Units 11 and 12 unless the horns have been permanently sealed by an authorized ADF&G representative within 30 days of harvest.

Existing State Regulations

5 AAC 92.150. Evidence of sex and identity.

(a) Horns of a Dall sheep must be salvaged.

5 AAC 92.171. Sealing of Dall sheep horns.

A person may not possess, transport, or export from the state, the horns of a Dall sheep ram taken in any hunt where there is a horn configuration bag limit, unless the horns have been permanently sealed by a department representative within 30 days after the taking, or lesser time if designated by the department.

Regulatory History

The Federal regulations, that have dealt with Dall sheep harvest and reporting requirements, §__.6 (Licenses, permits harvest tickets, tags, and reports) and §__.26 (Subsistence taking of wildlife) have been in effect since 1992. However, they have not been consolidated into one location within the public booklet of Federal regulations which may make it difficult for Federally qualified subsistence users to know the requirements.

Effects of the Proposal

Federal regulation §__.6 states that any Federally qualified subsistence user must *"Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part*". As part of the State harvest reporting for sheep, sealing is required for sheep rams from areas with horn restrictions (Units 7, 9, 11-16, 19, 20, and 23-26), which is applicable to Federally qualified

subsistence users using a harvest ticket. Federal regulation §__.26 also already states that *"If subsistence take of Dall sheep is restricted to a ram, you may not possess or transport a harvested sheep unless both horns accompany the animal."* Therefore, changing Federal regulation to incorporate additional language would be redundant and would not provide additional clarification to the Federal subsistence user. However, it would be helpful to the Federally qualified subsistence users to add a sentence in the public booklet that states that Dall sheep horns must be sealed unless not required through unit specific regulation.

OSM CONCLUSION

Take no action on proposal WP10-39

Justification

Federal regulation §__.6 states that any Federally qualified subsistence user must *"Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part*". As part of the State harvest reporting for sheep, sealing is required for sheep rams from areas with horn restrictions (Units 7, 9, 11-16, 19, 20, and 23-26), which is applicable to Federally qualified subsistence users using a harvest ticket. Federal regulation §__.26 already states that *"If subsistence take of Dall sheep is restricted to a ram, you may not possess or transport a harvested sheep unless both horns accompany the animal."*

The sealing requirement is not stated specifically in the Federal regulation public booklet which makes it difficult for the Federally qualified subsistence user to know their responsibilities. Adding this to the Federal regulation public booklet accordingly will give clarity to Federal subsistence regulations for sealing requirements of Dall sheep horns in all relevant Units, including Units 11 and 12. The recommended text addition in the public booklet would read as follows: "*A person who takes a Dall sheep ram under these regulations in Units 7, 9, 11-16, 19, 20, and 23-26 must posses a State harvest ticket and comply with the requirements of that ticket, including any sealing requirement.*

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Take no action on Proposal WP10-39. The Council determined that this proposal is unnecessary because there already is a sealing requirement on the harvest permit.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Take no action on WP10-39. The Council took no action on WP10-39 for reasons stated in the OSM justification.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-39

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-39
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-39: This proposal was submitted by the Alaska Department of Fish and Game to clarify federal subsistence regulations that require harvest salvage of horns, reporting, and sealing of Dall sheep in Units 11 and 12.

Introduction: Federal regulation in §__.6 requires federally qualified subsistence users to comply with "pertinent permits, harvest tickets, or tags" and "individual provisions" required by the State unless superseded by federal regulations in subpart D. State regulations require that horns of a Dall sheep must be salvaged. State regulations also require that a person may not possess, transport, or export from the state, the horns of a Dall sheep ram taken in any hunt where there is a horn configuration bag limit or a ram-only bag limit in Southcentral, "unless the horns have been permanently sealed by a department representative within 30 days after the taking."

Impact on Subsistence Users: Because the salvage and sealing requirements are not specifically in federal regulation and/or scattered in the public booklet, federally qualified subsistence users may be unaware of their responsibilities. This increases their risk of enforcement action and reduces the Department's abilities to acquire data needed for management that is collected during sealing for the benefit of all users. Successful hunters will be required to bring their ram horns into an Alaska Department of Fish and Game office (e.g., Glennallen or Tok) to have them sealed within 30 days, with their required harvest report. Each set of horns will be sealed with a permanent numbered plug (similar to all other rams harvested under State regulations). Currently, federal subsistence hunters and trappers are required to have furbearers, black bears, and brown bears sealed by the Department. Requiring the sealing of federal subsistence harvested Dall sheep would not be considered an unusual or significant new burden to the federal subsistence hunters of Units 11 and 12 because the process is already in place for other species.

Conservation Issues: The regulation change is needed for conservation and management of Dall sheep. The change would require horns of harvested Dall rams from Game Management Units 11 and 12 (from the eastern Chugach, Wrangell/Nutzotin Mountains) to be salvaged and sealed. This regulation would be similar to the State of Alaska hunting regulations 5 AAC 92.150(a) and 92.171, which require salvage and sealing of Dall sheep horns. Because rams are not brought in to be sealed, valuable information, such as detailed size measurements and genetic material, is lost. By requiring sealing, age and size data collected for each ram will be collected by a small number of trained Department representatives, ensuring accuracy. These data are used to assess population health and dynamics through monitoring of the age structure of the harvest, as well as to support ongoing genetic research in the Wrangell St. Elias Park and Preserve. The USGS Biological Science Center is conducting research to assess genetic patterns, distribution, and variability within the park and preserve. This study will improve understanding of sheep movements and the ability of this population to recover from severe declines or die-offs should disease become a problem.

Valuable information can be gathered from Dall rams harvested in federal subsistence areas through the sealing process that can help biologists better manage Dall sheep populations. With increased knowledge of baseline data for sheep statewide, managers will be in a much better position to react quickly should populations experience severe declines or die-offs. Portions of this Wrangell mountain sheep population are currently at very low densities, and more knowledge gained

concerning the age-class structure and historical patterns will provide better understanding of current population dynamics.

Adoption of this proposal should benefit all user groups hunting Dall sheep in Units 11 and 12 because the management of the sheep population will benefit from the data and information collected during the sealing process. Adoption of this proposal will not affect other resource uses or users. The more baseline data we have for this sheep population, the better the position we are in to ensure the proper management of this resource for the benefit of all users.

Enforcement Issues: There are a considerable number of Dall sheep harvested in Units 11 and 12 under federal subsistence regulations, and, although most are harvested by hunters using the State harvest ticket system, it is unclear to subsistence users and enforcement personnel whether the State salvage and sealing regulations apply to Dall rams taken in federal subsistence hunts. Most rams harvested under federal subsistence regulations in Units 11 and 12 are taken under the State harvest ticket system (Unit 11 approximate average = 22/year, 1988-2007), with the exception of a small number of rams taken under elder permit hunts. Given the lack of clarity, sealing requirements have not been enforced against federal subsistence hunters, and wildlife managers cannot easily check to see if a hunter is abiding by the State salvage and sealing regulations.

Other Comments: The federal staff analysis points out that the federal subsistence regulations have been in effect since 1992 but also acknowledges that the regulations are not consolidated in one location for easy reference by subsistence users, enforcement officials, or state managers. Federal staff claims that changing the federal regulation to replicate state regulation "would be redundant" and not necessarily provide clarification to the federal subsistence user. The federal analysis recommends that the Federal Subsistence Board take no action to adopt parallel federal regulations but agrees to modify the text of the federal subsistence public booklet to reflect the requirement of a State harvest ticket and any requirements of that ticket, including any sealing requirement. This recommendation contradicts prior interpretations by federal legal counsel. During numerous discussions of federal regulations over the years, the State has frequently requested that the federal program not adopt regulations that duplicate State regulations, and the State has been advised that the federal program needs a comprehensive set of regulations.

Recommendation: Take no action. Federal legal counsel advises that these State requirements apply to federal subsistence users. The federal program concurs that the State regulations apply and desire to prevent duplicative regulations. On this basis, the Department agrees to the Federal Subsistence Board taking no action so long as the precise wording of the state regulations will be added to the federal public booklet rather than just a reference to state regulations. To do this, the summary needs to describe what is required of sheep hunters in the affected area of concern and other applicable units. Clarity would also be needed for enforcement personnel in citing under applicable state regulations. The Department is encouraged that federal staff desire to avoid duplicative federal and state regulations. A review of the option of federal enforcement citing under state regulations to increase understanding the Federal Subsistence Board members may assist our mutual interests in reducing the number of duplicate regulations in the federal program that are not necessary to provide a meaningful subsistence preference on federal public lands.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-39. We support WP10-39 to "salvage Dall sheep horns, and that a person may not possess, transport or export from the state, the horns of a Dall sheep ram taken in any hunt where there is a horn configuration bag limit or a ram-only bag limit in Southcentral, unless the horns have been permanently sealed by a department representative within 30 days after the taking".

The Department of Fish and Game will gather better "detailed size measurements and genetic information" by salvaged Dall horns by the Federally qualified subsistence users hunting in Unit 11 and Unit 12 for Dall sheep.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-40 Executive Summary	
General Description	Proposal WP10-40 requests that the wolverine trapping season in Unit 14C be changed from November 10 – February 28 to November 10 –January 31 and that the harvest limit be changed to 2 wolverines. *Submitted by the Alaska Department of Fish and Game*
Proposed Regulation	**Unit 14C — Wolverine** ~~*No limit*~~ **2 wolverines** *Nov. 10 –* ~~*Feb. 28*~~ ***Jan. 31***
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	
Written Public Comments	**None**

STAFF ANALYSIS
WP10-40

ISSUES

Proposal WP10-40, submitted by the Alaska Department of Fish and Game (ADF&G), requests that the wolverine trapping season in Unit 14C be changed from November 10 – February 28 to November 10 – January 31 and that the harvest limit be changed to 2 wolverines.

DISCUSSION

In 2009, the Alaska Board of Game closed wolverine trapping in the Chugach State Park and returned the trapping season to November 10 – January 31 from December 15 – January 31 due to increasingly successful harvests and reduced wolverine refugiums in the area. Due to concerns over the population, the proponent believes that the Federal subsistence trapping season and harvest limit should be aligned with the State trapping season (November 10 – January 31) and harvest limit of two wolverines.

Existing Federal Regulation

Unit 14C — Wolverine	
No limit	*Nov. 10 – Feb. 28*

Proposed Federal Regulation

Unit 14C — Wolverine	
~~*No limit*~~ **2 wolverines**	*Nov. 10 –* ~~*Feb. 28*~~ ***Jan. 31***

Existing State Regulation

Unit 14C — Wolverine	
2 wolverines	*Nov. 10 –Jan. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 17% of Unit 14C and consist of 13% of U.S. Forest Service lands, 4% Bureau of Land Management, and less than 1% U.S. Fish and Wildlife Service (**Map 1**).

Customary and Traditional Use Determinations

No specific determination has been made; therefore all rural residents have a positive customary and traditional use determination for wolverines in Unit 14C.

Regulatory History

Under current Federal subsistence regulations, wolverine trapping has a month longer season than the State season, and there is no limit on the number of wolverines that can be trapped in Unit 14C. Since its

inception, the Federal trapping season for wolverine in Unit 14C has been from November 10 to February 28 with no harvest limit.

Wolverine sealing became a mandatory State requirement in 1971 and it serves as the primary means of attaining harvest information. ADF&G requires anyone who harvests a wolverine to have the pelt sealed with a locking metal tag and report when, where, and how the animal was harvested. Therefore, harvest reporting only indicates successful harvest, not harvest attempts or harvest effort.

The Chugach State Park (Unit 14C) was open to wolverine trapping in 2007 and 2008 with a six week season from Dec. 15 to Jan. 31 and a harvest limit of two wolverines. In July 2009, the Alaska Board of Game closed wolverine trapping in the Chugach State Park and returned the trapping season to Nov. 10 – Jan. 31 due to increasing harvests and reduced wolverine refugiums in the area.

Biological Background

Wolverines have a polygamous mating system with males overlapping territories with several females (Hedmark et al 2007). Low reproductive potential of two to four kits born in late winter or early spring (Rausch and Pearson 1972) has been documented, but more recent studies have shown the reproductive rate for wolverines is much lower than expected due to delayed maturity and frequent recruitment failure (Persson 2006). In addition, wolverines typically occur in relative low densities compared to other furbearer species (Golden et al 2007a). The potential rate of increase for untrapped wolverine populations is estimated at 6.4% throughout North America (Krebs et al. 2004). Functional refugia are critical in maintaining source populations to repopulate areas where trapping occurs and must be adequate in size and suitable habitat to support reproductive females to den and rear kits without moving into trapping areas (Magoun and Copeland 1998, Krebs et al 2004, Golden et al 2007b).

Dens sites for wolverines in Alaska are primarily in higher elevations of alpine, subalpine, taiga, or tundra habitat with few exceptions in low elevation, densely forested habitats (Magoun and Copeland 1998) although wolverines occupy the lower elevations in smaller numbers. Predictably as with other species, the main component of viable wolverine populations is the survival of reproductive females (Persson et al. 2003), therefore maintaining enough suitable habitat for refugia for reproductive females to successfully den and rear kits without having to make excursions into trapping areas is paramount (Magoun et al. 2008). The peak of parturition for wolverines in Alaska and the Yukon occurs predominantly from mid-February through March (Rausch and Pearson 1972). Some adult females may not be active prior to parturition and subsequently the likelihood of being trapped remains small during certain times of the year (Golden et al. 2007b). However, parturient females will often move from sites used for parturition (natal dens) to sites use to rear kits (maternal dens) and continue to forage over long distances (Magoun and Copeland 1998) which may increase the number of harvests during February if parturition occurred in January. Females have moved their young to maternal dens when the kits have been as young as 13 days old (Magoun and Copeland 1998). Male wolverines range widely throughout their home ranges most of the year (Golden 1997) and typically have territories within home-ranges of several females (Hedmark 2007).

ADF&G completed two aerial surveys to estimate densities of wolverine in Unit 14C and estimated 4.8 and 4.9 wolverines/1,000 km^2 in 1995 and 2008, respectively (**Table 1**). By adding the harvest for that winter, the wolverine population for the entire unit was estimated at 18 wolverines in 1994 and 22 wolverines in 2007 which are similar densities in the Kenai Peninsula and Nelchina Basin (ADF&G 2008).

Table 1. Wolverine density in Alaska and Yukon (ADF&G 2008)

Survey Area	Date	Density[1]	90% C.I.[2]	CV (%)	Reference
Talkeetna Mts. (GMU 13A)	Feb. 1991	4.7	3.5 – 5.9[3]	13.0	Becker et al. 2004
Chugach Mts. (GMU 13D)	March 1988	5.2	2.7 – 7.7[4]	20.3	Becker 1991
Chugach Mts. (GMU 14C)	Feb. 1995	4.8	2.7 – 5.9[5]	20.1	ADF&G 2000
Chugach Mts. (GMU 14C)	April 2008	4.9	4.1 – 5.7[6]	8.9	ADF&G 2008
Kenai Mts. (GMU 7/15)	March 2004	3.0	2.5 – 3.6[7]	12.0	Golden et al.2007a
Yukon, Canada	March 2004	9.7	8.7 – 11.0[8]	6.5	Golden et al. 2007a

1 Density is number of wolverines/1000km2).
2 C.I. denotes the statistical confidence interval for wolverine density; the lower limits are not adjusted for the known minimum number of wolverines encountered during the survey.

Management Direction

The management goals for ADF&G for furbearers in Unit 14 are to provide an opportunity to trap and hunt furbearers, maintain an optimal sustained harvest of furbearers, and develop measurable population objectives for all fur species. ADF&G objectives to accomplish this goal are to monitor annual harvest of furbearers using sealing forms, questionnaires, and trapper interviews, and implement track counts to form a long-term population index.

Harvest History

From 1979-1993, the mean annual harvest was 1.1 wolverines with 25% females which increased to 3.5 wolverines with 44% females from 1994-2008 (ADF&G 2008). From 2006-2008, eight out of the ten wolverines harvested in Unit 14C were females (ADF&G 2008). While the annual number of wolverines harvested within Unit 14C is small, it represents a substantial proportion of the population within the Unit. Golden et al. (2007b) found the highest wolverine harvests per unit area in Southcentral Alaska (Kenai Peninsula, Nelchina Basin, and West Cook Inlet) which is not surprising, given the highest human density in the State occurs within this area. However, despite high human activity levels in the Kenai Peninsula, there were higher and more consistent areas without wolverine harvest than in West Cook Inlet which suggests a substantial potential for refugia in Kenai Peninsula and not West Cook Inlet (Golden et al. 2007b).

From 2000-2007, Federally qualified subsistence users (n=20) have not harvested more than two wolverines per person (FWS 2009), although in 2008, one individual did harvest three males out of the Twentymile drainage (ADF&G 2008). In February 2008, two female wolverines were trapped by a Federal subsistence user and for a nineteen year period (1985-2004) the Federal harvest has been primarily in the months of December (35%) and January (49%) (FWS 2009).

Effects of the Proposal

If this proposal is adopted, it would reduce the Federal wolverine trapping season by one month and reduce the harvest limit to two wolverines. The harvest limit of two wolverines and the shortened season should not have significant effects on Federally qualified users since the majority of trappers (n=20) harvested only one to two wolverines (1 trapper harvested 3 wolverines in 2008) despite there being no harvest limit on wolverines for Federally qualified subsistence users. The shortened season would allow higher likelihood of suitable refugia which allows females to successfully den and rear kits without having to make excursions into trapping areas. Allowing the harvest through February puts

female wolverines, in denning areas, at risk of harvest. In addition, the high harvest of females in recent years (eight of ten wolverines trapped between 2006 and 2008 were females), coupled with the low reproductive rate of wolverines due to delayed maturity and frequent recruitment failure could be critical to the recruitment rate for the wolverine population in Unit 14C.

OSM CONCLUSION

Support Proposal WP10-40

Justification

From 1985-2004, wolverine trapping by Federally qualified subsistence users has mainly occurred in December (35%) and January (49%), however there has been some harvest in February. Allowing the harvest through February puts female wolverines at risk of harvest in denning areas. Maintaining enough suitable habitat for refugia for reproductive females to successfully den and rear kits without having to make excursions into trapping areas is paramount (Magoun et al. 2008). General conservation concern exists due to the estimated annual harvest averaging 15.9% (3.5 of 22 wolverines) between 1994 and 2008 (ADF&G 2008), and the potential to increase the harvest due to no harvest limit for the Federal season, especially considering that eight of ten wolverines trapped between 2006 and 2008 were females which is a high proportion of the potential breeding population within Unit 14C (ADF&G 2008). Since harvest primarily occurs during December and January, the shortened season and harvest limit of two wolverines will result in few Federally qualified trappers being affected, while protecting the population of wolverines in Unit 14C.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-40. There is little trapping activity in Unit 14C and conservation concerns are being addressed by changing the season and harvest limit. In addition, it will provide for some subsistence trapping opportunities in the area.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-40

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WP10-42 Executive Summary	
General Description	Proposal WP10-42 requests the closure of the Federal season for caribou in Unit 10 (Unimak Island) during the fall and winter seasons due to decreased population and low productivity of the caribou herd. *Submitted by the Izembek National Wildlife Refuge Manager and the Alaska Department of Fish and Game*
Proposed Regulation	**Unit 10 — Unimak Island only — Caribou** ~~*Two caribou by Federal registration permit*~~ ***No Federal open season*** ~~*Aug. 1 – Sept. 30*~~ ~~*Nov. 15 – Mar. 31*~~
OSM Conclusion	**Support**
Kodiak/Aleutians Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	
Written Public Comments	**None**

STAFF ANALYSIS
WP10-42

ISSUES

Proposal WP10-42, submitted by the Izembek National Wildlife Refuge Manager and the Alaska Department of Fish and Game, requests the closure of the Federal season for caribou in Unit 10 (Unimak Island) during the fall and winter seasons due to decreased population and low productivity of the caribou herd.

DISCUSSION

The Unimak Island Caribou Herd has shown a marked decrease in both population and calf recruitment over the past four years. The intent of this proposal is to adopt into Federal regulation the actions taken in Emergency Special Action WSA09-06 and Temporary Special Action WSA 09-07 to provide an opportunity for the caribou population to recover by eliminating additional mortality caused by harvest.

Existing Federal Regulation

Unit 10 — Unimak Island only — Caribou	
Two caribou by Federal registration permit	*Aug. 1 – Sept. 30* *Nov. 15 – Mar. 31*

Proposed Federal Regulation

Unit 10 — Unimak Island only — Caribou	
~~*Two caribou by Federal registration permit*~~	***No Federal open season*** ~~*Aug. 1 – Sept. 30*~~ ~~*Nov. 15 – Mar. 31*~~

Existing State Regulation

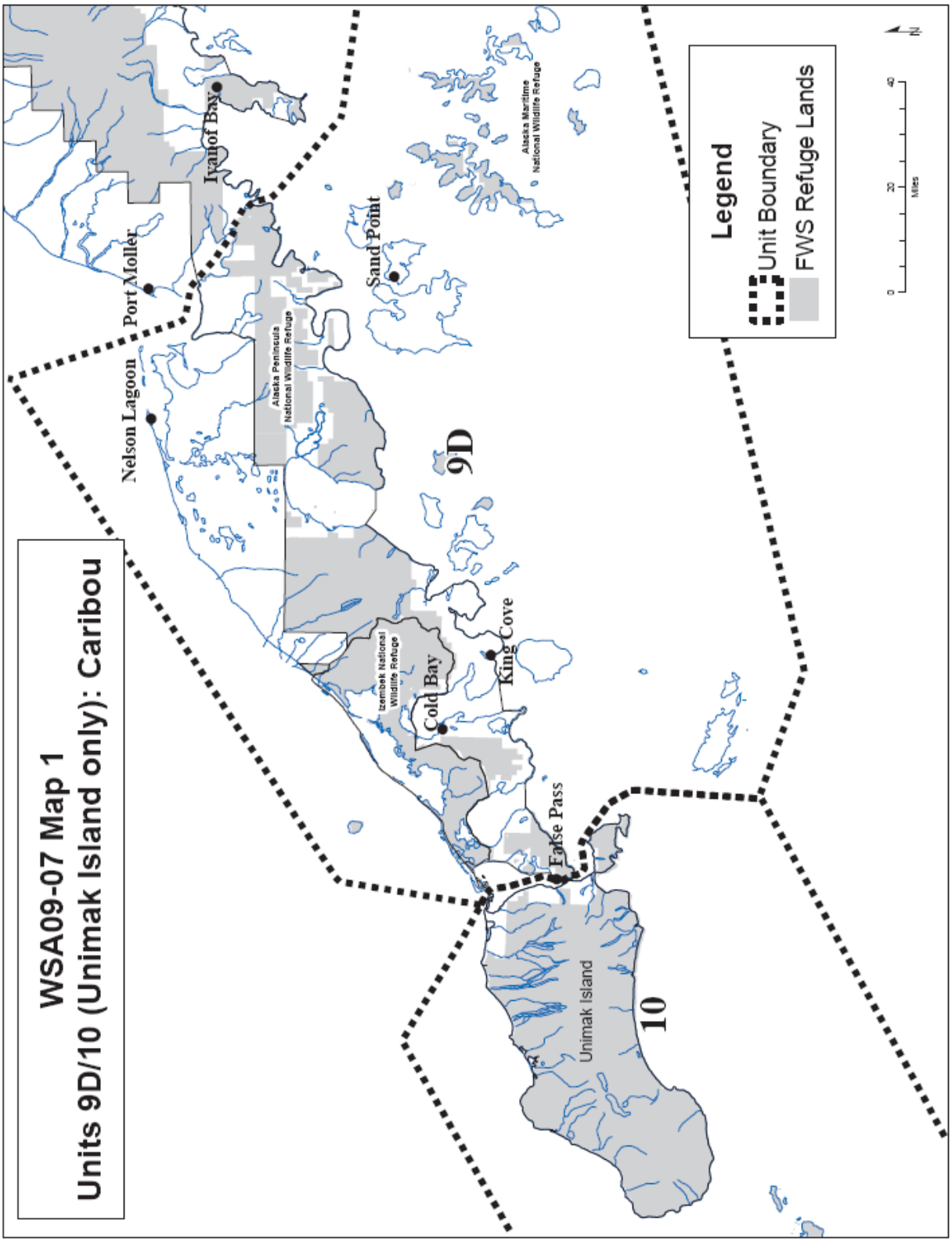
Unit 10 — Umnak and Unimak Island — Caribou	
Residents and non-residents	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 90% of Unit 10 (Unimak Island) and are managed by the Izembek National Wildlife Refuge (U.S. Fish and Wildlife Service) (**Map 1**).

Customary and Traditional Use Determinations

Residents of False Pass, King Cove, Akutan, and Sand Point have a positive customary and traditional use determination for caribou in Unit 10 (Unimak Island).


WSA09-07 Map 1
Units 9D/10 (Unimak Island only): Caribou
Nelson Lagoon
Port Moller
Ivanof Bay
Sand Point
Alaska Peninsula National Wildlife Refuge
Alaska Maritime National Wildlife Refuge
9D
Izembek National Wildlife Refuge
Cold Bay
King Cove
False Pass
Unimak Island
10
Legend
Unit Boundary
FWS Refuge Lands
0
20
40
Miles
N

Regulatory History

The Unimak Island Caribou Herd showed a precipitous decline in population in the early 1980s and by the early 1990's required a Federal management response. In response to this decline, caribou harvest in Unit 10 (Unimak Island) was closed to non-Federally qualified subsistence users in 1991. In 1993, the herd continued to decline and the Alaska Department of Fish and Game (ADF&G) closed the State harvest by Emergency Order and the Federal Subsistence Board (Board) issued Special Action SA93-01 to close Units 9D and 10 (Unimak Island) to all caribou harvest.

In 1997, the Board approved Special Action SA97-01 to open a caribou season in Units 9D and 10, after caribou surveys indicated there was a sufficient increase in bulls to allow a subsistence harvest on Federal public lands. Special Action SA98-05 established a subsistence hunt via registration permit and SA99-04 authorized caribou harvest for Sept. 1 – Mar. 31 for 1 caribou and allowed for a designated hunter provision. In 2000, the Board adopted Proposal WP00-29 establishing a two caribou harvest limit by Federal registration permit in Unit 10 during the fall season of Aug. 1 – Sept. 30 and the winter season from Nov. 15, 2003– Mar. 31, 2004. The State general season was reopened in 2001 to allow residents to harvest one caribou from Aug. 10 – Sept. 30 or Nov. 15 – Mar. 31 and allowed nonresidents one caribou from Sept. 1 – Sept. 30 (Butler 2005).

In 2003, the Board authorized Special Action WSA03-08 increasing the caribou harvest limit from 2 to 4 caribou for Unit 10 (Unimak Island) during the fall season of Aug. 1 – Sept. 30, 2003. Temporary Special Action (WSA03-10) was approved by the Board to extend the increased harvest limit into the winter season from Nov. 15, 2003 to Mar. 31, 2004.

In 2004, Proposal WP04-40 (FWS 2004) was adopted by the Board increasing the harvest number from 2 caribou to 4 caribou for Unit 10 (Unimak Island).

In 2008, the Board adopted Proposal WP08-25 (FWS 2008a) decreasing the harvest number from 4 to 2 caribou for Unit 10 (Unimak Island) in response to the caribou population decrease.

The Alaska Board of Game closed all hunting for caribou on Unimak Island (Unit 10) at its February 27 – March 9, 2009 meeting (State Proposal 54). The Federal Subsistence Board authorized Emergency Special Action WSA09-06 on July 1, 2009, closing the fall caribou season from Aug. 1 through Sept. 29 and authorized Temporary Special Action WSA09-07 on November 10, 2009 to close the remainder of the season.

Biological Background

Caribou on Unimak Island and the Southern Alaska Peninsula Caribou Herd (SAPCH; Unit 9D) were originally managed as a single population. However, the caribou on Unimak Island displayed a fidelity to calving grounds on the island and subsequent genetic sampling of the herds showed enough distinction to classify them as two different herds. Management objectives were not defined for the SAPCH until 2007, and to date, the Unimak Island Caribou Herd has no management plan. In recent years, no significant dispersal between the Unimak Island Caribou Herd and the SAPCH has been documented. The Unimak Island Herd reached a peak in 1975 with an estimated population of 5000 animals and then decreased to 300 animals by the early 1980s. Calf recruitment into the population is critical for population growth to keep pace with the mortality rate of adults. In 1993, caribou harvesting in Unit 10 was closed in response to the declining population. By 1997, the population had shown an increase in the bull:cow ratio and the Board approved Special Action SA97-01 to open a caribou season in Units 9D and 10 after caribou surveys indicated there was a sufficient increase in bulls to allow a subsistence harvest on Federal public

lands. The population remained stable, with approximately 1,000 animals, until 2005 when population composition surveys suggested a decline had begun.

In 2005, caribou population composition surveys (**Table 1**) estimated 730 caribou with ratio of 45 bulls:100 cows, with large bulls making up 39% of all bulls. However, during fall composition surveys in 2008, biologists estimated 9 bulls:100 cows. The 2008 estimate is a significant decrease from the 2007 estimate of 31 bulls:100 cows (Butler 2008) and represents a 71% decrease in the bull:cow sex ratio. Caribou have a polygynous mating system in which a single male is capable of inseminating many females, however research has shown that there is a sex-ratio threshold in caribou (sex ratio ≤ 0.08), as well as other ungulates, below which fecundity may collapse (Bergerud 1974). The 2008 estimate of 9 bulls:100 cows is precipitously close to this threshold.

In 2008, the ratio of 7 calves:100 cows was similar to ratios observed in 2005 and 2007 but was significantly lower than previous surveys in 2000 and 2002 that had ratios of 26 calves:100 cows. Calf recruitment from 2005–2008 was not sufficient to offset adult mortality and helps to explain the overall decreasing population trend for the Unimak Island Herd. In addition, immigration from the SAPCH which is speculated to already not occur, is less likely as SAPCH calf recruitment is also at its lowest levels since 2000 (6 calves:100 cows) (Butler 2007).

In October 2009, a fall composition survey was completed on Unimak Island and showed further reduction in bull:cow ratios (5 Bulls:100 cows) and calf: cow ratios (3 calves:100 cows) from the fall 2008 composition survey (Butler 2009, pers. comm.).

The results of the population composition surveys from 2005–2009 suggest a strong population decline for the Unimak Island Caribou Herd. Specific limiting factors causing the low calf recruitment and subsequent population decline are not known. Valkenburg et al. (2001) noted that lichen biomass is low on the Alaska Peninsula due to historically sustained grazing by caribou, although Butler (2007) acknowledged that habitat assessment data has not been available in recent years. However, the pregnancy rate for Unimak caribou indicates that the herd is in good nutritional condition in this area (Butler 2009, pers. comm.), but calf recruitment still remains low (Butler 2008). Valkenburg et al. (2001) stated that, typically, predation is an important limiting factor to caribou populations, and at that time, predation on the Unimak Island Herd did not seem high enough to be the sole contributor to the population decline. However, this may have changed since 2001 and more recent studies of calf predation on the Unimak Island Herd need to be done (Butler 2009, pers. comm.). In 1999, the prevalence of pneumonia was noted in NAPCH calves, but not in SAPCH calves (Valdenburg et al. 2001) and no recent disease research has been done on Unimak Island. Access to Unimak Island is difficult; therefore recent research has not been done to determine if disease, predation, or any other specific limiting factor is responsible for the decline in the Unimak Island Caribou Herd.

Management Direction

In 2007, ADF&G revised the Southern Alaska Peninsula Caribou Herd Operational Plan (Draft) to reflect the separation of the SAPCH and the Unimak Caribou Herd (ADF&G and FWS 2007). To date, no formal management objectives have been defined by ADF&G for the Unimak Island Caribou Herd due to the difficult logistics to access the island to provide data for management purposes. General ADF&G management objectives are to keep the Unimak Herd at 1,000 to 1,500 animals due to limited habitat on the island. In lieu of a formal management plan for the Unimak Herd, management objectives for the SAPCH, as outlined in the 2007 Southern Alaska Peninsula Caribou Herd Operational Draft Plan, may provide a framework for the population management objectives for the Unimak Herd. The SAPCH draft management plan is to sustain a total population of 3,000–3,500 animals, maintain a fall bull:cow ratio of

Table 1. Unimak caribou herd (uch) composition surveys and population estimates, 2000–2008.

Regulatory Year	Bulls:100 cows	Calves: 100 cows	% Calves	% Cows	% Bulls	Small bulls (% bulls)	Medium bulls (% of bulls)	Large bulls (% of bulls)	Sample size	Population counts
2000	40	21	13	62	25	34	32	33	406	983[a]
2002	54	31	17	54	29	50	22	29	392	1262[b]
2004										1006[b]
2005	45	7	5	66	29	24	37	39	730	1009[b]
2006										806[b]
2007	31	6	4	73	23	28	34	38	433	
2008	9	6	5	86	9	33	33	33	260	

[a] Count by Rod Schuh, registered guide, in May

[b] Winter count by Izembek National Wildlife Refuge staff

Source: Butler (2008)

20–40:100, and discontinue harvest when the SAPCH is below 875 and has been in a period of decline for three years (ADF&G and FWS 2007). The Federal caribou season was closed in Unit 9D initially by Emergency and Temporary Special Actions in 2007 (WSA 07-03 and WSA 07-04). In 2008, WP08-26 was adopted by the Federal Subsistence Board closing the Unit 9 caribou season (FWS 2008b).

Harvest History

Since 2001, the State has had a general hunt in Unit 10 (Unimak Island) for one caribou with seasons of Sept. 1 –Sept. 30 for nonresidents and Aug. 10–Sept. 30 and Nov. 15–Mar. 31 for residents. The Unimak Caribou harvest has averaged 16 caribou annually from 2001–2007 (**Table 2**). Residents have harvested an average of 3 caribou and non-residents have averaged a harvest of 11 caribou annually from 2001–2005 (**Table 3**).

Table 2. Comparison of Federal and State reported Unimak Island caribou harvest in Unit 10, 2001–2007.

	Federal Registration Permits (OSM database)			State Harvest Tickets (Table 2) (ADF& G database)			Total Reported Harvest
Year	Permits Issued	Bulls Harvested	Cows Harvested	Harvest Reports	Bulls Harvested	Cows Harvested	
2001	0	0	0	25	19	n/a	19
2002	0	0	0	48	11	1, 1 unk	13
2003	0	0	0	47	10	3 unk	13
2004	0	0	0	59	15	6 unk	21
2005	0	0	0	158	16	1 unk	17
2006	0	0	0	365	10	1, 3 unk	14
2007	16	2	0	289	13	n/a	15

Source: ADF&G 2009 and FWS (2009)
Note: Unimak Island harvest only; these numbers do not include Adak harvest from Unit 10.

Prior to 2007, few Federal registration permits (RC101) were issued to hunt caribou on Unimak Island. However, in 2007, 16 permits were issued to hunt under the Federal registration hunt (RC101) and 2 caribou were reported being harvested (Table 2). The increase in permits is most likely due to the closure of caribou harvest in Unit 9D for both Federal and State seasons in regulatory year 2007/08 (FWS 2008b). However, despite the increase in permits issued in 2007, 50% (8 of 16) reported that they did not hunt, 25% reported they did hunt (2 of 8), and the remaining six permittees did not submit a hunting report (FWS 2009). In 2007, the Unimak Caribou Herd was also exhibiting signs of population decline and a low calf:cow ratio. Therefore, in 2008 the Board decreased the harvest limit for the Federal subsistence hunt from four to two caribou (FWS 2008a). Harvest under the State general hunt has been primarily bulls since 2001 with total harvest numbers remaining below 21 animals annually (**Table 2**). In 2009, the Alaska Board of Game closed the caribou season on Unimak Island due to a low population estimate (State Proposal 54).

Current Events

At the Kodiak Aleutians Regional Advisory Council meeting in March 2010, the Izembek National Wildlife Refuge Manager informed the Council that she had changed her perspective on proposal WP10-

Table 3. Unimak caribou annual hunter residency and success, 2001–2005.

	Successful				Unsuccessful				
Regulatory Year	Local Resident	Nonlocal Resident	Nonresident	Total[b] (%)	Local Resident[a]	Nonlocal Resident	Nonresident	Total (%)	Total Hunters[b]
2001-02	0	5	14	19 (95)	0	1	0	1 (5)	20
2002-03	0	5	7	12 (92)	0	1	0	1 (8)	13
2003-04	0	1	9	10 (77)	0	2	1	3 (23)	13
2004-05	0	2	12	15 (71)	0	5	1	6 (29)	21
2005-06	0	4	11	15 (94)	0	0	1	1 (6)	16

[a] Local residents are residents of Unimak Island
[b] Includes hunters of unknown residency
Source: Butler (2007)

42 based on her evaluation of new data. Izembek National Wildlife Refuge staff flew aerial surveys for caribou in December and January and estimated 400 animals, whereas the October ADF&G survey found 221 caribou. Initially the Izembek NWR Manager was in support of closing the hunting of caribou altogether, however she now supports the idea of opening the hunt to Federally qualified subsistence users with a harvest limit of one caribou and the establishment of an overall harvest quota. For this regulatory year, the quota would be established as zero until age and sex compositions are completed. It should be noted that the census completed by Izembek staff did not gather age and sex composition data, which is critical to assess the reproductive viability of the population, and therefore, the only known ratios are 5 bulls:100 cows and 3 calves:100 cows. Based on the sex and age ratios, ADFG continues to support a closure of the hunt.

Effects of the Proposal

If this proposal is adopted, the Federal caribou hunting season for Unit 10 would be closed and opportunity would be suspended for Federally qualified subsistence users to harvest caribou in Unit 10 for 2010–2012. However, there are conservation concerns for this herd. The Unimak Island caribou population is decreasing and there has been little calf recruitment within the population for the past several years. Any harvest would have detrimental effects on the caribou herd and eventually on subsistence users, by driving the population of the herd to the point where recovery is more difficult. Both the bull:cow and calf:cow ratios are extremely low and do not support a continued harvest at this time.

If the caribou seasons are closed in Unit 10, Federal and State regulations would be aligned thereby eliminating harvest mortality and allowing an opportunity for the Unimak Island caribou herd to recover. Historically, Federal subsistence harvest has been low, with only 2 bulls reported harvested in total from 2001 to 2007 (**Table 2**). Closure of Unit 10 caribou harvest could adversely affect Federally qualified subsistence users by eliminating all harvest of caribou under either Federal or State regulations.

OSM CONCLUSION

Support Proposal WP10-42

Justification

The results of the population composition surveys from 2005–2009 suggest a population decline for the Unimak Island Caribou Herd due to low calf recruitment. Calf recruitment is critical for population growth to keep pace with the mortality rate of adults. Caribou have a lower reproductive potential due to females not typically producing young until over two years of age and then having only one calf per year. The loss of an adult caribou to the population creates an additional challenge for population growth by removing viable breeding animals from the population. There is also a lag effect in waiting for female calves to reach sexual maturity, if they survive to adulthood.

Both the bull:cow and calf:cow ratios are extremely low and a cause for concern for conservation of the herd. Eliminating the harvest opportunity would allow the herd to grow and would provide for subsistence harvests in the future. The closure of the harvest for the Unimak Herd in 1993 allowed the herd to rebound and subsistence harvest for bulls was reopened in 1997 after surveys showed a surplus of bulls in the Unimak Island Caribou Herd. Closure of the harvest of caribou on Unimak Island is justified by the decline of the population, low bull: cow ratios, and low calf recruitment.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-42. Action needs to be taken to address the population decline and poor calf recruitment of the Unimak Island Caribou Herd.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-42

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WP10-43/44 Executive Summary	
General Description	Proposals WP10-43 and -44 seek to restrict wolf hunting and trapping in Unit 10 where wolves do not occur. *Submitted by the Alaska Wildlife Alliance*
Proposed Regulation	**Unit 10 — Wolf Hunting** ***Unit 10 where wolves occur*** *5 Wolves* — *Aug. 10–April 30* **Unit 10 remainder** ~~***5 Wolves***~~ — ***No Federal open season*** ~~*Aug. 10–April 30*~~
OSM Conclusion	**Neutral**
Kodiak/Aleutians Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-43 AND -44

ISSUES

Proposals WP10-43 and -44, submitted by the Alaska Wildlife Alliance, seek to restrict wolf hunting and trapping in Unit 10 where wolves do not occur.

DISCUSSION

Proposal WP10-43 requests that wolf hunting be closed in that portion of Unit 10 where wolves do not occur. Proposal WP10-44 requests that the wolf trapping season be closed in that portion of Unit 10 where wolves do not occur.

Existing Federal Regulations

Unit 10 — Wolf Hunting

5 Wolves	*Aug. 10–April 30*

Units 10 — Wolf Trapping

No limit	*Nov. 10–Mar. 31*

Proposed Federal Regulations

Proposal WP10-43:

Unit 10 — Wolf Hunting

Unit 10 where wolves occur

5 Wolves	*Aug. 10–April 30*

Unit 10 remainder

~~5 Wolves~~	***No Federal open season*** ***~~Aug. 10–April 30~~***

Proposal WP10-44:

Unit 10—Wolf Trapping

Unit 10 where wolves occur

No limit	*Nov. 10–Mar. 31*

Unit 10 remainder

~~No limit~~	***No Federal open season*** ***~~Nov. 10–April 30~~***

Existing State Regulations

Unit 10— Wolf Hunting	
10 Wolves	*Aug. 10–May 25*
Units 10-Wolf Trapping	
No limit	*Nov. 10–Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 10 and consist of 100% U.S. Fish and Wildlife Service (FWS) land (see Unit 10 Map). All of the FWS land is part of the Alaska Maritime National Wildlife Refuge.

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 10.

Regulatory History

Since 1990, the Federal subsistence hunting season for wolves in Unit 10 has been August 10 to April 30. Between 1990 and 1994 the Federal harvest limit in Unit 10 for wolves was two. In 1994 the harvest limit was raised to 5 wolves based on action taken by the Federal Subsistence Board on a proposal submitted by the Alaska Department of Fish and Game and supported by the Kodiak/Aleutians Subsistence Regional Advisory Council (Council). Since 1990 the Federal subsistence wolf trapping season in Unit 10 has been November 10 to March 31 with no harvest limit.

In 2004, Defenders of Wildlife submitted Proposal WP05-02 requesting that wolf hunting seasons in Units 1, 3-4, 5A, 6-7, 9-13, 14C, 15-21, and 24-26 be closed until September 15. The Council opposed that proposal. In its comments concerning Proposal WP05-02, the Council noted that there was no conservation concern and the wolf harvest had been relatively small (FSB 2005). Consistent with Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02.

Biological Background

Wolves (*Canis lupus)* occur at low to moderate densities on Unimak Island (Butler 2006). Biological information on Unimak Island wolves is limited. Peterson (1967) reported that wolves had occasionally immigrated to islands west of Unimak, by crossing on ice flows.

Wolves have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its

territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves (Meier et al. 2006, Adams et al. 2008). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance. Wolves are opportunistic carnivores; prey species on Unimak Island likely include caribou, small mammals, birds, salmon and various marine species that are available along the coast.

Harvest History

Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Some wolf trapping occurs in the False Pass and Unimak Island area (Fall et al. 1996).

Wolves harvested by trapping and hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Between regulatory years 1999/2000 and 2008/09, the reported harvest of wolves in Unit 10 ranged from 0 to 4 wolves per year (**Table 1)**. Most were harvested in the months of September and October. Butler (2006) observed that harvest has had little effect on wolf population of Unit 10.

Table 1. Reported wolf harvest and method of take for Unit 10 (ADF&G 2009 and 2010).

Regulatory Year	Reported Total Harvest	Method of take for total harvest from Units 10				
		Trap/snare	(%)	Shot	%	Unk
1999/2000	0	0		0		0
2000/01	2	0		2	100	0
2001/02	2	0		1	50	1
2002/03	2	0		2	100	0
2003/04	4	0		4	100	0
2004/05	0	0		0	100	0
2005/06	4	0		4	100	0
2006/07	0	0		0		0
2007/08	0	0		0		0
2008/09	0	0		0		0

Effects of the Proposal

If Proposals WP10-43 and -44 were adopted, the Federal wolf hunting and trapping seasons in that portion of Unit 10 which does not currently have wolves would be closed. There are wolves on Unimak Island and they have occasionally immigrated to islands west of Unimak, by crossing on ice flows. The proposals would add complexity to the Federal regulations with virtually no affect of subsistence users or the resource. If either of the proposals were adopted, it would cause Federal and State regulations to be further out of alignment.

OSM CONCLUSION

Neutral on Proposals WP10-43 and -44.

Justification

These proposals would have virtually no affect on subsistence users or the resource.

Even if these proposals were adopted by the Federal Subsistence Board, hunters and trappers would still be able to take wolves under State regulations on Alaska Maritime National Wildlife Refuge lands. As such, the adoption of these proposals by the Federal Subsistence Board would not have the effect sought by the proponent.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-43/44. These proposals would have no effect.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-43/44

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-43 and WP10-44
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-43: This proposal requests federal regulations state there is no wolf hunting season in portions of Unit 10.

Wildlife Proposal WP10-44: This proposal requests federal regulations state there is no wolf trapping season in portions of Unit 10.

Introduction: Wolf distribution in the Aleutians is limited to Unimak Island. It is unlikely that wolves will disperse to other Aleutian Islands because of the distance between Unimak Island and other Aleutian Islands. Because wolf trapping can only occur on islands with wolves, wolf trapping does not occur on the majority of islands in Unit 10. Under WP10-44, if wolves were to colonize other islands, a trapping season for wolves would automatically be opened on that island. The proposal is circular with no meaningful effect on hunting opportunity in Unit 10. Adoption of this proposal is not expected to result in benefits for wolf conservation or federal subsistence use of wolves in Unit 10. The only effect of this proposal is to make wolf trapping regulations in Unit 10 unnecessarily complicated.

Impact on Subsistence Users: There is no impact on federal subsistence users if these proposals are adopted. Federal subsistence hunters and trappers will still be able to hunt or trap wolves wherever they occur on all lands in Unit 10 under state regulations.

Opportunity Provided by State: The state provides wolf hunting opportunity on all islands in Unit 10. The wolf hunting season is August 1 through May 25, and the bag limit is 10 wolves per day. The state provides wolf trapping hunting opportunity on all islands in Unit 10. The wolf trapping season is November 10 through March 31, with no harvest limit.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposals WP10-43/44. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

WP10-45 Executive Summary	
General Description	Proposal WP10-45 would shorten the fall and winter moose seasons in Unit 9B from Aug. 20–Sept. 15 to Sept. 1–Sept. 15, and from Dec. 1–Jan. 15 to Dec. 15–Jan. 15; and would align the Federal and State seasons. The Council's support of WP10-45 is contingent upon adoption of WP10-46. *Submitted by the Bristol Bay Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 9B—Moose** *Unit 9B—1 bull* ~~*Aug. 20*~~ ***Sept. 1****–Sept. 15* ~~*Dec. 1*~~ ***Dec. 15****–Jan. 15*
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-45

ISSUES

Proposal WP10-45, submitted by the Bristol Bay Subsistence Regional Advisory Council, would shorten the fall and winter moose seasons in Unit 9B from Aug. 20–Sept. 15 to Sept. 1–Sept. 15, and from Dec. 1–Jan. 15 to Dec. 15–Jan. 15; and would align the Federal and State seasons. The Council's support of WP10-45 is contingent upon adoption of WP10-46.

DISCUSSION

For at least the past several years, Bristol Bay Subsistence Regional Advisory Council (Council) members and area residents have repeatedly expressed concerns about the decline of the moose population. The proponent believes that shorter seasons will reduce the number of moose harvested and may help slow the decline of the moose population in this area. WP10-45 would shorten the fall season by 11 days, and the winter season by 14 days.

Existing Federal Regulation

Units 9B—Moose	
Unit 9B—1 bull	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*

Proposed Federal Regulation

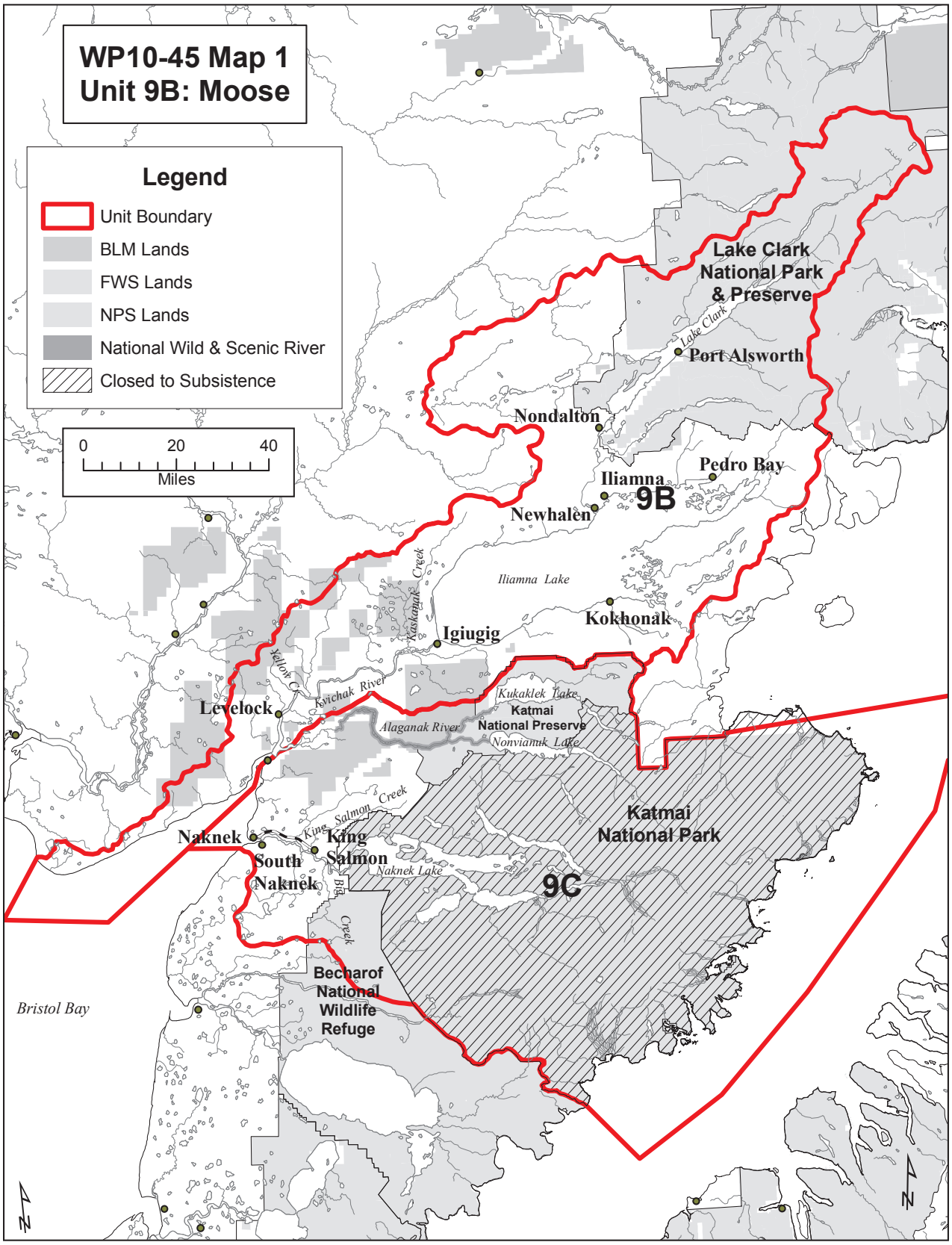
Unit 9B—Moose	
Unit 9B—1 bull	*~~Aug. 20~~* ***Sept. 1****–Sept. 15* *~~Dec. 1~~* ***Dec. 15****–Jan. 15*

Existing State Regulation

Unit 9B—Moose	
Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tine on at least one side	*Sept. 5–Sept. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 27% of Unit 9B and consist of portions of Lake Clark National Park and Preserve (23%) and isolated tracts of Bureau of Land Management lands (4%) (**Map 1**).


WP10-45 Map 1
Unit 9B: Moose
Legend
Unit Boundary
BLM Lands
FWS Lands
NPS Lands
National Wild & Scenic River
Closed to Subsistence
0
20
40
Miles
Lake Clark National Park & Preserve
Lake Clark
Port Alsworth
Nondalton
Pedro Bay
Iliamna
9B
Newhalen
Iliamna Lake
Kokhonak
Igiugig
Kaskanak Creek
Yellow Cr.
Levelock
Kvichak River
Kukaklek Lake
Katmai National Preserve
Alaganak River
Nonvianuk Lake
Katmai National Park
King Salmon Creek
Naknek
King Salmon
South Naknek
Naknek Lake
9C
Big Creek
Becharof National Wildlife Refuge
Bristol Bay

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.

Regulatory History

In 1991, the Federal Subsistence Board (Board) adopted Proposal WP91-23 with modification, which changed the fall moose season from Sept. 5–20 to Sept. 1–15 in Unit 9B. In 1994, the Board then expanded the fall season from Sept. 1–15 to Aug. 20– Sept. 15 by adopting Proposal WP94-38 with modification. In 1999, Proposal WP99-35 was adopted with modification and extended the winter season from Dec. 1–31 to Dec. 1–Jan. 15.

In 1991 and 1992 several other proposals were submitted that requested a year-round moose season (Proposals WP91-57, WP92-43,and WP92-44). However, all were rejected by the Board due to conservation concerns. In 1994 the Board rejected Proposal WP94-39 which requested a March hunt due to concern over inadvertent harvest of cow moose.

In 2008, Proposals WP08-30 and WP08-31, addressing moose in Units 9B and 9C, were submitted by the Council. Proposal WP08-30 requested a shorter moose season in Unit 9B while Proposal WP08-31 requested a closure of Federal public lands to non-Federally qualified users in Units 9B and 9C. Both proposals were related as the Council's support of Proposal WP08-30 was contingent on adoption of Proposal WP08-31. Proposals WP08-30 and WP08-31 were deferred by the Board so a workgroup could be formed to identify other management options.

Other harvest regulations are noteworthy in this region as they directly affect subsistence users. Caribou hunting opportunities have decreased overall for the Bristol Bay region. The Federal subsistence season for the Northern Alaska Peninsula Caribou Herd (NAPCH) has been closed since 2005 due to decline in the population (FWS 2006). The Alaska Department of Fish and Game (ADF&G) also has a closed season for the NAPCH. Based on the decline of the Mulchatna Caribou Herd (MCH) across its range, the Board adopted Proposal WP07-23 which resulted in a reduction in Federal harvest limits from five to three caribou in Unit 9B beginning with the 2007/08 regulatory year. State regulations currently have the bag limit reduced to two caribou for the MCH.

Biological Background

In Unit 9, moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked. The moose population began to decline thereafter which was attributed to range damage from over-browsing. Even after a series of hunting restrictions and improvements in range conditions the moose population in some subunits, such as 9E, had declined as much as 60% from the peak moose population in the 1960s. Brown bear predation on neonatal moose was thought to be the primary limiting factor of moose in Unit 9 (Butler 2008). Analysis of the Alaska Department of Fish and Game fall sex and age composition surveys indicate the moose population in most of Unit 9 remained relatively stable from 1980–2008 (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) densities; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004 and 2008). Overall, management objectives for bull:cow ratios

and population are being maintained in Unit 9B for a low density area (Butler 2009, pers. comm.) (**Table 1**). The last bull:cow ratio estimate for Unit 9B was 40 bulls:100 cows in 2007 (Butler 2008).

The summary table (**Table 1**) presents moose data for a composite of trend analysis and is representative of the subunit. It should be noted that the averages indicated in **Table 1** are derived from variable population density estimates.

Table 1. Unit 9B Moose densities and composition ratios (Butler 2007).

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.56	45	22
1990's Average	0.52	55	15
2000's Average	0.46*	34	11
2007 Composition	-	40	2

*Average Density based on 2005 data only. Insufficient to assess trend.

The current moose populations in Unit 9 are considered stable albeit at low density (Butler 2008). Moose population estimates by subunits are: Unit 9A, about 300 moose; Unit 9B, approximately 2000 moose; and Unit 9C outside of Katmai National Park, approximately 800 moose (Butler 2008).

Since 1984, population trend counts in Unit 9B have also been conducted by the National Park Service in various portions of Lake Clark National Park and Preserve. In some cases, differing methodologies used and data collected at different times of year meant survey results were too variable to measure statistically significant changes in population trends (Mangipane and Putera 2007.). Nonetheless, there have been consistent high bull:cow ratios ranging from 39–69 bulls:100 cows between 1992–2007 for the area of the Park and Preserve within Unit 9B south of Lake Clark. Calf:cow ratios have ranged from 9–20 calves:100 cows between 1992–2007 (Mangipane and Putera 2007).

Local residents have consistently expressed that they are experiencing difficulty meeting their subsistence which they attribute to a decrease in the moose population. The erratic calf:cow ratios within Unit 9 (Butler 2008) may lead to the perception that the population is declining. Between 1998 to 2007, the cow:calf ratios in Unit 9B ranged as low as 2 calves:100 cows in 1999 to as high as 26 calves:100 cows in 2003 (Butler 2006 and 2008). This erratic data can make trend analyses difficult to interpret. Nonetheless, Council members report that there is an increased need for moose and that the current moose population is not sufficient in meeting their needs.

Harvest History

Reported moose harvest for Unit 9B has averaged 38 moose each year for 2000–2008 (ADF&G 2009). Between 2000 and 2008, Federally qualified subsistence users accounted for an average of 30% of the reported harvest in Unit 9B (ADF&G 2009) and participation by nonresidents appears to be declining in recent years (**Table 2**).

It is likely that compliance with the State harvest ticket program is low in this area (Butler 2004), which is not unusual for many parts of rural Alaska (Andersen and Alexander 1992). Bristol Bay household survey research by Holen et al. (2005:73) estimates Unit 9B communities harvested a total of 160 moose in 2001, a higher estimate than reported moose harvest in this area.

Since 2000, the majority (about 89%) of the reported moose harvest has occurred in September and aircraft continue to be the most common method of transportation with boats as the second most common

Table 2. Unit 9B reported hunter residency and moose harvest success (ADF&G 2009, Butler 2007).

	Successful				Unsuccessful			
Year	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]
2000	12	10	26	48	26	35	52	113
2001	8	19	21	48	24	40	31	95
2002	7	17	14	38	21	57	38	116
2003	10	9	17	36	27	56	24	107
2004	13	14	12	39	22	35	25	82
2005	16	18	5	39	28	30	29	87
2006	14	9	4	27	31	31	12	74
2007	7	11	17	36	29	31	24	84
2008	17	9	5	32	38	43	14	95

[a] Includes unknown residency

transport mode (Butler 2008). Most Federally qualified rural residents hunt by boat. In Unit 9, between 2000 and 2006, Federally qualified rural residents success rates averaged 28% whereas non-Federally qualified residents averaged 29% and nonresidents 52% (Butler 2008). Nonresidents typically had a higher success rate as most flew out to hunt, and many employed guides.

Other Management Options

An alternative management option considered would be to close Federal public lands to the harvest of moose by non-Federally qualified users. This option is not supported as the health of the moose population is within management objectives and opportunity exists for Federally qualified subsistence users.

Effects of the Proposal

If adopted, the Unit 9B fall season would be shortened by 11 days, and the winter season would be shortened by 14 days. If adopted, the Federal and State seasons in Unit 9B would align. The shorter seasons would likely reduce the number of moose harvested each regulatory year, but may not significantly increase the population because only bulls are allowed for harvest.

OSM CONCLUSION

Defer Proposal WP10-45.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-45 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-45

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-45, 46, 47, 48, 49, 50, 52
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within two mile buffer on either side of waterways to hunting of moose by non-federally qualified users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a 2-mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified hunters.

Other Comments: WP10-45 and 46 were proposals deferred by the Federal Subsistence Board (Board) to allow time for the formation of a Unit 9 moose workgroup tasked to analyze and discuss available information and provide recommendations and guidance for both the RAC and the Board. The Unit 9 moose work group will not fulfill the directives of the Board prior to the scheduled May 18 through 20, 2010 Board meeting. The Bristol Bay Regional Advisory Council, Alaska Department of Fish and Game, and the Office of Subsistence Management concur these proposals should be deferred until the Unit 9 moose work group successfully completes the assigned tasks.

Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-45. This proposal will not address any perceived conservation of allocation issues as outlined in our previous comments. It can only restrict subsistence hunting opportunities and therefore should be rejected.

Joe Klutsch, Alaska Professional Hunters Association

WP10-46 Executive Summary	
General Description	Proposal WP10-46 requests that Federal public lands in Unit 9B and a portion of Unit 9C be closed for the taking of moose by non-Federally qualified subsistence users. *Submitted by the Bristol Bay Subsistence Regional Advisory Council*
Proposed Regulation	**Units 9B and 9C—Moose** *Unit 9B—1 bull.* ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.*** — *Aug. 20–Sept. 15*, *Dec. 1–Jan. 15* *Unit 9C—that portion draining into the Naknek River from the north—1 bull.* ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.*** — *Sept. 1–Sept. 15*, *Dec. 1–Dec. 31* *Unit 9C—that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.* — *Aug. 20–Sept. 15*, *Dec. 1–Dec. 31* *Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.* **Unit 9C remainder—1 bull.** ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.*** — *Sept. 1–Sept. 15*, *Dec. 15–Jan. 15*
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**3 Oppose**

STAFF ANALYSIS
WP10-46

ISSUES

Proposal WP10-46, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that Federal public lands in Unit 9B and a portion of Unit 9C be closed for the taking of moose by non-Federally qualified subsistence users.

DISCUSSION

For at least the past several years, Bristol Bay Subsistence Regional Advisory Council (Council) members and area residents have repeatedly expressed concerns about the moose population in Units 9B and 9C, and the adverse effects of competition with nonresidents and non-Federally qualified residents. The proponent believes that a closure of Federal public lands to nonresidents and non-qualified residents would reduce the number of moose harvested and help slow the decline of the moose population in this area, while allowing continued subsistence uses of moose by Federally qualified subsistence users. This proposal would close Federal public lands in Unit 9B and Unit 9C—that portion draining into the Naknek River from the north and Unit 9C remainder, for moose hunting to all but Federally qualified subsistence users.

Existing Federal Regulations

Units 9B and 9C—Moose

Unit 9B—1 bull	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*
Unit 9C—that portion draining into the Naknek River from the north—1 bull	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.	*Aug. 20–Sept. 15* *Dec. 1–Dec. 31*
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*

Proposed Federal Regulations

Units 9B and 9C—Moose

Unit 9B—1 bull. ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.***	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*

Unit 9C—that portion draining into the Naknek River from the north—1 bull. ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.***	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.	*Aug. 20–Sept. 15* *Dec. 1–Dec. 31*
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull.	
Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*

Existing State Regulations

Unit 9B—Moose	
Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tine on at least one side	*Sept. 5–Sept. 15*
Unit 9C—Moose	
9C—that portion draining into the Naknek River	
Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 5–Sept. 15*
9C Remainder	
Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 5–Sept. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 27% of Unit 9B and consist of portions of Lake Clark National Park and Preserve (23%) and isolated tracts of Bureau of Land Management lands (4%).

Federal public lands comprise approximately 84% of Unit 9C and consist of Katmai National Park (70%), Katmai National Preserve (8%), Becharof National Wildlife Refuge (3%), Bureau of Land Management

(3%), and Alagnak Wild River (<1%) (**Map 1**). The Katmai National Park manages the Alagnak Wild River and subsistence hunting is not authorized in Katmai National Park.

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.

Regulatory History

In 1991, the Federal Subsistence Board (Board) adopted WP91-23 with modification, to change the fall moose season from Sept. 5-20 to Sept. 1-15 in Unit 9B. The Board then expanded the fall season from Sept. 1-15 to Aug. 20- Sept. 15 by adopting WP94-38 with modification in 1994. In 1999 the Board adopted Proposal WP99-35 with modification to extend the winter season from Dec. 1-31 to Dec. 1-Jan. 15.

The Federal Subsistence Board (Board) adopted WP95-30 with modification to extend the fall season from Sept.1-Sept 15 to Aug. 20-Sept. 15 for Unit 9C-that portion draining into the Naknek River from the south.

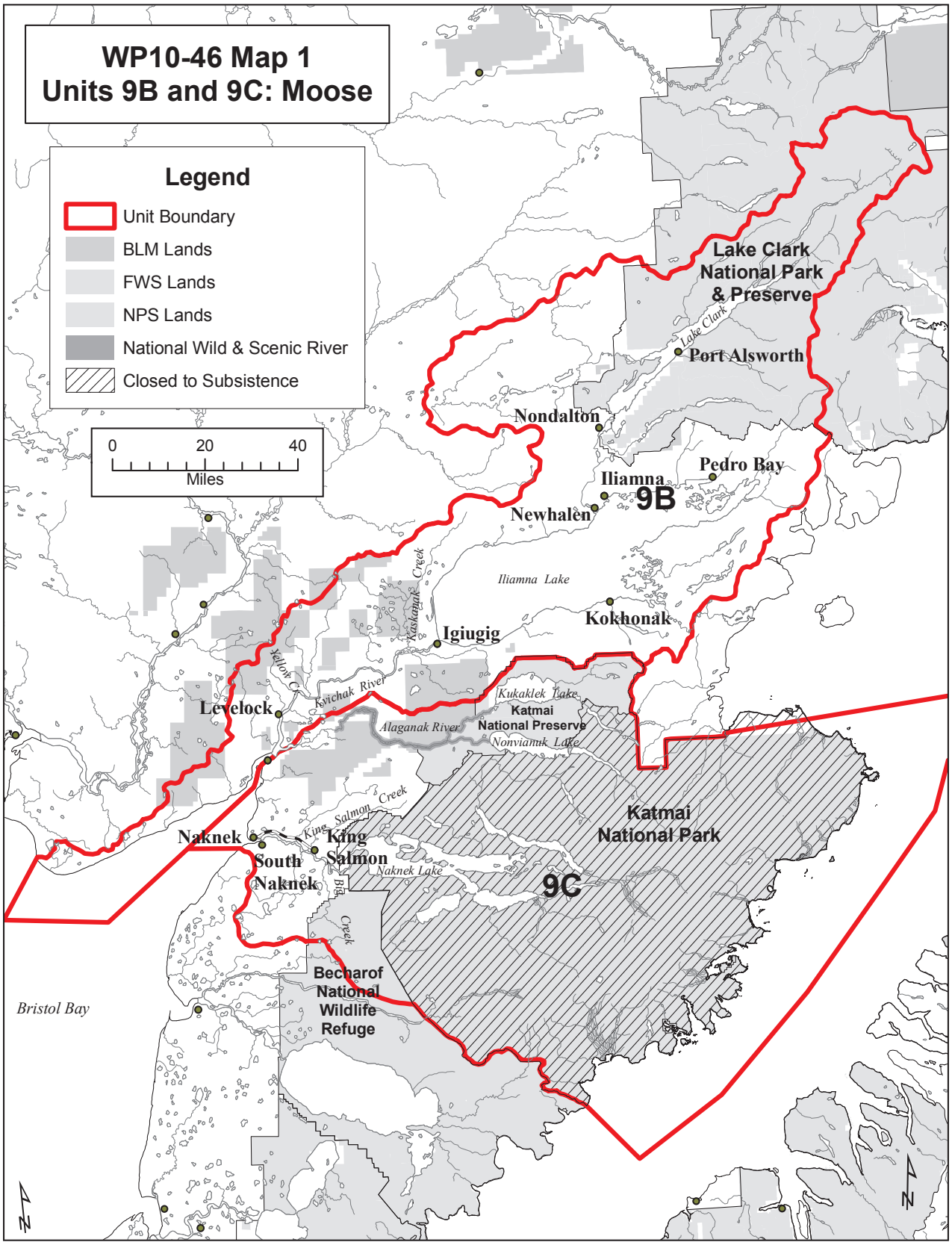
In 2006, the Council submitted Proposal WP07-25, requesting a two-mile buffer, to close Federal public lands to non-Federally qualified subsistence users, on both sides of specified rivers and creeks in Units 9 and 17A, with the intent that it would help moose populations remain stable or increase. The proponent pointed out that too many moose were being harvested by hunters using boats. After further consideration of certain impracticalities, Proposal WP07-25 was opposed by the Council and ultimately by the Board, which noted that the closure would not be consistent with some aspects of ANILCA because the moose population was not of conservation concern.

In 2008, Proposals WP08-30 and WP08-31, addressing moose in Units 9B and 9C, were submitted by the Council. Proposal WP08-30 requested a shorter moose season in Unit 9B while WP08-31 requested a closure of Federal public lands to non-Federally qualified users in Units 9B and 9C. Both proposals were related as the Council's support of WP08-30 was contingent on adoption of WP08-31. Proposals WP08-30 and WP08-31 were deferred by the Board so a workgroup could be formed to identify other management options.

Other harvest regulations are noteworthy in this region as they directly affect subsistence users. Caribou hunting opportunities have decreased overall for the Bristol Bay region. The Federal subsistence season for the Northern Alaska Peninsula Caribou Herd (NAPCH) has been closed since 2005 due to decline in the population (FWS 2006). The Alaska Department of Fish and Game (ADF&G) also has a closed season for the NAPCH. Based on the decline of the Mulchatna Caribou Herd (MCH) across its range, the Board adopted Proposal WP07-23 which resulted in a reduction in Federal harvest limits from five to three caribou in Unit 9B beginning with the 2007/08 regulatory year. State regulations currently have the bag limit reduced to two caribou for the MCH.

Biological Background

In Unit 9, moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked, but then began to decline. It was evident to biologists that range damage from over-browsing lead to the decline (Butler 2008). Even after a series of hunting restrictions and improvements in range conditions the moose population in some


WP10-46 Map 1
Units 9B and 9C: Moose
Legend
Unit Boundary
BLM Lands
FWS Lands
NPS Lands
National Wild & Scenic River
Closed to Subsistence
0
20
40
Miles
Lake Clark National Park & Preserve
Lake Clark
Port Alsworth
Nondalton
Pedro Bay
Iliamna
9B
Newhalen
Iliamna Lake
Kokhonak
Igiugig
Kaskanak Creek
Yellow Cr
Kvichak River
Levelock
Kukaklek Lake
Katmai National Preserve
Alaganak River
Nonvianuk Lake
Katmai National Park
King Salmon Creek
Naknek
King Salmon
South Naknek
Naknek Lake
Big Creek
9C
Becharof National Wildlife Refuge
Bristol Bay
N

subunits, such as 9E, had decline as much as 60% from the peak moose population in the 1960s. Brown bear predation on neonatal moose was thought to be the primary limiting factor of moose in Unit 9 (Butler 2008). Analysis of the Alaska Department of Fish and Game fall sex and age composition surveys indicate the moose population in most of Unit 9 remained relatively stable from 1980-2008 (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) densities; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004 and 2008). Overall, management objectives for bull:cow ratios and population are being maintained in Units 9B (low density area) and 9C (moderate density area) (Butler 2009, pers. comm.) (**Table 1**). The last bull:cow ratio estimate for 9B was 40 bulls:100 cows in 2007 (Butler 2008) and for 9C was 47 bulls:100 cows in 2008 (Butler 2009, pers. comm.).

The summary table (**Table 1**) presents moose data for a composite of trend areas and is representative of the subunits. It should be noted that the averages indicated in **Table 1** are derived from variable population density estimates.

Table 1. Units 9B and 9C Moose densities and composition ratios (Butler 2007, 2009 pers. comm.)

Unit 9B Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.56	45	22
1990's Average	0.52	55	15
2000's Average	0.46[a]	34	11
2007 Composition	-	40	2

[a]Average Density based on 2005 data only. Insufficient to assess trend

Unit 9C Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	1.01	37	23
1990's Average	0.87	52	19
2000's Average	0.71 [a]	44	21
2007 Composition	-	40	27
2008 Composition	-	47	13

[a]Average Density based on 2005 data only. Insufficient to assess trend

Unit 9C Moose – Alagnak River drainage

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.96	34	25
1990's Average	0.86	36	18
2000's Average	0.83	37	11
2007 Composition	-	40	27

The current moose populations in Unit 9 are considered stable albeit at low density (Butler 2008). Moose population estimates by subunits are: Unit 9A, about 300 moose; Unit 9B, approximately 2000 moose; and Unit 9C outside of Katmai National Park, approximately 800 moose (Butler 2008).

Since 1984, population trend counts in Unit 9B have also been conducted by the National Park Service in various portions of Lake Clark National Park and Preserve. In some cases, differing methodologies used

and data collected at different times of year meant survey results were too variable to measure statistically significant changes in population trends (Mangipane and Putera 2007.). Nonetheless, there have been consistent high bull:cow ratios ranging from 39-69 bulls:100 cows between 1992-2007 for the area of the Park and Preserve within Unit 9B south of Lake Clark. Calf:cow ratios have ranged from 9-20 calves:100 cows between 1992-2007 (Mangipane and Putera 2007).

Local residents have consistently expressed difficulty meeting their subsistence needs due to what they believe is a decrease in the moose population. The erratic calf:cow ratios within Unit 9 (Butler 2008) may lead to the perception that the population is declining. Between 1998 to 2007, the cow:calf ratios in Unit 9B ranged as low as 2 calves:100 cows in 1999 to as high as 26 calves:100 cows in 2003 (Butler 2006 and 2008). In Unit 9C, the ratio was as low as 5 calves: 100 cows in 2003 and as high as 20 calves:100 cows in 2007 (Butler 2006 and 2008). This erratic data can make trend analyses difficult to interpret. Nonetheless, Council members believe that there is an increased need for moose and that the current moose population is not sufficient in meeting their needs.

Harvest History

Moose harvest for Unit 9B has averaged 38 moose each year for 2000-2008 (ADF&G 2009, Butler 2007). Reported moose harvest for Unit 9C-within the Alagnak River Drainage has averaged 13 moose for each year for 2000-2006 (ADF&G 2009, Butler 2007). Between 2000 and 2008, Federally qualified subsistence users accounted for an average of 30% of the reported harvest per year in Unit 9B and 35% in Unit 9C-within the Alagnak River Drainage (ADF&G 2009, Butler 2009). Reported harvest data has indicated that nonresident moose hunting has been declining in recent years (**Table 2**). The Alagnak River Drainage within Unit 9C is selected for analysis because this area would be most affected by Proposal WP10-46; locals hunt along the river and more Federal public lands are alongside portions of the Alagnak River relative to the other selected waterways.

In Unit 9B, as in much of rural Alaska, household surveys tend to provide a more accurate accounting of harvests than do returned harvest tickets (Andersen and Alexander 1992). Bristol Bay household survey research by Holen et al. (2005:73) estimates Unit 9B communities harvested a total of 160 moose in 2001, while the reported harvest was at eight moose for 2001 (ADF&G 2009).

Since 2000, the majority (about 89%) of the reported moose harvest has occurred in September and aircraft continue to be the most common method of transportation with boats as the second most common transport mode (Butler 2008). Most Federally qualified rural residents hunt by boat. In Unit 9, between 2000 and 2006, Federally qualified rural residents success rates averaged 28% whereas non-Federally qualified residents averaged 29% and nonresidents 52% (Butler 2008). Nonresidents typically had a higher success rate as most flew out to hunt, and many employed guides.

Discussions by the Council indicate that local residents are having difficulty meeting their subsistence needs. This difficulty is compounded by the reduced availability of caribou as indicated by the decline in the reported caribou harvest by Alaska residents within the Bristol Bay area (**Figure 1**). Caribou harvest opportunities have diminished due to the decline of the NAPH and MCH.

Other Management Options

The Federal Subsistence Board *Policy on Closures* states “the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users” (FSB 2007). One alternative management option to minimize the degree of restriction on non-subsistence users would be to consider longer seasons for Federally-qualified

Table 2. Units 9B and 9C reported hunter residency and moose harvest success (ADF&G 2009, Butler 2007).

Unit 9B Hunter Residency and Success

	Successful				Unsuccessful			
Year	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]
2000	12	10	26	48	26	35	52	113
2001	8	19	21	48	24	40	31	95
2002	7	17	14	38	21	57	38	116
2003	10	9	17	36	27	56	24	107
2004	13	14	12	39	22	35	25	82
2005	16	18	5	39	28	30	29	87
2006	14	9	4	27	31	31	12	74
2007	7	11	17	36	29	31	24	84
2008	17	9	5	32	38	43	14	95

GMU 9C – Alagnak River Drainage, Hunter Residency and Success

	Successful				Unsuccessful			
Year	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]
2000	7	2	12	21	11	0	14	25
2001	7	5	7	19	6	8	6	20
2002	3	2	6	11	7	13	7	27
2003	7	3	3	13	4	7	17	28
2004	1	2	7	10	5	6	10	21
2005	1	1	6	8	1	5	13	19
2006	8	3	6	11	0	2	7	9
2007	1	3	2	6	2	3	5	10
2008	6	4	1	11	6	1	4	11

[a] Includes unknown residency

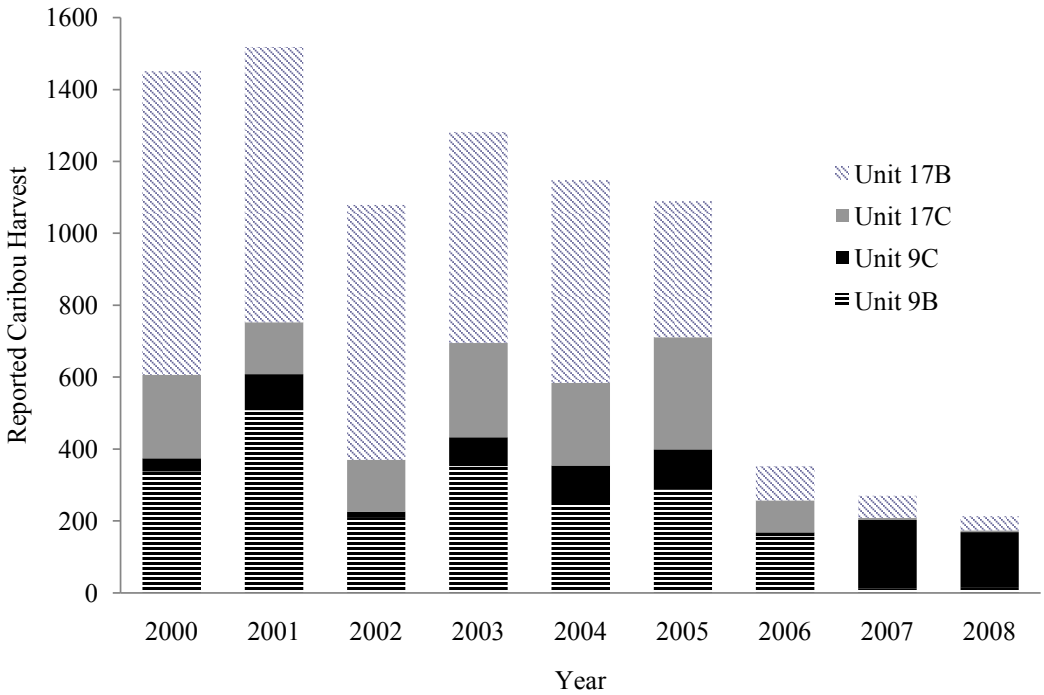


Figure 1. Reported caribou harvest within the Bristol Bay area, 2000-2008 (ADF&G 2009).

subsistence users to ensure subsistence needs are being met. Extending the Federal season may allow local residents to harvest more bulls during a time that bulls are near peak rut and more easily found. This idea was brought up by the chairman for the Western Interior Regional Advisory Council during the April 30, 2008 Federal Subsistence Board Public Meeting. The Federal season in August can be considered too early in the year and at a time when bulls are difficult to locate. Allowing more opportunity for a bull to be harvested may persuade locals against illegal cow harvest, which may be a limiting factor for moose populations. However, this option is not supported at this time since many local hunters may not prefer to harvest bull moose late in the rut and the local concern is over low moose populations. Further study and discussion would need to occur to determine if this is a viable option to helping locals increase harvest of bull moose and still manage for a healthy population.

Effects of the Proposal

If adopted, this proposal would implement a closure of Federal public lands to non-Federally qualified moose hunters in Units 9B and a portion of 9C. While this would reduce competition with nonresidents and non-Federally qualified residents on Federal public land, as the proponent has requested, it is possible that the closure of Federal public lands to non-Federally qualified moose hunters could lead to an increase of hunters on State lands. Some non-Federally qualified moose hunters may shift hunting areas from Federal public lands to State or private lands if the proposal was adopted. An increase could lead to unwanted consequences for Federally qualified subsistence users due to increased competition.

If this proposal is adopted, it would likely not result in lower competition for Federally qualified subsistence users, because of the location of Federal public lands and because locals usually hunt along waterways within Units 9B and 9C (much of which is on State or private lands). Local residents primarily hunt with boats within waterways such as the Naknek, Alagnak , and Kvichak rivers, Illamna Lake, and Lake Clark. Of these major waterways, all but the Alagnak River and Lake Clark, are surrounded by State

and private lands. In addition, much of the lands near the villages are State or private lands, which fall under State management (**Map 1**).

It's difficult to assess the potential effects of closing Federal public lands and subsequently concentrating hunters on State lands. Some nonlocal hunters may be discouraged to hunt in Units 9B and 9C altogether while others may move to hunt on State lands. In 2008, 71 nonlocal hunters (non-Federally qualified residents and nonresidents) hunted in Unit 9B and 30 in Unit 9C (ADF&G 2009). It is possible that some number of nonlocals similar to numbers in 2008 will concentrate on State lands.

If the proposal is adopted, no effects are anticipated on the moose population as the nonresident harvest could move to State lands. Available data indicates that there is currently no conservation concern for the moose population, although there may be factors limiting the growth of the herd due to bear predation as well as habitat degradation from over browsing and illegal harvest of cow moose.

OSM CONCLUSION

Defer Proposal WP10-46 pending the outcome of the Unit 9 working group.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-46 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-46

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-45, 46, 47, 48, 49, 50, 52
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within two mile buffer on either side of waterways to hunting of moose by non-federally qualified users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a 2-mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified hunters.

Other Comments: WP10-45 and 46 were proposals deferred by the Federal Subsistence Board (Board) to allow time for the formation of a Unit 9 moose workgroup tasked to analyze and discuss available information and provide recommendations and guidance for both the RAC and the Board. The Unit 9 moose work group will not fulfill the directives of the Board prior to the scheduled May 18 through 20, 2010 Board meeting. The Bristol Bay Regional Advisory Council, Alaska Department of Fish and Game, and the Office of Subsistence Management concur these proposals should be deferred until the Unit 9 moose work group successfully completes the assigned tasks.

Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose. Please defer to the Alaska Department of Fish and Game draft comments on these proposals as well as the OSM Draft analysis. They accurately outline the reasons why these proposals (WP10-46, 49, and 50) should be rejected.

Joe Klutsch, Alaska Professional Hunters Association

Oppose WP10-46, -47, -48, -49 and WP10-50. First enacted on the Alaska Peninsula in the early 1970s and subsequently throughout much of the state, the size restriction of 50" or at least 3 brow tines limits the non-rural hunter's ability to harvest a moose to a very specific age and size. This has been a very successful management tool for ADF&G. The moose season of September 10-20, also implemented in the early 1970s, has kept bull moose in this age class at a stable harvest level.

The increased wolf population is of far more concern than an 11-day moose season. In our opinion, lack of a large wolf population allowed moose to expand down the Alaska Peninsula in the early 1900s. Since aerial wolf management was closed there in the early 1990s, we have witnessed a dramatic increase in the wolf population in all areas between the Egegik and Ugashik river drainages. Ungulate users must unite to maintain an acceptable population of wolves. ADF&G will recommend to the Board of Game during its January 2010 meeting that it implement a Predation Control Area for units 9C and 9E. Since a large portion of these units lays within national preserve and refuge land, all users of moose and caribou should embrace and support implementing a wolf management plan.

An important reason not to close the moose season to non-rural residents on federal public lands is the distance of these lands from villages and incorporated cities. Hunting closest to the villages is mainly on state land. Closing federal land will put more non-rural hunters onto state land, closer to the villages. Hunting will be more difficult and expensive for the subsistence hunter who will compete against more non-rural hunters on state land or who will need to travel further to reach the federal areas.

Permit holders should be given 12 months notice of any closure to prepare properly. Less notice places a burden on businesses that operate on federal public lands and can put those families into a financial crisis. Hunts are cancelled at the last minute after thousands of dollars are spent on insurance, fuel, food, and equipment and the deposits used for these expenses must now be returned. The assistant guides lose their income too.

Many of the subsistence seasons in unit 9 have been lengthened or new opportunities created. A closure of public lands to non-rural hunters is unacceptable.

Tracy and Linda Verm, Chugiak

Oppose WP10-46, -47, -48, -49 and WP10-50. Because I strongly believe in conservation I would encourage a close look at the following suggestions, which should enhance ungulate populations and improve ungulate harvest for everyone. Rather than limit where hunting can be done, limit when, how, and by whom it can be done. The December hunt should exclude the use of small aircraft, making the hunt truly "rural", which was its original intent. Implement an immediate predator control program. Packs of 16 wolves are detrimental even to a brown bear's existence.

Gus and Koreen Lamoureaux, Anchorage

WP10-47 Executive Summary	
General Description	Proposal WP10-47, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9C be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands. Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: Kvichak River, Alagnak River, Big Creek (just east of King Salmon), and King Salmon Creek (northeast of King Salmon).
Proposed Regulation	**Unit 9C–Moose** *Unit 9C, that portion draining into the Naknek River from the north—1 bull* — *Sept. 1–Sept. 15*, *Dec. 1–Dec. 31* ***Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands*** *Unit 9C, that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.* — *Aug. 20–Sept. 15*, *Dec. 1–Dec. 31* *Federal public lands are closed during December for the hunting of moose, except by rural Alaska residents of Unit 9A, 9B, 9C, and 9E, hunting under these regulations.* ***Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands*** *Unit 9C remainder—1 bull* ***Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands*** — *Sept. 1–Sept. 15*, *Dec. 15–Jan. 15*
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**

continued on next page

*W*WP10-47 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**3 Oppose**

STAFF ANALYSIS
WP10-47

ISSUES

Proposal WP10-47, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9C be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands.

Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: Kvichak River, Alagnak River, Big Creek (just east of King Salmon), and King Salmon Creek (northeast of King Salmon).

DISCUSSION

The Bristol Bay Subsistence Regional Advisory Council (Council) requests that Federal public lands within a two-mile buffer on both sides of waterways in Unit 9C be closed to non-Federally qualified users to help the moose population remain stable and possibly even increase. The proponent believes that too many moose are harvested within drainages by hunters using boats and local people have voiced concern that there is too much competition with nonlocal moose hunters.

Existing Federal Regulations

Unit 9C–Moose

Unit 9C, that portion draining into the Naknek River from the north—1 bull	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Unit 9C, that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.	*Aug. 20–Sept. 15* *Dec. 1–Dec. 31*
Federal public lands are closed during December for the hunting of moose, except by rural Alaska residents of Unit 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*

Proposed Federal Regulations

Unit 9C–Moose

Unit 9C, that portion draining into the Naknek River from the north—1 bull	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands	

Unit 9C, that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.	*Aug. 20–Sept. 15* *Dec. 1–Dec. 31*
Federal public lands are closed during December for the hunting of moose, except by rural Alaska residents of Unit 9A, 9B, 9C, and 9E, hunting under these regulations.	
Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands	
Unit 9C remainder—1 bull	
Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*

Existing State Regulations

Unit 9C—Moose

9C—that portion draining into the Naknek River

Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 5–Sept. 15*

9C Remainder

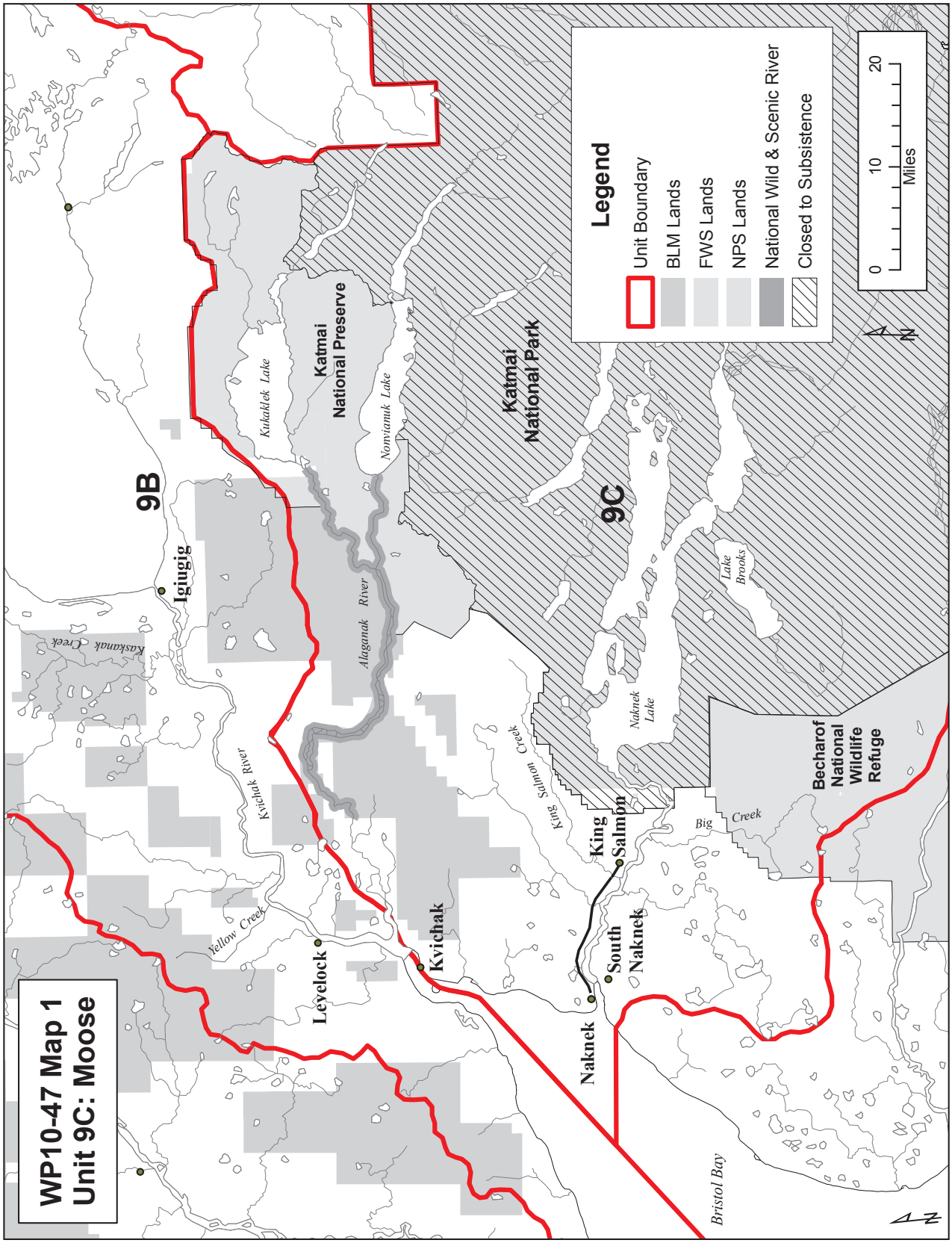
Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 5–Sept. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 84% of Unit 9C and consist of Katmai National Park (70%), Katmai National Preserve (8%), Becharof National Wildlife Refuge (3%), Bureau of Land Management (3%), and Alagnak Wild River (<1%) (**Map 1**). Subsistence hunting is not authorized in Katmai National Park.

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.


WP10-47 Map 1
Unit 9C: Moose
9B
9C
Igiugig
Kasknak Creek
Kukaklek Lake
Katmai National Preserve
Nonvianuk Lake
Katmai National Park
Alaganak River
Kvichak River
Yellow Creek
Levelock
Kvichak
King Salmon Creek
King Salmon
Naknek
South Naknek
Naknek Lake
Lake Brooks
Big Creek
Becharof National Wildlife Refuge
Bristol Bay
Legend
Unit Boundary
BLM Lands
FWS Lands
NPS Lands
National Wild & Scenic River
Closed to Subsistence
0
10
20
Miles
N

Regulatory History

In 1995, the Federal Subsistence Board (Board) adopted Proposal WP95-30 with modification to extend the fall season from Sept. 1-Sept 15 to Aug. 20-Sept. 15 for Unit 9C-that portion draining into the Naknek River from the south.

In 2006, the Council submitted Proposal WP07-25, requesting a two-mile buffer on both sides of specified rivers and creeks in Units 9 and 17A be closed to non-Federally qualified users, with the intent that it would help moose populations remain stable or increase. The proponent pointed out that too many moose were being harvested by nonlocal hunters using boats. After further consideration of certain impracticalities, Proposal WP07-25 was opposed by the Council and ultimately by the Board, which noted that the closure would not be consistent with some aspects of ANILCA because the moose population was not of conservation concern.

In 2008, Proposals WP08-30 and WP08-31 were deferred by the Board. Proposal WP08-30 requested a shorter moose season in Unit 9B while Proposal WP08-31 requested a closure of Federal public lands to non-Federally qualified users in Units 9B and 9C.

Other harvest regulations are noteworthy in this region as they directly affect subsistence users. Caribou hunting opportunities have decreased overall for the Bristol Bay region. The Federal subsistence season for the Northern Alaska Peninsula Caribou Herd (NAPCH) has been closed since 2005 due to the decline in the population. The Alaska Department of Fish and Game (ADF&G) also closed the season for the NAPCH. Based on the decline of the Mulchatna Caribou Herd (MCH) across its range, regulations have reduced harvest limits on this herd. The Federal harvest limit is one caribou for Unit 9C-that portion within the Alagnak River drainage and the remainder of Unit 9C is closed to caribou hunting. The Federal regulations for Unit 9C are intended to protect the NAPCH, which sometimes overlap with the MCH in this portion of Unit 9C. State regulations currently have the bag limit reduced to two caribou for Unit 9C-that portion within the Alagnak River drainage.

Biological Background

In Unit 9, moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked. The moose population began to decline thereafter which was attributed to range damage from over-browsing. By the early 1980s, in some parts of the unit, such as 9E, moose densities were 60% below peak levels despite improvements in range condition and a series of hunting restrictions that began in 1974. In Unit 9, the primary limiting factor for the moose population is thought to be brown bear predation on neonatal moose (Butler 2008). Alaska Department of Fish and Game analyses of fall sex and age composition surveys indicate populations in most of Unit 9 have been relatively stable over from 1980-2008 albeit at low density (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) densities; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004 and 2008). Overall, management objectives for bull:cow ratios and population level are being maintained in Unit 9C, a moderate density area (Butler 2009, pers. comm.) (**Table 1**). In 2008 the bull:cow ratio was 47 bulls:100 cows for Unit 9C. In 2007 the bull:cow ratio for the Alagnak River drainage within Unit 9C was 40 bulls:100 cows (Butler 2007a, 2009, pers. comm.).

Table 1. Unit 9C Moose densities and composition ratios (Butler 2007a, 2009 pers. comm.)

Unit 9C Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	1.01	37	23
1990's Average	0.87	52	19
2000's Average	0.71 [a]	44	21
2007 Composition	-	40	27
2008 Composition	-	47	13

[a]Average Density based on 2005 data only. Insufficient to assess trend

Unit 9C Moose – Alagnak River drainage

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.96	34	25
1990's Average	0.86	36	18
2000's Average	0.83	37	11
2007 Composition	-	40	27

Table 1 presents moose data for a composite of trend analysis and is representative of the subunit. It should be noted that the averages indicated in **Table 1** are derived from variable population density estimates.

Population estimates for the subunits in Unit 9 are: Unit 9A approximately 300 moose; Unit 9B, approximately 2000 moose; and Unit 9C outside of Katmai National Park, approximately 500–600 moose (Butler 2004).

The erratic calf:cow ratios within Unit 9 (Butler 2008) may lead to the perception that the population is declining. From 1998 to 2007, the ratios in Unit 9C were as low as 5 calves:100 cows in 2003 and as high as 20 calves:100 cows in 2007 (Butler 2006 and 2008). This erratic data can make trend analyses difficult to interpret.

Harvest History

In Unit 9C, the Alagnak River drainage is the primary waterway for moose hunters and where parcels of Federal public lands are located. Reported moose harvest for Unit 9C-within the Alagnak River Drainage averaged 12 moose per year between 2000-2008 (ADF&G 2009, Butler 2009). During the same time period, Federally qualified rural residents accounted for an average of 35% of the reported harvest per year and participation by nonresidents appeared to be on a decline (**Table 2**).

Although some Federally qualified rural residents may have not obtained moose harvest tickets and may be underrepresented (Butler 2004), trend information from reported harvest can be used to evaluate trends. Between 2000-2006, approximately 89% of the reported moose harvest has occurred in September with aircraft and boats being the most common modes of transport (Butler 2008). Most Federally qualified rural residents hunt by boat. Between 1990-2002, in Unit 9 an average of 35% of Federally qualified rural residents successfully harvested a moose compared to 31% for non-Federally qualified Alaskan residents (Butler 2004). During the same period, nonresidents typically had a higher average success rate of 52%, as many employed guides and most flew out to hunt which provides better access to areas where the moose are located (Butler 2008). Guided hunting is not allowed on the Wild Alagnak River Drainage.

Table 2. Units 9C–Alagnak River Drainage reported hunter residency and moose harvest success (ADF&G 2009, Butler 2007a)

	Successful				Unsuccessful			
Year	Federally qualified rural resident	Non-federally qualified resident	Nonresident	Total[a]	Federally qualified rural resident	Non-federally qualified resident	Nonresident	Total[a]
2000	7	2	12	21	11	0	14	25
2001	7	5	7	19	6	8	6	20
2002	3	2	6	11	7	13	7	27
2003	7	3	3	13	4	7	17	28
2004	1	2	7	10	5	6	10	21
2005	1	1	6	8	1	5	13	19
2006	8	3	6	11	0	2	7	9
2007	1	3	2	6	2	3	5	10
2008	6	4	1	11	6	1	4	11

[a] Includes unknown residency

Discussions by the Council convey that local residents are having difficulty meeting their subsistence needs. This difficulty is compounded by the reduced availability of caribou (Butler 2007b, Woolington 2007) as indicated by the decline in the reported caribou harvest by Alaska residents within the Bristol Bay area (**Figure 1**).

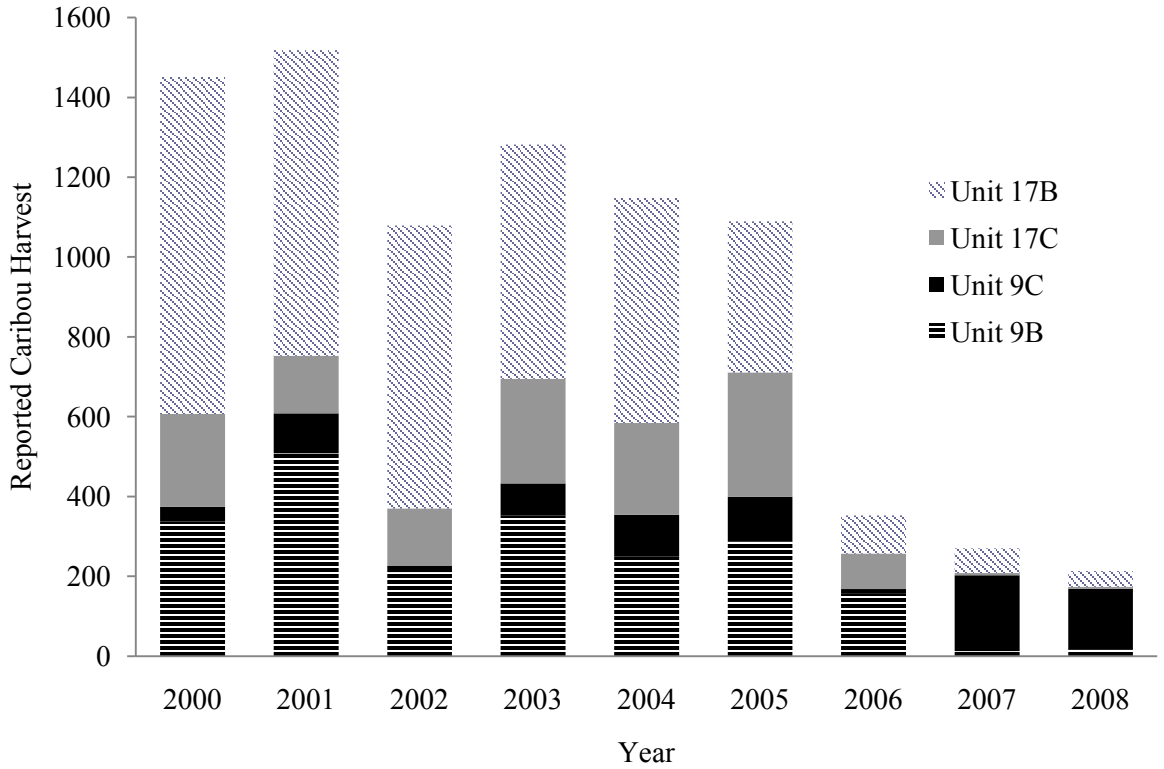


Figure 1. Reported caribou harvest within the Bristol Bay area, 2000-2008 (ADF&G 2009).

Other Alternatives Considered

The Federal Subsistence Board *Policy on Closures* states "the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users" (FSB 2007). An alternative management option to avoid the closure of Federal public lands is to consider longer seasons for Federally-qualified subsistence users. Extending the Federal season may allow local residents to harvest more bulls during a time that bulls are near peak rut and more easily found. This idea was brought up the chairman for the Western Interior Regional Advisory Council during the April 30, 2008 Federal Subsistence Board Public Meeting. The Federal season in August can be considered too early in the year and at a time when bulls are difficult to locate. Allowing more opportunity for a bull to be harvested may persuade locals against illegal cow harvest. However this option is not supported at this time since many local hunters in this region may not prefer to harvest bull moose late in the rut and the local concern is over low moose populations (FSB 2008). Further study and discussion would need to occur to determine if this is a viable option to help locals increase harvest of bull moose and still manage for a healthy population.

Effects of the Proposal

If adopted, this proposal would implement a closure of Federal public lands to non-Federally qualified moose hunters within a two mile buffer along waterways which may reduce competition. Between 2000-2008, an average of 23 nonlocal hunters per year took an average of 8 moose per year (**Table 2**). It is possible that competition for locals will be reduced by a portion of the number of past annual nonlocal hunter averages for Unit 9C within the Alagnak River drainage if the proposal was adopted. However, it is difficult to determine how much competition would be reduced because many nonlocals hunt with the use of airplanes and can access areas where most locals do not hunt.

The closure of Federal public lands within two miles of the Kvichak River and King salmon Creek (northeast of King Salmon) would have no effect because there are no Federal public lands along these rivers in Unit 9C. As for Big Creek (just east of King Salmon), Federal public lands are only found within the upper portion of the waterway (**Map 1**).

Determining a two-mile boundary from selected waterways would be difficult for hunters and law enforcement. Even a global positioning system (GPS) unit would do little to help determine a two-mile boundary in meandering and braided river systems that often change location from year to year. In addition, the State has jurisdiction along rivers up to the ordinary high water mark, so moose harvested below the ordinary high water mark would continue to be allowed under State of Alaska regulations.

Federally qualified subsistence users may be affected through a reduction in competition with nonlocal hunters. Non-Federally qualified users would be affected by having to hunt only on State or private lands within two miles of selected waterways. Therefore, some non-Federally qualified users may be deterred from hunting moose in Unit 9C. It would be up to all moose hunters to determine where Federal public lands are located to ensure compliance with State and Federal regulations.

OSM CONCLUSION

Defer Proposal WP10-47 pending the outcome of the Unit 9 working group.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-47 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-47

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within two mile buffer on either side of waterways to hunting of moose by non-federally qualified users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a 2-mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified hunters.

Other Comments: WP10-45 and 46 were proposals deferred by the Federal Subsistence Board (Board) to allow time for the formation of a Unit 9 moose workgroup tasked to analyze and discuss available information and provide recommendations and guidance for both the RAC and the Board. The Unit 9 moose work group will not fulfill the directives of the Board prior to the scheduled May 18 through 20, 2010 Board meeting. The Bristol Bay Regional Advisory Council, Alaska Department of Fish and Game, and the Office of Subsistence Management concur these proposals should be deferred until the Unit 9 moose work group successfully completes the assigned tasks.

Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose. There is no biological evidence to indicate that this measure is required to insure subsistence hunting opportunities or that the health of the moose population is in jeopardy due to current use patterns. There is no measurable conservation issue which will be addresses by adopting these proposals (WP10-47, 48, and 52). Opportunity for qualified rural residence has been substantially increased in the last decade (78 days). The current draft OSM staff analysis indicates that these proposals are inconsistent with the Federal Subsistence Board policy on closures.

Joe Klutsch, Alaska Professional Hunters Association

Oppose WP10-46, -47, -48, -49 and WP10-50. First enacted on the Alaska Peninsula in the early 1970s and subsequently throughout much of the state, the size restriction of 50" or at least 3 brow tines limits the non-rural hunter's ability to harvest a moose to a very specific age and size. This has been a very successful management tool for ADF&G. The moose season of September 10-20, also implemented in the early 1970s, has kept bull moose in this age class at a stable harvest level.

The increased wolf population is of far more concern than an 11-day moose season. In our opinion, lack of a large wolf population allowed moose to expand down the Alaska Peninsula in the early 1900s. Since aerial wolf management was closed there in the early 1990s, we have witnessed a dramatic increase in the wolf population in all areas between the Egegik and Ugashik river drainages. Ungulate users must unite to maintain an acceptable population of wolves. ADF&G will recommend to the Board of Game during its January 2010 meeting that it implement a Predation Control Area for units 9C and 9E. Since a large portion of these units lays within national preserve and refuge land, all users of moose and caribou should embrace and support implementing a wolf management plan.

An important reason not to close the moose season to non-rural residents on federal public lands is the distance of these lands from villages and incorporated cities. Hunting closest to the villages is mainly on state land. Closing federal land will put more non-rural hunters onto state land, closer to the villages. Hunting will be more difficult and expensive for the subsistence hunter who will compete against more non-rural hunters on state land or who will need to travel further to reach the federal areas.

Permit holders should be given 12 months notice of any closure to prepare properly. Less notice places a burden on businesses that operate on federal public lands and can put those families into a financial crisis. Hunts are cancelled at the last minute after thousands of dollars are spent on insurance, fuel, food, and equipment and the deposits used for these expenses must now be returned. The assistant guides lose their income too.

Many of the subsistence seasons in unit 9 have been lengthened or new opportunities created. A closure of public lands to non-rural hunters is unacceptable.

Tracy and Linda Verm, Chugiak

Oppose WP10-46, -47, -48, -49 and WP10-50. Because I strongly believe in conservation I would encourage a close look at the following suggestions, which should enhance ungulate populations and improve ungulate harvest for everyone. Rather than limit where hunting can be done, limit when, how, and by whom it can be done. The December hunt should exclude the use of small aircraft, making the hunt truly "rural", which was its original intent. Implement an immediate predator control program. Packs of 16 wolves are detrimental even to a brown bear's existence.

Gus and Koreen Lamoureaux, Anchorage

WP10-48 Executive Summary	
General Description	Proposal WP10-48, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9B be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands. Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: Kvichak River, Kaskanak Creek, and Yellow Creek.
Proposed Regulation	**Unit 9C—Moose** *Unit 9B—1 bull* — *Aug. 20–Sept. 15*, *Dec. 1–Jan. 15* ***Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands***
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**3 Oppose**

STAFF ANALYSIS
WP10-48

ISSUES

Proposal WP10-48, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9B be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands.

Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: Kvichak River, Kaskanak Creek, and Yellow Creek.

DISCUSSION

The Bristol Bay Subsistence Regional Advisory Council (Council) requests that Federal public lands within a two-mile buffer on both sides of waterways in Unit 9B be closed to non-Federally qualified users to help the moose population remain stable and possibly even increase. The proponent believes that too many moose are harvested within drainages by hunters using boats and local people have voiced concern that there is too much competition with nonlocal moose hunters.

Existing Federal Regulations

Unit 9B—Moose

Unit 9B—1 bull	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*

Proposed Federal Regulations

Unit 9C—Moose

Unit 9B—1 bull	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*

Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands

Existing State Regulations

Unit 9B—Moose

Residents: One bull *OR, One antlered bull*	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tine on at least one side	*Sept. 5–Sept. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 27% of Unit 9B and consist of portions of Lake Clark National Park and Preserve (23%) and isolated tracts of Bureau of Land Management lands (4%) (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.

Regulatory History

In 1991, the Federal Subsistence Board (Board) adopted Proposal WP91-23 with modification, to change the Federal subsistence moose season from Sept. 5–20 to Sept. 1–15 in Unit 9B because local hunters preferred to hunt earlier due to the rut. The Board subsequently expanded the fall season from Sept. 1–15 to Aug. 20– Sept. 15 by adopting Proposal WP94-38 with modification in 1994 because local hunters again preferred to hunt non-rutting bulls and the change would provide additional subsistence opportunity. In 1999, Proposal WP99-35 was adopted with modification to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 15 to provide more subsistence opportunity.

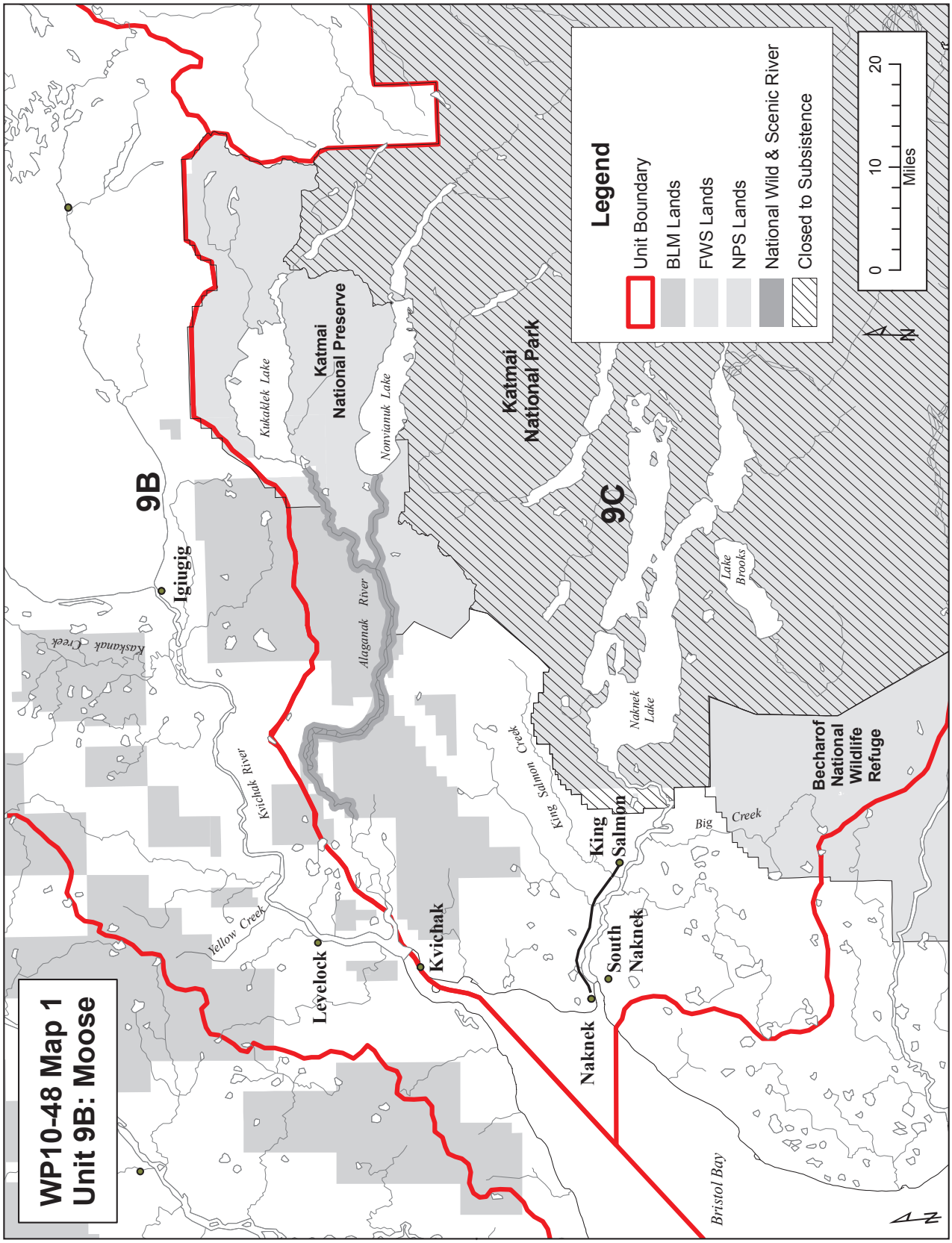
In 2006, the Council submitted Proposal WP07-25, which requested a two-mile buffer on both sides of specified rivers and creeks in Units 9 and 17A. The intent of the proposal was to reduce harvest along river corridors and help moose populations stabilize or possibly increase. The proponent pointed out that too many moose were being harvested by non-Federally qualified users using boats. After further consideration of certain impracticalities, Proposal WP07-25 was opposed by the Council and ultimately by the Board, which noted that the closure would not be consistent with ANILCA because the moose population was not of conservation concern.

In 2008, Proposals WP08-30 and WP08-31 were deferred by the Board to allow a State and Federal working group address issues and work on a solution. Proposal WP08-30 requested a shorter moose season in Unit 9B while Proposal WP08-31 requested a closure of Federal public lands to non-Federally qualified users in Units 9B and 9C.

It is likely that local concerns over moose are exacerbated by reduced caribou hunting opportunities. The Federal subsistence season for the Northern Alaska Peninsula Caribou Herd (NAPCH) has been closed since 2005 due to the decline in the population. The Alaska Department of Fish and Game (ADF&G) also closed the season for the NAPCH. Based on the decline of the Mulchatna Caribou Herd (MCH) across its range, the Board adopted Proposal WP07-23 which resulted in a reduction in Federal harvest limits from five to three caribou in Unit 9B. State regulations currently have the bag limit reduced to two caribou for the MCH.

Biological Background

Moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked. The moose population began to decline thereafter which was attributed to range damage from over-browsing. By the early 1980s, in some parts of the unit, such as 9E, moose densities were 60% below peak levels despite improvements in range condition and a series of hunting restrictions that began in 1974. In Unit 9, the primary limiting factor for the moose population is thought to be brown bear predation on neonatal moose (Butler 2008). Alaska


WP10-48 Map 1
Unit 9B: Moose
9B
9C
Igiugig
Kukaklek Lake
Katmai
National Preserve
Nonvianuk Lake
Katmai
National Park
Kaskanak Creek
Alaganak River
Kvichak River
Yellow Creek
Levelock
Kvichak
King Salmon Creek
King
Salmon
South
Naknek
Naknek
Naknek
Lake
Lake
Brooks
Big Creek
Becharof
National
Wildlife
Refuge
Bristol Bay
Legend
Unit Boundary
BLM Lands
FWS Lands
NPS Lands
National Wild & Scenic River
Closed to Subsistence
0
10
20
Miles
N

Department of Fish and Game analyses of fall sex and age composition surveys indicate populations in most of Unit 9 have been relatively stable from 1980–2008 albeit at low density (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) densities; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004 and 2008). Overall, management objectives for bull:cow ratios and population level are thought to be maintained in Unit 9B, a low density area (Butler 2009, pers. comm.) (**Table 1**). In 2007, the bull:cow ratio was 40 bulls:100 cows for Unit 9B (Butler 2008).

Table 1 presents moose data for a composite of trend analysis and is representative of the subunit. It should be noted that the averages indicated in **Table 1** are derived from variable population density estimates.

Table 1. Unit 9B moose densities and composition ratios (Butler 2007a, 2009 pers. comm.)

Unit 9B Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.56	45	22
1990's Average	0.52	55	15
2000's Average	0.46[a]	34	11
2007 Composition	-	40	2

[a]Average Density based on 2005 data only. Insufficient to assess trend

Population estimates for the subunits in Unit 9 are: Unit 9A approximately 300 moose; Unit 9B, approximately 2000 moose; and Unit 9C outside of Katmai National Park, approximately 500–600 moose (Butler 2004).

Since 1984, population trend counts in Unit 9B have also been conducted by the National Park Service in various portions of Lake Clark National Park and Preserve. In some cases, counts used different methodologies for different years and were conducted at different times of year resulting in survey data variable to measure statistically significant changes in population trends (Mangipane and Putera 2007). Nonetheless, between 1992–2007 for the area of the Park and Preserve within Unit 9B south of Lake Clark, there has been consistent high bull:cow ratios of 39–69 bulls:100 cows. During those same years calf:cow ratios have been between 9–20 calves:100 cows (Mangipane and Putera 2007).

The erratic calf:cow ratios within Unit 9 (Butler 2008) may lead to the perception that the population is declining. From 1998 to 2007, the ratios in Unit 9B were as low as 2 calves:100 cows in 1999 and as high as 26 calves:100 cows in 2003 (Butler 2006 and 2008). This erratic data can make trend analyses difficult to interpret.

Harvest History

Reported moose harvest for Unit 9B averaged 38 moose per year between 2000–2006 (ADF&G 2009). During the same time period, Federally qualified rural residents accounted for an average of 30% of the harvest per year in Unit 9B and participation by nonresidents appeared to be on a decline (**Table 2**).

Table 2. Unit 9B reported hunter residency and moose harvest success (ADF&G 2009, Butler 2007a).

Unit 9B Hunter Residency and Success

	Successful				Unsuccessful			
Year	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]	Federally qualified rural resident	Non-Federally qualified resident	Nonresident	Total[a]
2000	12	10	26	48	26	35	52	113
2001	8	19	21	48	24	40	31	95
2002	7	17	14	38	21	57	38	116
2003	10	9	17	36	27	56	24	107
2004	13	14	12	39	22	35	25	82
2005	16	18	5	39	28	30	29	87
2006	14	9	4	27	31	31	12	74
2007	7	11	17	36	29	31	24	84
2008	17	9	5	32	38	43	14	95

[a] Includes unknown residency

Household surveys conducted in Alaska Peninsula communities indicate low compliance with the State harvest ticket program. Bristol Bay household survey research by Holen et al. (2005:72) estimates Unit 9B communities harvested a total of 160 moose in 2001, a higher estimate than reported moose harvest in this area.

A majority of the reported moose harvest has occurred in September with aircraft and boats being the most common modes of transport (Butler 2008). Most Federally qualified rural residents hunt by boat. Between 1990–2002, in Unit 9 an average of 35% of Federally qualified rural residents successfully harvested a moose compared to 31% for non-Federally qualified Alaskan residents (Butler 2004). During the same period, nonresidents typically had a higher average success rate of 52%, as many employed guides and most flew out to hunt which provides better access to areas where the moose are located (Butler 2008).

Discussions by the Council indicate that local residents are having difficulty harvesting enough moose to meet their subsistence needs. This difficulty is compounded by the reduced availability of caribou (Butler 2007b, Woolington 2007) as indicated by the decline in the reported caribou harvest by Alaska residents within the Bristol Bay area (**Figure 1**).

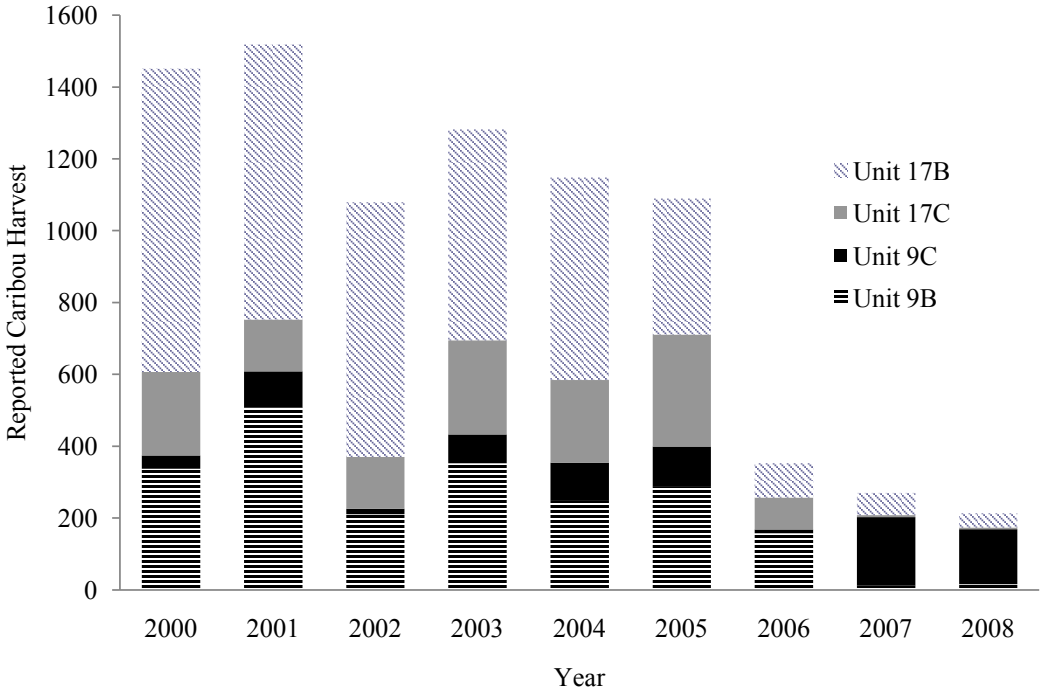


Figure 1. Reported caribou harvest within the Bristol Bay area, 2000-2008 (ADF&G 2009).

Other Alternatives Considered

The Federal Subsistence Board *Policy on Closures* states "the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users" (FSB 2007). An alternative management option to avoid the closure of Federal public lands is to consider longer seasons for Federally qualified subsistence users.

Extending the Federal season may allow local residents to harvest more bulls during a time that bulls are near peak rut and more easily found. This idea was brought up by the chairman for the Western Interior Regional Advisory Council during the April 30, 2008 Federal Subsistence Board Public Meeting. The Federal season in August can be considered too early in the year and at a time when bulls are difficult to locate. Allowing more opportunity for a bull to be harvested may persuade locals against illegal cow harvest. However this option is not supported at this time since many local hunters in this region may not prefer to harvest bull moose late in the rut and the local concern is over low moose populations (FSB 2008). Further study and discussion would need to occur to determine if this is a viable option to help locals increase harvest of bull moose and still manage for a healthy population.

Effects of the Proposal

If adopted, this proposal would implement a closure of Federal public lands to non-Federally qualified moose hunters within a two mile buffer along waterways, which may reduce competition. Between 2000 and 2008, an average of 94 nonlocal hunters per year took an average of 26 moose per year (**Table 2**). It is possible that competition for locals will be reduced by a portion of the number of past annual nonlocal hunter averages. However, it is difficult to determine how much competition would be reduced because many nonlocals hunt with the use of airplanes and can access areas where most locals do not hunt.

There is little Federal public land along the listed waterways within Unit 9B. A small amount of scattered Federal public lands are found along the Kvichak River and are found within the upper portion of Yellow Creek and much of the middle drainage of Kashanak Creek (**Map 1**).

Determining a two-mile boundary from selected waterways would be difficult for hunters and law enforcement. Even a global positioning system (GPS) unit would do little to help determine a two-mile boundary in meandering and braided river systems that often change location from year to year. In addition, the State has jurisdiction along rivers up to the ordinary high water mark, so moose harvested below the ordinary high water mark would continue to be allowed under State of Alaska regulations.

Federally qualified subsistence users may be affected through a reduction in competition with nonlocal hunters. Non-Federally qualified users would be affected by having to hunt only on State or private lands within two miles of selected waterways. Therefore, some non-Federally qualified users may be deterred from hunting moose in Unit 9B. It would be up to all moose hunters to determine where Federal public lands are located to ensure compliance with State and Federal regulations.

OSM CONCLUSION

Defer Proposal WP10-48 pending the outcome of the Unit 9 working group.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-48 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-48

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-45, 46, 47, 48, 49, 50, 52
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within two mile buffer on either side of waterways to hunting of moose by non-federally qualified users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a 2-mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified hunters.

Other Comments: WP10-45 and 46 were proposals deferred by the Federal Subsistence Board (Board) to allow time for the formation of a Unit 9 moose workgroup tasked to analyze and discuss available information and provide recommendations and guidance for both the RAC and the Board. The Unit 9 moose work group will not fulfill the directives of the Board prior to the scheduled May 18 through 20, 2010 Board meeting. The Bristol Bay Regional Advisory Council, Alaska Department of Fish and Game, and the Office of Subsistence Management concur these proposals should be deferred until the Unit 9 moose work group successfully completes the assigned tasks.

Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose. There is no biological evidence to indicate that this measure is required to insure subsistence hunting opportunities or that the health of the moose population is in jeopardy due to current use patterns. There is no measurable conservation issue which will be addresses by adopting these proposals (WP10-47, 48, and 52). Opportunity for qualified rural residence has been substantially increased in the last decade (78 days). The current draft OSM staff analysis indicates that these proposals are inconsistent with the Federal Subsistence Board policy on closures.

Joe Klutsch, Alaska Professional Hunters Association

Oppose WP10-46, -47, -48, -49 and WP10-50. First enacted on the Alaska Peninsula in the early 1970s and subsequently throughout much of the state, the size restriction of 50" or at least 3 brow tines limits the non-rural hunter's ability to harvest a moose to a very specific age and size. This has been a very successful management tool for ADF&G. The moose season of September 10-20, also implemented in the early 1970s, has kept bull moose in this age class at a stable harvest level.

The increased wolf population is of far more concern than an 11-day moose season. In our opinion, lack of a large wolf population allowed moose to expand down the Alaska Peninsula in the early 1900s. Since aerial wolf management was closed there in the early 1990s, we have witnessed a dramatic increase in the wolf population in all areas between the Egegik and Ugashik river drainages. Ungulate users must unite to maintain an acceptable population of wolves. ADF&G will recommend to the Board of Game during its January 2010 meeting that it implement a Predation Control Area for units 9C and 9E. Since a large portion of these units lays within national preserve and refuge land, all users of moose and caribou should embrace and support implementing a wolf management plan.

An important reason not to close the moose season to non-rural residents on federal public lands is the distance of these lands from villages and incorporated cities. Hunting closest to the villages is mainly on state land. Closing federal land will put more non-rural hunters onto state land, closer to the villages. Hunting will be more difficult and expensive for the subsistence hunter who will compete against more non-rural hunters on state land or who will need to travel further to reach the federal areas.

Permit holders should be given 12 months notice of any closure to prepare properly. Less notice places a burden on businesses that operate on federal public lands and can put those families into a financial crisis. Hunts are cancelled at the last minute after thousands of dollars are spent on insurance, fuel, food, and equipment and the deposits used for these expenses must now be returned. The assistant guides lose their income too.

Many of the subsistence seasons in unit 9 have been lengthened or new opportunities created. A closure of public lands to non-rural hunters is unacceptable.

Tracy and Linda Verm, Chugiak,

Oppose WP10-46, -47, -48, -49 and WP10-50. Because I strongly believe in conservation I would encourage a close look at the following suggestions, which should enhance ungulate populations and improve ungulate harvest for everyone. Rather than limit where hunting can be done, limit when, how, and by whom it can be done. The December hunt should exclude the use of small aircraft, making the hunt truly "rural", which was its original intent. Implement an immediate predator control program. Packs of 16 wolves are detrimental even to a brown bear's existence.

Gus and Koreen Lamoureaux, Anchorage

WP10-49/50 Executive Summary	
General Description	Proposal WP10-49, submitted by Gerald Kosbruk, Native Village of Perryville and Proposal WP10-50, submitted by Della Kalmakoff, Village Administrator, Chignik Lake Traditional Council request that Federal public lands in Unit 9E be closed to the taking of moose for non-Federally qualified users.
Proposed Regulation	**Unit 9E—Moose** *Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31* — *Aug. 20–Sept. 20* *Dec. 1–Jan. 31* ***Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Unit 9E hunting under these regulations.***
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Defer**
Written Public Comments	**3 Oppose**

STAFF ANALYSIS
WP10-49 and WP10-50

ISSUES

Proposal WP10-49, submitted by Gerald Kosbruk, Native Village of Perryville and Proposal WP10-50, submitted by Della Kalmakoff, Village Administrator, Chignik Lake Traditional Council request that Federal public lands in Unit 9E be closed to the taking of moose for non-Federally qualified users.

DISCUSSION

The proponents claim that rural residents of Unit 9E are increasingly having difficulties in meeting subsistence needs due to low moose populations; increasing competition from sport hunters and transporters; and low seasonal precipitation that make it difficult to access moose along river and stream corridors. The proponents believe that a closure of Federal public lands to non-Federally qualified users will increase opportunity for subsistence users hunting moose in Unit 9E.

Existing Federal Regulation

Units 9E—Moose

Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31	*Aug. 20–Sept. 20* *Dec. 1–Jan. 31*

Proposed Federal Regulation

Unit 9E—Moose

Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31	*Aug. 20–Sept. 20* *Dec. 1–Jan. 31*
Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Unit 9E hunting under these regulations.	

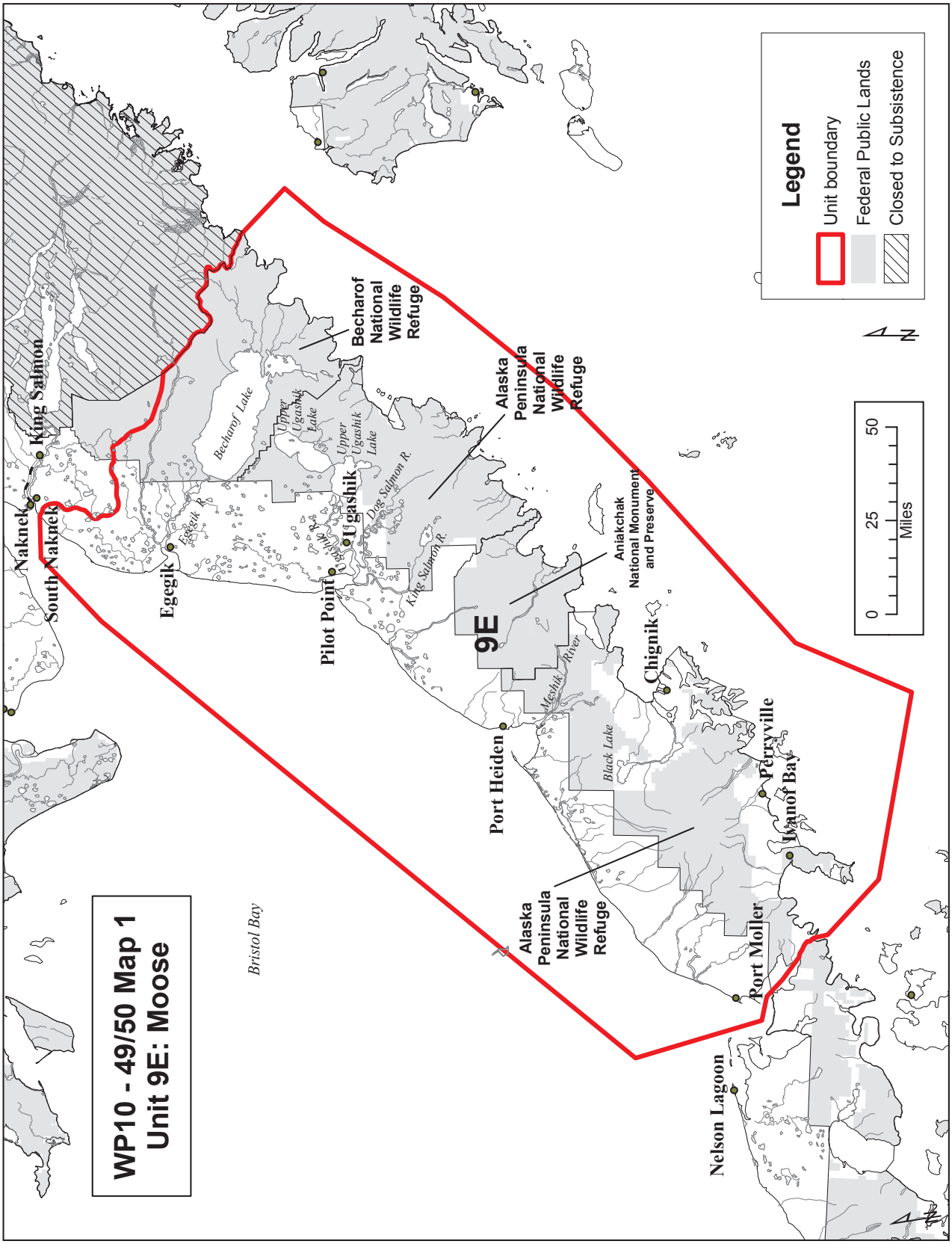
Existing State Regulations

Unit 9E—Moose

Residents: One bull with spike-fork or 50-inch or antlers with 3 or more brow tines at least one side	*Sept. 10–Sept. 20*
OR, One antlered bull	*Dec. 1–Jan. 20*
Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 10–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 50% of Unit 9E and consist of Becharof and Alaska Peninsula National Wildlife Refuges (45%) and Aniakchak National Monument and Preserve (5%) (**Map 1**).


WP10 - 49/50 Map 1
Unit 9E: Moose
Legend
Unit boundary
Federal Public Lands
Closed to Subsistence
0
25
50
Miles
N
Naknek
King Salmon
South Naknek
Egegik
Egegik R.
Becharof Lake
Upper Ugashik Lake
Upper Ugashik Lake
Becharof National Wildlife Refuge
Pilot Point
Ugashik
Dog Salmon R.
King Salmon R.
Alaska Peninsula National Wildlife Refuge
9E
Aniakchak National Monument and Preserve
Chignik
Meshik River
Black Lake
Port Heiden
Perryville
Ivanof Bay
Alaska Peninsula National Wildlife Refuge
Port Moller
Nelson Lagoon
Bristol Bay

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.

Regulatory History

Since 1990, moose hunting on Federal public lands within Unit 9E has been for bulls only. In 1999, the Federal Subsistence Board (Board) adopted Proposal WP99-36 with modification to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 20 to provide additional subsistence opportunities primarily for local residents. In 2000, the Board adopted Proposal WP00-37 to expand the fall hunting season from Sept. 1–Sept. 20 to Aug.20–Sept. 20. In 2007, the Board adopted Proposal WP07-24 with modification to extend the winter season from Dec. 1–Jan. 20 to Dec. 1–Jan. 31 to provide further subsistence opportunity.

In 1994 and 1995, wildlife Proposals WP94-30 and WP95-26 requested the closure of select Federal public lands in Unit 9E to non-Federally qualified users for the purpose of preventing sport-hunting with interfering with the migration of moose and caribou. The Board did not support the proposals believing that they were not necessary to conserve healthy populations or to provide adequate subsistence opportunities.

Special Actions WSA97-09 and WSA98-12 also requested the closure of Federal public lands in Unit 9E to moose and caribou hunting to non-Federally qualified users. In 1998, the Board deferred the Special Action requests until a subcommittee could meet and discuss moose management recommendations. Workgroup recommendations for moose were forwarded to the Bristol Bay Subsistence Regional Advisory Council as Wildlife Proposal WP99-36. This proposal would have closed Federal public lands to moose hunting by non-Federally qualified hunters on the Pacific side of the Alaska Peninsula from Stepovak Bay to Cape Igvak. The Board deferred this proposal until additional moose surveys could be conducted to determine the status of the moose population. Surveys conducted by the Alaska Peninsula National Wildlife Refuge indicated a healthy moose population. The Board adopted Proposal WP99-36 with modification to not close Federal public lands to non-qualified moose hunters, but to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 20 to coincide with State regulation and provide additional subsistence opportunity (FWS 1999).

In May 2006, the Board considered Proposal WP06-26 that requested Federal public lands in Unit 9E be closed to the taking of moose except by Federally qualified subsistence users (FWS 2006), however the Board and Bristol Bay Council opposed the proposal citing that the most recent census information did not justify the closure.

Other harvest regulations in this region are worth noting as they directly affect subsistence users. Due to the decline of the Northern Alaska Peninsula Caribou Herd, all Federal and State caribou hunting opportunities in Unit 9E have been eliminated.

Biological Background

In Unit 9, moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked. The moose population began to decline thereafter which was attributed to range damage from over-browsing. By the early 1980s, in some parts of the unit, such as 9E, moose densities were 60% below peak levels despite improvements in range condition and a series of hunting restrictions that began in 1974.

The primary limiting factors for the moose populations in the Bristol Bay area are brown bear predation on neonatal moose, low calf recruitment, and lack of quality habitat. Bear:moose ratios in Unit 9 ranged from >1:1 to 1:10 and are higher than anywhere else within the indigenous range of moose (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) density; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004). Overall, management objectives for bull:cow ratios and population level are being maintained in Unit 9E, a moderate density area (Butler 2009, pers. comm.).

Results of fall sex and age composition surveys in the central portion of 9E are generally above management objectives (Butler 2008) (**Table 1**). During most years, bull:cow ratios have been above management objectives, but in 2005 the ratio was abnormally low at 25 bulls:100 cows. However, the calf:cow ratio was one of the highest ratios observed during the past 25 years at 22 calves:100 cows (Butler 2008).

Table1. Moose composition counts in Unit 9E, 1998-2005 (Butler 2008).

Year	Bulls: 100 Cows	Calves: 100 Cows
1998[a]	65	20
1999	48	10
2000	----------No data----------	
2001	48	11
2002[a]	74	20
2003[a]	46	10
2004	----------No data----------	
2005[a]	25	22

[a] Includes some surveys by FWS

Survey data from the central portion of Unit 9E indicates that the density of moose in 2003/04, 2004/05, and 2005/06 was about 0.12 moose / mi2 (0.323 moose / km2), 0.10 moose / mi2 (0.266 moose / km2), 0.09 moose / mi2 (0.227 moose / km2), respectively, for 3 different areas (Nielson 2008). Survey data from 1983, which was within some of the same area as the 2003–2005 survey areas, may have been at 1.807 moose / mi2 (0.698 moose / km2). One possible explanation for lower moose densities compared to those observed during 1983 is that moose in 9E have stabilized at lower densities that are within the limits of local habitat conditions (Watts 2009, pers. comm.).

Survey data over in Unit 9E is sparse. The lack of snow cover has prevented any recent surveys (Butler 2008). In addition, much of the survey data is difficult to compare for trend analyses due to variation in survey methods, survey area, and amount of effort (Nielson 2008, Watts 2009, pers. comm.).

Harvest History

Between 2000–2008, reported moose harvest in Unit 9E has remained relatively stable with a slight decrease (**Figure 1**). Most of the reported moose harvested has been by nonresidents. Between 2000–2008, annual harvest has ranged from 40–72 for nonresidents, 3–20 for non-Federally qualified users, and 4–22 for Federally qualified subsistence users (ADF&G 2009). Nonresident success is higher than other groups because many employed guides and most flew out to hunt, which provides better access to areas where the moose are located (Butler 2008). The average reported hunter success between 2000–2008 was 62% for nonresidents, 34% for non-Federally qualified residents, and 33% for Federally qualified subsistence users (ADF&G 2009).

The reported number of local moose hunters and moose harvest generally indicated that the amount of effort is related to the amount of harvest (**Figure 2**): The reduced harvests since 2000 are not thought to reflect moose population changes, but rather that hunter effort has decreased (Butler 2004, 2008).

Between 2000–2006, about 89% of the reported harvest has occurred during the fall season for Unit 9. Reported harvest during winter has remained low and ranged from 7–15% of the total harvest (Butler 2008).

Household surveys conducted in Alaska Peninsula communities from 1994–1997 indicate low compliance with the State harvest ticket program. This is not uncommon in rural Alaska (Andersen and Alexander 1992). The surveys generally indicate higher harvest levels (Krieg et al. 1998). For instance, In Unit 9E for regulatory year 1994/95, 1995/96, and 1996/ 97, the amount of moose harvest based on harvest ticket returns was 6, 1, and 3, respectively. Household surveys estimated that 48 moose were harvested for 1994/95 and 1995/96 and 21 for 1996/97 in Unit 9E (Krieg et al. 1998).

Household survey data indicate that Unit 9E Bristol Bay residents from the Chigniks, Ivanoff Bay, and Perryville harvested all their moose (39) on Federal public lands during regulatory years 1995/96 and 1996/97 (Krieg et al. 1998). Depending on the community, Egegik, Pilot Point, Port Heiden, and Ugashik residents harvested from 0 to 50% of their moose (6 total) on Federal public lands for both regulatory years (Krieg et al. 1998)

Other Management Options

The Federal Subsistence Board *Policy on Closures* states "the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users" (FSB 2007). One alternative management option to minimize the degree of restriction on non-subsistence users would be to consider longer seasons for Federally qualified subsistence users to ensure subsistence needs are being met. Extending the Federal season may allow local residents to harvest more bulls during a time that bulls are near peak rut and more easily found. The Federal season in August can be considered too early in the year and at a time when bulls are difficult to locate. Allowing more opportunity for a bull to be harvested may persuade Federally qualified rural residents against illegal cow harvest, which may be a limiting factor for moose populations. However this option is not supported at this time since many local hunters may not prefer to harvest bull moose late in the rut and the local concern is over low moose populations. Further study and discussion would need to occur to determine if this is a viable option to helping Federally qualified rural residents increase harvest of bull moose and still manage for a healthy moose population.

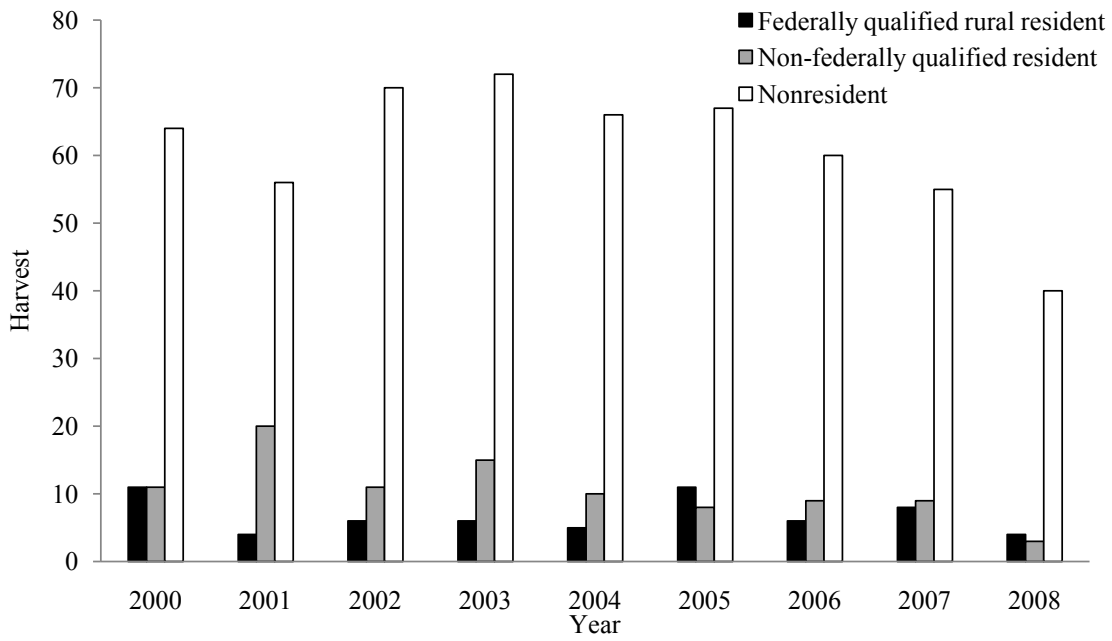


Figure 1. Unit 9E reported moose harvest by Federally qualified rural resident, Non-federally qualified resident, and nonresident hunters, 2000-2008 (ADF&G 2009).

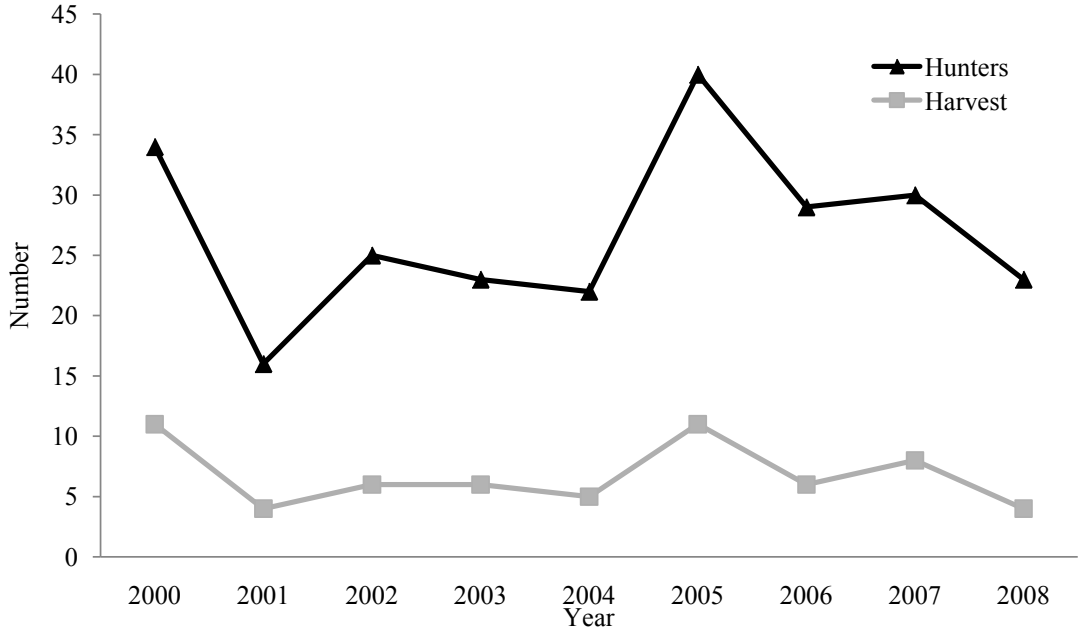


Figure 2. Unit 9E reported Federally qualified rural resident moose hunters and harvest, 2000-2008 (ADF&G 2009).

Effects of the Proposals

If either of these proposals were to be adopted, Federal public lands would be closed and opportunity eliminated for non-Federally qualified moose hunters in Unit 9E.

Local resident hunter success and harvest may increase as a result of closing Federal public lands, particularly for areas where Federally qualified rural residents hunt areas overlap with those of non-Federally qualified rural residents. However, it is anticipated that local harvest and success rate may only increase slightly, because of other limiting factors. Access to much of Unit 9E is difficult unless an aircraft is utilized and many of the local hunters do not have access to an aircraft.

It is possible that the closure of Federal public lands to non-Federally qualified moose hunters could lead to an increase of hunters on State lands. An increase could lead to increased competition for Federally qualified subsistence users. All of the Federal public lands within Unit 9E on the Alaska Peninsula are located on the eastern side (**Map 1**). Most State and private lands are found on the western side of the Alaska Peninsula and are near Egegik, Pilot Point, Ugashik, Port Heiden, and Port Moller. The closure of Federal public lands may decrease competition for communities on the eastern side of the Alaska Peninsula, but may increase competition for communities on the western side.

OSM CONCLUSION

Defer Proposals WP10-49/50 pending the outcome of the Unit 9 working group.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-49/50 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-49/50

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

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Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose. Please defer to the Alaska Department of Fish and Game draft comments on these proposals as well as the OSM Draft analysis. They accurately outline the reasons why these proposals (WP10-46, 49, and 50) should be rejected.

Joe Klutsch, Alaska Professional Hunters Association

Oppose WP10-46, -47, -48, -49 and WP10-50. First enacted on the Alaska Peninsula in the early 1970s and subsequently throughout much of the state, the size restriction of 50" or at least 3 brow tines limits the non-rural hunter's ability to harvest a moose to a very specific age and size. This has been a very successful management tool for ADF&G. The moose season of September 10-20, also implemented in the early 1970s, has kept bull moose in this age class at a stable harvest level.

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Gus and Koreen Lamoureaux, Anchorage

WP10-51/53 Executive Summary	
General Description	Proposals WP10-51 and WP10-53 were submitted by the Bristol Bay Subsistence Regional Advisory Council. Proposal WP10-51 requests that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be established as Aug. 1–Mar. 31. Proposal WP10-53, requests that the harvest limit for caribou be consistent at two caribou in Units 9A, 9B, a portion of 9C, 17A, 17B, 17C, 18, 19A, and 19B. It also requests a restriction in harvest so that no more than one bull may be taken, and no more than one caribou may be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village). Note: A similar proposal (WP10-60) requesting a reduction of the caribou harvest limit to two in Unit 18 is being analyzed separately.
Proposed Regulation	*See the analysis for regulation language.*
OSM Conclusion	**Support** Proposal WP10-51 **with modification** to make the season ending date Mar. 15 for all units. **Support** Proposal WP10-53
Bristol Bay Regional Council Recommendation	**Support** Proposal WP10-51 **with modification** as described in OSM Conclusion. **Support** Proposal WP10-53
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-51 **with modification** as described in OSM Conclusion. **Support** Proposal WP10-53.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-51 **with modification** as described in the OSM Conclusion. **Support** Proposal WP10-53
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-51 **with modification** to amend the closing date to align with state hunting season on March 15. **Support** Proposal WP10-53
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP10-51 and WP10-53

ISSUES

Proposals WP10-51 and WP10-53 were submitted by the Bristol Bay Subsistence Regional Advisory Council. Proposal WP10-51 requests that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be established as Aug. 1–Mar. 31.

Proposal WP10-53, requests that the harvest limit for caribou be consistent at two caribou in Units 9A, 9B, a portion of 9C, 17A, 17B, 17C, 18, 19A, and 19B. It also requests a restriction in harvest so that no more than one bull may be taken, and no more than one caribou may be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village).

Note: A similar proposal (WP10-60) requesting a reduction of the caribou harvest limit to two in Unit 18 is being analyzed separately.

DISCUSSION

The proponent states that the change in the season dates (WP10-53) will provide consistency for managing the Mulchatna Caribou Herd (MCH) on Federal public lands. In changing the harvest limit (WP10-53), the proponent states the changes would also provide consistency for Federal management of the MCH and align the Federal regulations with the State regulations in regards to harvest limits.

Existing Federal Regulations

Units 9A, 9B, and 9C—Caribou	
Unit 9A—4 caribou; however, no more than 2 caribou may be taken Aug. 10–Sept. 30 and no more than 1 caribou may be taken Oct. 1–Nov. 30	*Aug. 10–Mar. 31*
Unit 9B—3 caribou; however, no more than 1 caribou may be taken from July 1–Nov. 30	*July 1–Apr. 15*
Unit 9C, that portion within the Alagnak River drainage—1 caribou	*Aug. 1–Mar. 31*
Unit 9C remainder—Federal public lands are closed to the taking of caribou.	*No Federal open season*
Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.	
Units 17—Caribou	
Unit 17A, all drainages west of Right Hand Point—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30	*Aug. 1–Mar. 31*

	The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge
Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.	*Aug. 1–Sept. 30* *Dec. 1–Mar. 31* *The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*
Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark's Point, and Ekuk hunting under these regulations. *The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.*	
Unit 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to 5 caribou will be determined at the time the season is announced.	*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*
Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—3 caribou; however no more than 1 caribou may be taken from Aug. 1–Nov. 30.	*Aug. 1–Apr. 15*
Unit 18—Caribou	
Unit 18—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30	*Aug. 1–Mar. 15*
Unit 19—Caribou	
Unit 19A north of the Kuskokwim River—1 caribou	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28*
Unit 19A south of the Kuskokwim River and 19 B (excluding Lime Village)—3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30	*Aug. 1–Apr. 15*

Unit 19C—1 caribou	*Aug. 10–Oct. 10*
Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou	*Aug. 10–Sept. 30* *Nov. 1–Jan. 31*
Unit 19D remainder—1 caribou	*Aug. 10–Sept. 30*
Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.	*July 1–June 30*

Proposed Federal Regulations

Units 9A, 9B, and 9C—Caribou

Unit 9A—~~4~~ ***2*** *caribou; however, no more than ~~2 caribou~~* ***1 bull*** *may be taken****,*** *~~Aug. 10–Sept. 30~~ and no more than 1 caribou may be taken ~~Oct. 1–Nov. 30~~* ***Aug. 1–Jan. 31***	*~~Aug. 10–Mar. 31~~* ***Aug. 1–Mar. 31***
Unit 9B—~~3~~ ***2*** *caribou; however, no more than 1 ~~caribou~~* ***bull*** *may be taken****, and no more than 1 caribou may be taken Aug. 1–Jan. 31*** *~~from July 1–Nov. 30~~*	*~~July 1–Apr. 15~~* ***Aug. 1–Mar. 31***
Unit 9C, that portion within the Alagnak River drainage—~~1~~ ***2*** *caribou****; however no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31***	*Aug. 1–Mar. 31*
Unit 9C remainder—Federal public lands are closed to the taking of caribou.	*No Federal open season*
Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.	

Units 17—Caribou

Unit 17A, all drainages west of Right Hand Point—~~3~~ ***2*** *caribou; however, no more than 1 ~~caribou~~* ***bull*** *may be taken****, and no more than 1 caribou may be taken*** *~~from~~ Aug. 1–~~Nov. 30~~* ***Jan. 31***	*Aug. 1–Mar. 31* *The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge*

Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.	*Aug. 1–Sept. 30* *Dec. 1–Mar. 31* *The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*
Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark's Point, and Ekuk hunting under these regulations. *The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.*	
*Units 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to ~~5~~ **2** caribou will be determined at the time the season is announced.*	*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*
*Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—~~3~~ **2** caribou; however no more than 1 **bull may be taken, and no more than 1** caribou may be taken ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*~~Aug. 1–Apr. 15~~* ***Aug. 1–Mar. 31***
Unit 18—Caribou	
*Unit 18—~~3~~ **2** caribou; however, no more than 1 ~~caribou~~ **bull** may be taken**, and no more than 1 caribou may be taken** ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*~~Aug. 1–Mar. 15~~* ***Aug. 1–Mar. 31***
Unit 19—Caribou	
*Unit 19A north of the Kuskokwim River—~~1~~ **2** caribou**; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31***	*~~Aug. 10–Sept. 30~~* *~~Nov. 1–Feb. 28~~* ***Aug. 1–Mar. 31***
*Units 19A south of the Kuskokwim River and 19B (excluding Lime Village)—~~3~~ **2** caribou; however, no more than 1 **bull may be taken, and no more than 1** caribou may be taken ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*~~Aug. 1–Apr. 15~~* ***Aug. 1–Mar. 31***
Unit 19C—1 caribou	*Aug. 10–Oct. 10*
Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou	*Aug. 10–Sept. 30* *Nov. 1–Jan. 31*
Unit 19D remainder—1 caribou	*Aug. 10–Sept. 30*

Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.	*July 1–June 30*

Existing State Regulations

Units 9A, 9B, and 9C—Caribou

Residents: 2 caribou—no more than one bull may be taken; no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar 15*
Nonresidents:	*No open season*

Unit 9C that portion north of the Naknek River and south of the Alagnak River drainage—Caribou

Resident: 1 caribou by permit available in person in King Salmon if a winter season is announced	*May be announced*

Unit 17A all drainages east of Right Hand Point—Caribou

Resident: 1 caribou	*May be announced*

Unit 17A remainder

Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*

Unit 17B Nonresident Closed Area

Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*

Unit 17B remainder and Unit 17C east of Wood River and Wood River Lakes

Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*
Nonresident:	*No open season*

Unit 17C remainder

Resident: 1 caribou	*May be announced*

Unit 18

Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*

Nonresident:	*No open season*
Unit 19A and 19B	
Resident: 2 caribou—no more than one bull may be taken, and no more than one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*
Nonresident:	*No open season*
Unit 19C	
Resident: 1 bull	*Aug. 10–Sept. 20*
Nonresident: 1 bull	*Aug. 10–Sept. 20*
Unit 19D except the drainages of the Nixon Fork River	
Resident: 1 bull *Or 1 caribou*	*Aug. 10–Sept. 20* *Nov. 1–Jan. 31*
Nonresident: 1 bull	*Aug. 10–Sept. 20*
Unit 19D remainder	
Resident: 1 bull	*Aug. 10–Sept. 20*
Nonresident: 1 bull	*Aug. 10–Sept. 20*

Extent of Federal Public Lands

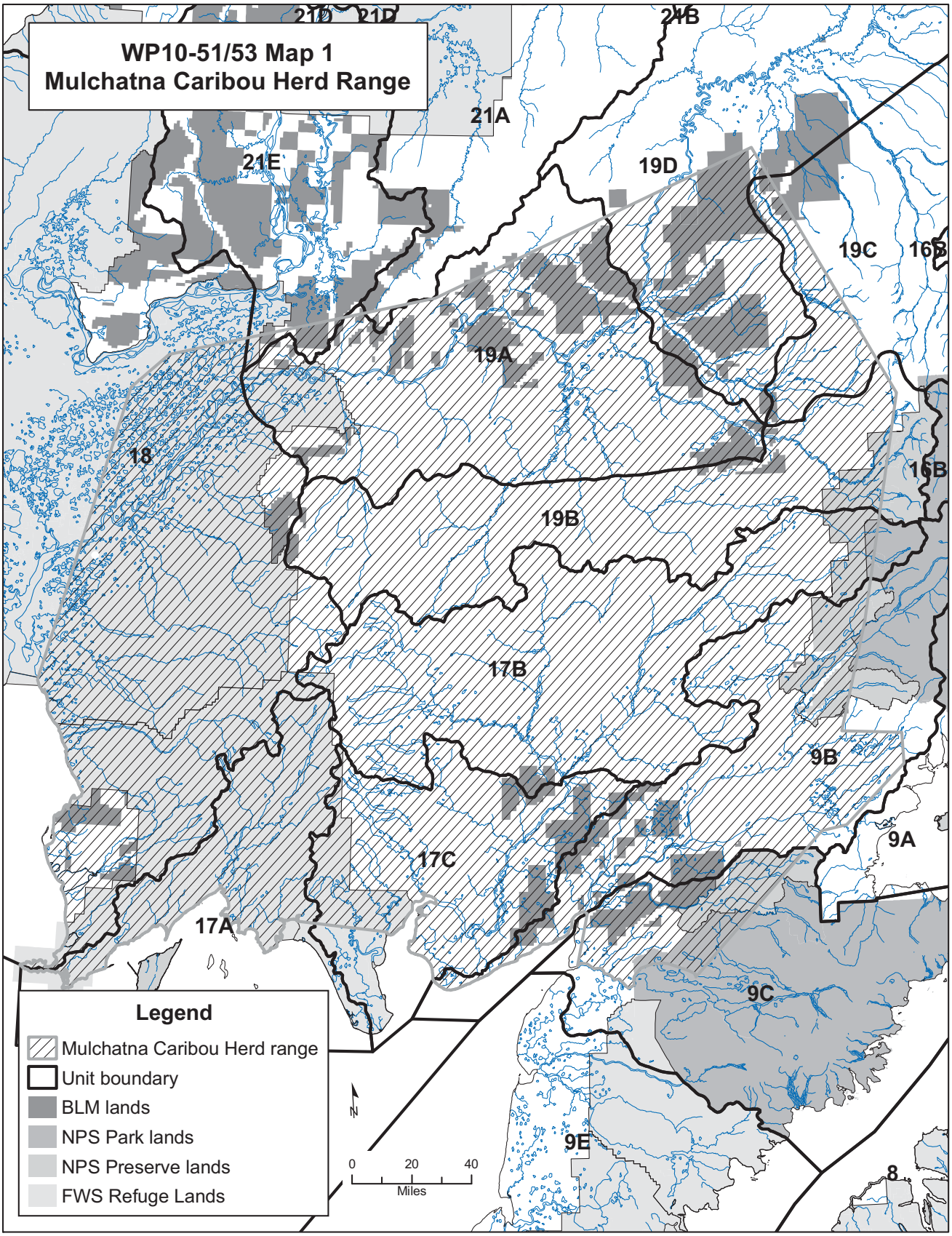
The following describes the extent of Federal public lands (**Map 1**):

- Federal public lands comprise approximately 32% of Unit 9A and consists of 32% National Park Service (NPS) and <1% Fish and Wildlife Service (FWS) lands. Unit 9B has 27% Federal public lands that comprise 4% Bureau of Land Management (BLM) and 23% NPS. Unit 9C has 84% Federal public lands that comprise 3% BLM, 3% FWS, and 78% NPS. However, subsistence hunting is not authorized in Katmai National Park, which makes up 70% of Unit 9C.

- Federal public lands comprise approximately 84% of Unit 17A, all of which is FWS. Unit 17B has 7% Federal public lands that comprise 1% BLM, 1% FWS, and 6% NPS. Unit 17C has 24% Federal public lands that comprise 10% BLM and 15% FWS.

- Federal public lands comprise approximately 64% of Unit 18 and consists of 2% BLM and 62% FWS.

- Federal public lands comprise approximately 20% of Unit 19A and consists of 17% BLM and 3% FWS. Unit 19B has 13% Federal public lands that comprise 2% BLM, <1% FWS, and 11% FWS.


WP10-51/53 Map 1
Mulchatna Caribou Herd Range
21D
21D
24B
21A
21E
19D
19C
16B
19A
18
16B
19B
17B
9B
9A
17C
17A
9C
9E
8
Legend
Mulchatna Caribou Herd range
Unit boundary
BLM lands
NPS Park lands
NPS Preserve lands
FWS Refuge Lands
N
0
20
40
Miles

Customary and Traditional Use Determinations

Units	Customary and Traditional Use Determination for Caribou
Units 9A and 9B	Rural residents of Units 9B, 9C and 17
Unit 9C	Rural residents of Units 9B, 9C and 17, and Egegik
Unit 17	Rural residents of Units 9B, 17, Lime Village, and Stony River
Unit 17A, that portion west of the Izavieknik River, Upper Togiak Lake, Togiak Lake, and the main course of the Togiak River	Rural residents of Goodnews Bay, Platinum, Quinhagak, Eek, Tuntutuliak, and Napakiak
Unit 17A, that portion north of Togiak Lake that includes Izavieknik river drainages	Rural residents of Akiak, Akiachak, and Tuluksak
Units 17A and 17B, those portions north and west of a line beginning from the Unit 18 boundary at the northwest end of Nenevok Lake, to the southern point of upper Togiak Lake, and northeast to the northern point of Nuyakuk Lake, northeast to the point where the Unit 17 boundary intersects the Shotgun Hills	Rural residents of Kwethluk
Unit 17B, that portion of Togiak National Wildlife Refuge within Unit 17B	Residents of Bethel, Goodnews Bay, Platinum, Quinhagak, Eek, Akiak, Akiachak, Tuluksak, Tuntutuliak, and Napakiak
Unit 18	Rural residents of Unit 18, St. Michael, Stebbins, Togiak, Twin Hills, Upper Kalskag, and Manokotak
Unit 19A and 19B	Rural residents of Units 19A, 19B, 18 (within the Kuskokwim River drainage upstream from, and including, the Johnson River), St. Marys, Marshall, Pilot Station, and Russian Mission

Regulatory History

State and Federal regulations for the MCH were liberalized during the dramatic population increase that occurred in the 1990s. These regulations allowed hunters the opportunity to harvest sustainable levels of surplus animals. Numerous modifications were made to the Federal regulations for various units as the MCH population increased and as it expanded into new range. Following the population decline, regulations became more restrictive in 2006 and 2007.

In March 2006, the Alaska Board of Game adopted new state regulations to reduce harvest limits within the range of the MCH from five to two caribou. In March 2007, the Alaska Board of Game further restricted caribou harvest to allow no more than one bull to be taken, and no more than one caribou to

be taken Aug. 1–Jan. 31. In 2007, the Federal Subsistence Board followed suit and adopted proposal WP07-23 with modification to reduce the harvest limits in Unit 9B; portion of Unit17A; Unit 17B; portion of Unit 17C; Unit 18; portion of Unit 19A; and Unit 19B; from five caribou to three due to a large population decline. In March 2009, the Alaska Board of Game eliminated nonresident harvest on the MCH due to the harvestable surplus being lower than the amount needed for subsistence.

While regulations allowed MCH harvest in many of the units that the MCH inhabit, regulations have also worked to protect other caribou herds that inhabit the same units. The Northern Alaska Peninsula Caribou Herd is found within Unit 9C, the Nushagak Peninsula Herd in 17A and 17C, and the Beaver Mountains Herd and Sunshine Mountains Herd in Unit 19A. Therefore, regulations have portioned these units to accommodate MCH harvest, but restrict harvest on other herds.

The State regulations, however, do not protect the Beaver Mountains Herd and Sunshine Mountains Herd in Unit 19A through portioning the unit as do the current Federal regulations. The habitat in 19A north of the Kuskokwim River has generally been unoccupied by caribou in recent years (Seavoy 2009, pers. comm.).

Biological Background

The Alaska Department of Fish and Game (ADF&G) management objectives for the MCH were to maintain a population of 100,000–150,000 with a minimum bull:cow ratio of 35:100 and to maximize opportunity to hunt caribou (Woolington 2007). However, at the Feb. 27–Mar. 9 2009 Southcentral/ Southeast meeting in Anchorage, the Alaska Board of Game reduced the population objective to 30,000–80,000 caribou stating that these numbers are more realistic for this herd (ADF&G 2009). The Alaska Board of Game also reduced harvest objective from 6,000–15,000 to 2,400–8,000 during this meeting (ADF&G 2009).

Results from the July 2006 photocensus conducted in July 2006 provided an estimate of 45,000 caribou (Woolington 2007; **Table 1**). Results from the 2008 photocensus conducted in July 2008 provided a minimum estimate of 30,000 caribou (Woolington 2009). Bull:cow ratios have been estimated at less than 35 bulls:100 cows since 2001 (**Table 1**). These estimates indicate a substantial reduction in herd size and bull:cow ratios and suggests that it is near the minimum population for the ADF&G management objectives.

The MCH increased at an average annual rate of 17% between 1981 and 1996 and near 28% from 1992–1994. Overall herd size peaked at 200,000 with a peak bull:cow ratio of 42:100 in 1996 (Woolington 2007). The dramatic population growth is attributed to mild winters, movements onto new range, low predation, and an estimated annual harvest of less than 5% of the population since the late 1970s (Woolington 2007). Since 1996, the population, bull:cow ratio, and calf:cow ratio have significantly declined (**Table 1**). Possible signs of stress in the MCH include an outbreak of hoof rot in 1998 and low calf:cow ratios in fall 1999 (Woolington 2001).

The MCH ranges across approximately 60,000 square miles and primarily within Units 9B, 9C, 17, 18, and 19 (**Map 1**). Wintering areas during the 1980s and early 1990s was along the north and west side of Iliamna Lake, north of Kvichak River but telemetry data indicated the MCH had been moving to the south and west for wintering (Van Daele and Boudreau 1992 *cited* in Woolington 2007). Starting in the mid-1990s, caribou from the MCH began wintering in Unit 18 south of the Kuskokwim River and southwestern Unit 19B in increasing numbers. During the winter of 2004/05, much of the herd wintered in Unit 18, south of the Kuskokwim River, and another large part of the herd in the middle Mulchatna drainage. During 2005/06, large numbers wintered near the lower Kvichak River.

Table 1. Mulchatna caribou herd composition counts and population estimates, 1991–2009 (Woolington 2007, 2009).

Regulatory Year	Bulls:100 Cows	Calves:100 cows	Composition Sample Size	Estimate of Herd Size
1991/92	—	—	—	90,000[a]
1992/93	—	—	—	115,000[a]
1993/94	42.1	44.1	5,907	150,000[a]
1994/95	—	—	—	180,000[a]
1995/96	—	—	—	190,000[a]
1996/97	42.4	34.4	1,727	200,000[a]
1997/98	—	—	—	—[b]
1998/99	40.6	33.6	3,086	—[b]
1999/00	30.3	14.1	4,731	175,000[c]
2000/01[e]	37.6	24.3	3,894	—[b]
2001/02	25.2	19.9	5,728	—[b]
2002/03	25.7	28.1	5,734	147,000[d]
2003/04[f]	17.4	25.6	7,821	—[b]
2004/05[g]	21	20	4,608	85,000[h]
2005/06[i]	13.9	18.1	5,211	—[b]
2006/07[j]	14.9	25.5	2,971	45,000[k]
2007/08[l]	23	15.8	3,943	—[b]
2008/09[m]	19.3	23.4	3,728	30,000[n]

[a] Estimate derived from photo-counts, corrected estimates, subjective estimate of the number of caribou in areas not surveyed, and interpolation between years when aerial photo surveys not conducted.

[b] No current population estimate based on surveys.

[c] Estimate based on photocensus conducted July 8, 1999.

[d] Estimate based on photocensus conducted June 30, 2002.

[e] NOTE: Fall 2000 bull:cow ratio and bull percentages corrected from previous table.

[f] Based on pooling data from surveys conducted 10/11/2003 and 10/14/2003.

[g] Based on pooling data from surveys conducted 10/12/2004 and 10/30/2004.

[h] Estimate based on photocensus conducted July 7, 2004.

[i] Based on pooling data from surveys conducted 10/10/2005 and 10/14/2005.

[j] Based on pooling data from surveys conducted 10/13–14/2006 and 10/22/2006.

[k] Based on photocensus conducted July 11,2006

[l] Based on pooling data from surveys conducted 10/7–8/2007 and 10/11/2007.

[m] Based on pooling data from surveys conducted 10/7 and 10/8/2008.

[n] Minimum estimate (Woolington 2009)

Harvest History

Caribou harvest continues to decline (Woolington 2007). Total reported MCH harvest was 2,171 in 2005, but had declined to 516 by 2008 (**Table 2**). Both resident and nonresident harvest has declined. Harvest within each unit has fluctuated and appears to have been highest in Units 9B, 9C, 17B, and 18 since 2005 (**Table 2**). The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06 (Woolington 2007).

Most of the harvest occurs in August and September (66% in 2004/05 and 47% in 2005/06) (Woolington 2007). Additionally, March also accounts for a relatively high amount of the harvest: 10% in 2004/05 increasing to 23% in 2005/06. Data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years (Woolington 2007).

Reported harvest during the other nine months has always been relatively low. Between 1991–2006, harvest in July accounted for ≤0.2% of the total annual harvest; October, November, December, January, and February accounted for ≤6%; and April accounted for ≤9% (Woolington 2007). It should be noted, however, that these data only account for the reported harvest and some harvest may be occurring that is unreported.

Effects of the Proposal

WP10-51

If this proposal is adopted it would lengthen the harvest seasons in Units 9A, 18, and 19A north of Kuskokwim River, while shortening the seasons in Units 9B, 17B, that portion of 17C east of the Wood River and Wood River Lakes, 19A south of the Kuskokwim River, and 19B.

Extending the winter portion of the season, when weather and daylight are more favorable, will likely increase harvest, particularly in units where the season is extended to the end of March. Opening the season earlier will likely have little effect as most harvest occurs after July and the majority of the reported harvest has been in September (Woolington 2007).

This proposal will only affect Federally qualified subsistence users; non-Federally qualified users will not be affected as the season will remain the same under State regulations.

WP10-53

If this proposal is adopted, harvest limits would be reduced to two caribou for Units 9A, 9B, 17A, 17B, 17C, 18, and 19A south of the Kuskokwim River and 19B, however harvest limits would increase from one to two caribou for Units 9C—that portion in the Alagnak River drainage and 19A—that portion north of the Kuskokwim River. Nonetheless, overall harvest would be expected to decrease because relatively high harvest has occurred within the other units that the MCH inhabits. Reported caribou harvest in Units 9B and 9C have been relatively low in recent years (**Table 2**). Decreasing the harvest limit to a consistent number of animals across the range of the herd should help the population stabilize.

Restricting harvest so that no more than one bull may be taken, and no more than one caribou be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, a portion of 17A, 17B, a portion of 17C, 18, 19A, and 19B (excluding Lime Village) may help reduce harvest overall and reduce harvest on bulls. These restrictions would prohibit the harvest of more than one bull, but would allow the harvest of more than one cow. Reducing bull harvest may help increase the bull:cow ratio. Reducing the harvest limit to one

Table 2. Reported caribou harvest by unit and residency, 2005–2008 (ADF&G 2009).

Year 2008										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	0	16	153	16	39	5	196	2	6	-
Nonresident	0	1	0	0	29	1	4	1	16	-
Other	0	0	0	5	2	3	21	0	0	-
Total		17	153	21	70	9	221	3	22	516

Year 2007										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	1	13	190	17	62	5	352	14	19	-
Nonresident	0	3	0	0	76	1	19	1	27	-
Other	0	0	0	2	4	0	3	0	0	-
Total	1	16	190	19	142	6	374	15	46	809

Year 2006										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	1	158	10	22	96	89	272	13	24	-
Nonresident	0	18	1	0	163	6	47	6	34	-
Other	0	1	0	0	2	1	5	0	0	-
Total	1	177	11	22	261	96	324	19	58	969

Year 2005										
	Unit 9A	Unit 9B	Unit 9C	Unit 17A	Unit 17B	Unit 17C	Unit 18	Unit 19A	Unit 19B	Grand total
Resident	0	287	112	38	378	312	447	35	46	-
Nonresident	0	46	5	3	252	23	80	4	75	-
Other	0	4	0	9	6	4	5	0	0	-
Total	0	337	117	50	636	339	532	39	121	2171

caribou between Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further restrict some caribou harvest and will align with the State regulations.

This proposal will only affect Federally qualified subsistence users through a reduced harvest. Non-Federally qualified users will not be affected as harvest limits will remain the same under State regulations.

OSM CONCLUSION

Support Proposal WP10-51 **with modification** to make the season ending date Mar. 15 for all units.

Support Proposal WP10-53

The modified regulations should read:

Units 9A, 9B, and 9C—Caribou	
*Unit 9A—~~4~~ **2** caribou; however, no more than ~~2 caribou~~ **1 bull** may be taken**,** ~~Aug. 10–Sept. 30~~ and no more than 1 caribou may be taken ~~Oct. 1–Nov. 30~~ **Aug.1–Jan. 31***	*~~Aug. 10–Mar. 31~~* ***Aug. 1–Mar. 15***
*Unit 9B—~~3~~ **2** caribou; however, no more than 1 ~~caribou~~ **bull** may be taken**, and no more than 1 caribou may be taken Aug. 1–Jan. 31*** ~~from July 1–Nov. 30~~	*~~July 1–Apr. 15~~* ***Aug. 1–Mar. 15***
*Unit 9C, that portion within the Alagnak River drainage—~~1~~ **2** caribou**; however no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31***	*Aug. 1–Mar. ~~31~~ **15***
Unit 9C remainder—Federal public lands are closed to the taking of caribou.	*No Federal open season*
Federal registration permits may be issued in conjunction with the State Tier II hunt. Both Federal and State agencies will decide how many total permits to issue to make sure that the actual harvest will not significantly exceed the harvestable surplus.	
Units 17—Caribou	
*Unit 17A, all drainages west of Right Hand Point—~~3~~ **2** caribou; however, no more than 1 ~~caribou~~ **bull** may be taken**, and no more than 1 caribou may be taken** ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*Aug. 1–Mar. ~~31~~ **15*** *The season may be closed and harvest limit reduced for the drainages between the Togiak River and Right Hand Point by announcement of the Togiak National Wildlife Refuge*

Units 17A and 17C, that portion of 17A and 17C consisting of the Nushagak Peninsula south of the Igushik River, Tuklung River and Tuklung Hills, west to Tvativak Bay—Up to 2 caribou by Federal registration permit.	*Aug. 1–Sept. 30* *Dec. 1–Mar. 31* *The season may be closed by announcement of the Togiak National Wildlife Refuge Manager.*
Federal public lands are closed to the taking of caribou except by the residents of Togiak, Twin Hills, Manokotak, Aleknagik, Dillingham, Clark's Point, and Ekuk hunting under these regulations.	
The harvest objective, harvest limit, and the number of permits available will be announced by the Togiak National Wildlife Refuge Manager after consultation with the ADF&G and the Nushagak Peninsula Caribou Planning Committee. Successful hunters must report their harvest to the Togiak National Wildlife Refuge within 24 hours after returning from the field.	
*Units 17A remainder and 17C remainder—Selected drainages, a harvest limit of up to ~~5~~ **2** caribou will be determined at the time the season is announced.*	*Season, harvest limit, and hunt area to be announced by the Togiak National Wildlife Refuge Manager between Aug. 1–Mar. 31*
*Units 17B and that portion of 17C east of the Wood River and Wood River Lakes—~~3~~ **2** caribou; however no more than 1 **bull may be taken, and no more than 1** caribou may be taken ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*~~Aug. 1–Apr. 15~~* ***Aug. 1–Mar. 15***
Unit 18—Caribou	
*Unit 18—~~3~~ **2** caribou; however, no more than 1 ~~caribou~~ **bull** may be taken**, and no more than 1 caribou may be taken** ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*Aug. 1–Mar. 15*
Unit 19—Caribou	
*Unit 19A north of the Kuskokwim River—~~1~~ **2** caribou**; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken Aug. 1–Jan. 31***	*~~Aug. 10–Sept. 30~~* *~~Nov. 1–Feb. 28~~* ***Aug. 1–Mar. 15***
*Units 19A south of the Kuskokwim River and 19B (excluding Lime Village)—~~3~~ **2** caribou; however, no more than 1 **bull may be taken, and no more than 1** caribou may be taken ~~from~~ Aug. 1–~~Nov. 30~~ **Jan. 31***	*~~Aug. 1–Apr. 15~~* ***Aug. 1–Mar. 15***
Unit 19C—1 caribou	*Aug. 10–Oct. 10*
Unit 19D south and east of the Kuskokwim River and North Fork of the Kuskokwim River—1 caribou	*Aug. 10–Sept. 30* *Nov. 1–Jan. 31*

Unit 19D remainder—1 caribou	*Aug. 10–Sept. 30*
Unit 19—Rural residents of Lime Village only—no individual harvest limit, but a village harvest quota of 200 caribou; cow and calves may not be taken Apr. 1–Aug. 9. Reporting will be by a community reporting system.	*July 1–June 30*

Justification

Based on the declining MCH population, conservation concerns necessitate a reduction in harvest.

WP10-51

Adopting WP10-51 with modification would reduce season lengths in many units, thus reducing some harvest and providing more consistency within the Federal regulations for MCH harvest. In addition, the Federal season would match the State season.

The only unit that would have the season extended would be in Unit 19A north of Kuskokwim River, where little harvest occurs. Season extensions at the front-end are anticipated to have little or no effect on the overall harvest due to the preference to harvest caribou after July as indicated by the timing of reported harvest.

Season dates for the MCH should be consistent for all units. A season ending date of March 15 is supported over a March 31 date, to reduce harvest. Given that a significant portion of the caribou harvest occurs in March, a season extension in Unit 18 may increase harvest even if harvest limits were to be reduced. In Unit 18, where the majority of harvest has been occurring in recent years, a season ending date of March 31 would extend the season by 16 days and would likely further increase caribou harvest overall. Other benefits of a March 15 deadline over March 31, is less harassment from hunters with snowmachines on caribou during a time when caribou can be nutritionally stressed; and less potential damage to tundra from snowmachines during a time when snow is often scarce.

WP10-53

Adopting WP10-53 would help reduce overall harvest and provide more consistency within the Federal and State regulations for MCH harvest. However, harvest limits would be increased for Units 9C—that portion in the Alagnak River drainage and 19A—that portion north of the Kuskokwim River by one caribou. A harvest reduction overall will still be expected to reduce overall harvest.

Restricting harvest to one bull is needed to help increase the bull:cow ratio. Since 2001, the bull:cow ratios have been below ADF&G's management objective of 35 bulls:100 cows. Reducing the bull harvest should help increase the number of bulls in the herd and ensure that pregnancy rates and calf production is adequate to help increase the population.

Restricting harvest so that no more than one caribou may be taken from Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further reduce harvest, although slightly. The opportunity to harvest a second caribou would be reduced by approximately two months for hunters that want to harvest more than one caribou in early winter. Harvest would decrease for the hunters that opportunistically harvest more than one caribou in early winter, but do not hunt in late winter. However, opportunity would still exist for subsistence hunters that wish to harvest two caribou after Jan. 31.

It is not necessary to have different caribou regulations in Unit 19A to protect the Beaver Mountains Herd and Sunshine Mountains Herd and still allow MCH harvest. The habitat in 19A north of the Kuskokwim River has generally been unoccupied by caribou in recent years (Seavoy 2009, pers. comm.).

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-51 **with modification** as described in OSM Conclusion. The Council is concerned about expanding hunt opportunity and harvest that may exacerbate the decline of large breeding bulls in the population.

Support Proposal WP10-53.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-51 **with modification** as described in OSM Conclusion. This proposal would shorten the season to protect the caribou population in Units 9A-C as a conservation measure to protect the declining population and would align with the State season.

Support Proposal WP10-53. The Council supported the proposal to reduce the harvest limit to one bull. This action would also address the conservation concern, help increase the caribou bull to cow ratio, protect the declining population, and align with the State regulation.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-51 **with modification** as described in OSM Conclusion. Federally qualified residents of Unit 18 harvest caribou in Unit 18, 17A, and 19A. The Mulchatna Caribou Herd has declined. There is a need to conserve and rebuild the caribou population.

Support Proposal WP10-53. Federally qualified residents of Unit 18 harvest caribou in Unit 18, 17A, and 19A. The Mulchatna Caribou Herd has declined. There is a need to conserve and rebuild the caribou population.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-51/53

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-51 and WP10-53
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-51: (GMU 9A, 9B, 9C, 17A, 17B, 18, 19A caribou seasons)
Wildlife Proposal WP10-53: (GMU 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A caribou bag limit)
Proposal WP10-51 would align federal subsistence opening and closing dates for caribou hunting on federal public lands throughout most of the range of the Mulchatna Caribou Herd. Proposal 53 would align federal subsistence bag limits for caribou hunting on federal public lands throughout most of the range of the Mulchatna Caribou Herd.

Introduction: Declines in the Mulchatna Caribou Herd from its peak population in the mid-1990s necessitated reduced season and bag limits throughout the herd's range as the population changed. Earlier changes in federal subsistence hunting regulations kept pace with changes made by the Alaska Board of Game in response to population changes. Present federal subsistence hunting regulations throughout the range of the Mulchatna Caribou Herd are inconsistent between Game Management Units. Changing the federal subsistence hunting regulations for caribou in the range of the Mulchatna Herd to uniform regulations will reduce confusion for hunters.

Impact on Subsistence Users: Proposal WP10-51 would shorten the caribou hunting season in those areas where the federal subsistence hunting season for caribou presently closes after March 31 (Units 9B, 17B, and that portion of 17C east of the Wood River and Wood River lakes, 19A south of the Kuskokwim River, and 19B). This proposal would lengthen the caribou hunting season in those areas where the federal subsistence hunting season for caribou presently closes before March 31 (Units 18 and 19A north of the Kuskokwim River). By establishing consistent federal subsistence opening and closing hunting season dates, confusion by hunters over what federal areas are open will be reduced. Establishing dates that are not aligned with present state hunting season dates will create confusion because of the mixed land ownership patterns throughout the range of the herd. The shorter state season, ending March 15, occurs during a time when travel conditions are poor so would have little impact on federally-qualified subsistence users and reduce risk of enforcement actions.

Proposal 53 would reduce the caribou bag limit in those areas where the federal subsistence bag limit is presently greater than two caribou (Units 9A and B, 17A, B and C, 18, 19A south of the Kuskokwim River, and 19B). This proposal would increase the caribou bag limit in those areas where the federal subsistence bag limit is presently less than two caribou (Units 9C–that portion in the Alagnak River drainage, and 19A–that portion north of the Kuskokwim River). By establishing consistent federal subsistence bag limits, confusion by hunters over how many caribou can be taken on which federal public lands will be reduced. In addition, because of the mixed land ownership patterns throughout the range of the herd, aligning federal subsistence caribou hunting bag limits with present state caribou hunting bag limits will further reduce confusion and risk of enforcement actions.

Opportunity Provided by State: Present state hunting season and bag limits throughout most of the range of the Mulchatna Caribou Herd are August 1 through March 15, and 2 caribou (no more than one bull may be taken, of which no more than one caribou may be taken from August

1 through January 31). The exception to this is the area of eastern Unit 17A and southwestern Unit 17C (that area north of the Nushagak Peninsula) which may be opened by Emergency Order authority with a bag limit of one caribou. Recent action by the Alaska Board of Game closed caribou hunting by nonresidents throughout the range of the herd to assure a subsistence preference for Alaska residents.

Conservation Issues: Hunting season dates and bag limit were liberalized as the Mulchatna Caribou Herd grew in size and expanded in range. Similarly, reductions in season and bag limits are necessary to manage declines in this herd. While all the reasons for the herd's growth and subsequent decline are not well understood, reductions in take have been recognized as essential to reduce the rate of decline.

A regulation change at this time that would result in additional caribou taken during late spring (i.e. in Unit 18) would be inconsistent with other management actions undertaken for this herd. There is no need to separate the caribou season north of the Kuskokwim River in Unit 19A since this area is generally unoccupied by caribou.

A regulation change at this time to reduce the number of caribou allowed in those areas with present larger bag limits, as well as to establish uniform bag limits throughout the range of this herd, is warranted.

Enforcement Issues: Proposal WP10-51 changes in season dates for federal public lands would open the same but would end two weeks later than the state caribou hunting season. Proposal WP10-53 changes of federal subsistence bag limits for Mulchatna caribou on federal public land would be consistent with present state caribou bag limits. Federal public lands occur throughout a great part of the herd's range and are scattered and not contiguous (especially in Units 9B, 17B and C, and 19A and B). In addition, much of the area around villages in Unit 18 is under state regulations. It may be difficult for federally qualified subsistence users to easily discern land ownership from the ground and be sure they are hunting on federal land.

Other Comments: As written, the proposal appears to be a substantial reduction in hunting opportunity (because of the shortened season length from most of the herd's range). However, the realistic effect is that the proposal will likely result in additional harvest because the season would be extended in Unit 18, where the bulk of the reported harvest from the herd has occurred for the past several years under existing season dates.

Recommendation: Support WP10-51 with modification to amend the closing date to align with state hunting season on March 15. Support WP10-53, which aligns federal subsistence bag limits for caribou hunting on federal public lands throughout most of the range of the Mulchatna Caribou Herd.

WRITTEN PUBLIC COMMENTS

Support Proposals 51/53. In addition, we recommend that a letter be sent to the Office of Subsistence Management requesting them to clearly state in the Federal subsistence regulations that Native allotment, Native corporation lands and private property are not included in the Federal Subsistence Season. A cautionary message should be included in the regulations with an "*" for each unit where subsistence users will see the notice.

Lake Clark National Park Subsistence Resource Commission

WP10-52 Executive Summary	
General Description	Proposal WP10-52, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9E be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands. Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: King Salmon River (near Egegik), Egegik River, Ugashik River, Dog Salmon River, King Salmon River (near Pilot Point), Cinder River, and the Meshik River.
Proposed Regulation	**Unit 9E—Moose** *Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31.* — *Aug. 20–Sept. 20*, *Dec. 1–Jan. 31* *Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.*
OSM Conclusion	**Defer**
Bristol Bay Regional Council Recommendation	**Tabled**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-52

ISSUES

Proposal WP10-52, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests that non-Federally qualified users hunting moose in Unit 9E be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands.

Note: Clarification was provided by the proponent as to which specific waterways should be considered in this proposal after the proposal was published and distributed for public comment. The proponent would like the two mile buffer to be applied along the following waterways: King Salmon River (near Egegik), Egegik River, Ugashik River, Dog Salmon River, King Salmon River (near Pilot Point), Cinder River, and the Meshik River.

DISCUSSION

The Bristol Bay Subsistence Regional Advisory Council (Council) requests that Federal public lands within a two-mile buffer on both sides of waterways in Unit 9E be closed to non-Federally qualified users to help the moose population remain stable and possibly even increase. The proponent believes that too many moose are harvested within drainages by hunters using boats and local people have voiced concern that there is too much competition with nonlocal moose hunters.

Existing Federal Regulation

Units 9E—Moose

Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31.	*Aug. 20–Sept. 20* *Dec. 1–Jan. 31*

Proposed Federal Regulation

Unit 9E—Moose

Unit 9E—1bull; however only antlered bulls may be taken Dec. 1– Jan. 31.	*Aug. 20–Sept. 20* *Dec. 1–Jan. 31*
Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.	

Existing State Regulations

Unit 9E—Moose

Residents: One bull with spike-fork or 50-inch or antlers with 3 or more brow tines at least one side	*Sept. 10–Sept. 20*
OR, One antlered bull	*Dec. 1–Jan. 20*

Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tine on at least one side	*Sept. 10–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 50% of Unit 9E and consist of Becharof and Alaska Peninsula National Wildlife Refuges (45%) and Aniakchak National Monument and Preserve (5%) (**Map 1**).

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for hunting moose in Units 9A, 9B, 9C, and 9E.

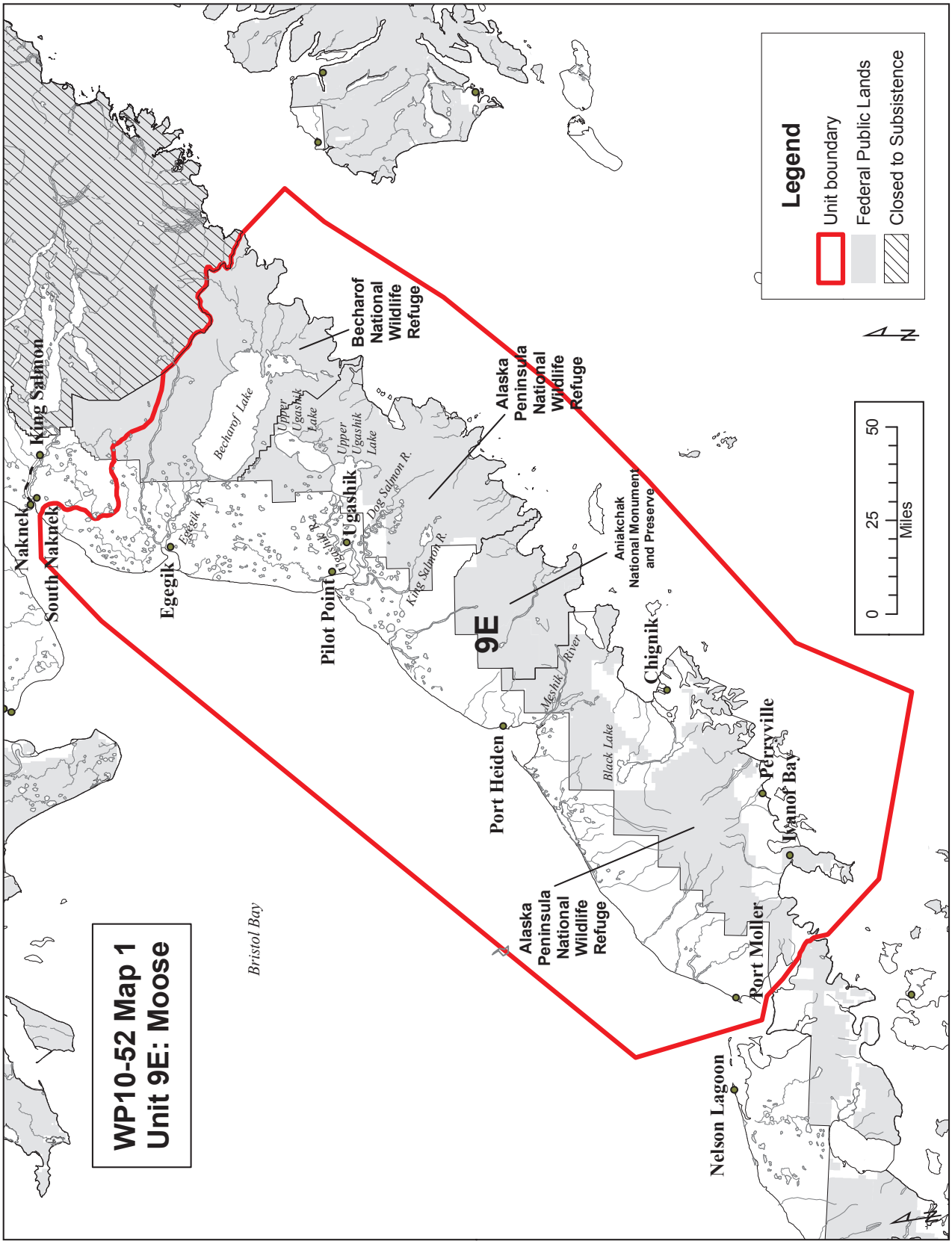
Regulatory History

Since 1990, moose hunting on Federal public lands within Unit 9E has been for bulls only and the number of hunting days allowed has increased for both fall and winter hunts. In 1999, the Federal Subsistence Board (Board) adopted Proposal WP99-36 with modification to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 20 to provide additional subsistence opportunities primarily for local residents. In 2000, the Board adopted Proposal WP00-37 to expand the fall hunting season from Sept. 1–Sept. 20 to Aug. 20–Sept. 20. In 2007, the board adopted Proposal WP07-24 with modification to extend the winter season from Dec. 1–Jan. 20 to Dec. 1–Jan. 31 to provide additional subsistence hunting opportunity.

The Board has considered four proposals and two Special Actions (which were deferred and made into one proposal) that requested the closure of Federal public lands in Unit 9E for moose harvest. All past closure requests were opposed by the Board due to a healthy moose population and existing subsistence opportunity.

Wildlife Proposals WP94-30 and WP95-26 requested the closure of select Federal public lands in Unit 9E to prevent non-Federally qualified users from interfering with the migration of moose and caribou. The Board did not support the closure, believing that the closure of Federal public lands was not necessary to conserve healthy populations or to provide adequate subsistence opportunities.

Special Actions WSA97-09 and WSA98-12 requested the closure of Federal public lands in Unit 9E to moose and caribou hunting, except by Federally qualified subsistence users. In 1998, the Board deferred action on a Special Action requests to close the area to non-Federally qualified users until a subcommittee could meet and discuss moose management recommendations. Workgroup recommendations for moose were forwarded to the Bristol Bay Subsistence Regional Advisory Council as Wildlife Proposal WP99-36. This proposal would have closed Federal public lands to moose hunting on the Pacific side of the Alaska Peninsula from Stepovak Bay to Cape Igvak to non-Federally qualified hunters. The Board deferred this proposal until additional moose surveys could be conducted to determine the status of the moose population. Surveys conducted by the Alaska Peninsula National Wildlife Refuge indicated a healthy moose population. The Board adopted Proposal WP99-36 with modification to not close Federal public lands to non-qualified moose hunters, but to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 20 to coincide with State regulation and provide additional subsistence opportunity.


WP10-52 Map 1
Unit 9E: Moose
Legend
Unit boundary
Federal Public Lands
Closed to Subsistence
0
25
50
Miles
N
Bristol Bay
Naknek
South Naknek
King Salmon
Egegik
Egegik R.
Becharof Lake
Upper Ugashik Lake
Ugashik
Ugashik R.
Pilot Point
Dog Salmon R.
King Salmon R.
Becharof National Wildlife Refuge
Alaska Peninsula National Wildlife Refuge
Aniakchak National Monument and Preserve
9E
Port Heiden
Meshik River
Black Lake
Chignik
Perryville
Ivanof Bay
Port Moller
Nelson Lagoon
Alaska Peninsula National Wildlife Refuge

In May 2006, the Board considered Proposal WP06-26, which requested Federal public lands in Unit 9E be closed to the taking of moose except by Federally qualified subsistence users. However the Board and Bristol Bay Council opposed the proposal citing that the most recent census information did not justify the closure.

Biological Background

In Unit 9, moose on the Alaska Peninsula expanded their range southwestward accompanied by a dramatic population increase until the 1960s when the population peaked. The moose population began to decline thereafter which was attributed to range damage from over-browsing. By the early 1980s, in some parts of the unit, such as 9E, moose densities were 60% below peak levels despite improvements in range condition and a series of hunting restrictions that began in 1974.

The primary limiting factors for the moose populations in the Bristol Bay area are brown bear predation on neonatal moose, low calf recruitment, and lack of quality habitat. Bear:moose ratios in Unit 9 ranged from >1:1 to 1:10 and are higher than anywhere else within the indigenous range of moose (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) density; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004). Overall, management objectives for bull:cow ratios and population level are being maintained in Unit 9E, a moderate density area (Butler 2009, pers. comm.).

Results of fall sex and age composition surveys in the central portion of 9E are generally above management objectives (Butler 2008) (**Table 1**). During most years, bull:cow ratios have been above management objectives, but in 2005 the ratio was abnormally low at 25 bulls:100 cows. However, the calf:cow ratio was one of the highest ratios observed during the past 25 years at 22 calves:100 cows (Butler 2008).

Table1. Moose composition counts in Unit 9E, 1998-2005 (Butler 2008).

Year	Bulls: 100 Cows	Calves: 100 Cows
1998[a]	65	20
1999	48	10
2000	----------No data----------	
2001	48	11
2002[a]	74	20
2003[a]	46	10
2004	----------No data----------	
2005[a]	25	22

[a] Includes some surveys by FWS

Survey data from the central portion of Unit 9E indicates that the density of moose in 2003/04, 2004/05, and 2005/06 was about 0.12 moose / mi^2 (0.323 moose / km^2), 0.10 moose / mi^2 (0.266 moose / km^2), 0.09 moose / mi^2 (0.227 moose / km^2), respectively, for 3 different areas (Nielson 2008). Survey data from 1983, which was within some of the same area as the 2003–2005 survey areas, may have been at 1.807 moose / mi^2 (0.698 moose / km^2). One possible explanation for lower moose densities compared to those observed during 1983 is that moose in 9E have stabilized at lower densities that are within the limits of local habitat conditions (Watts 2009, pers. comm.).

Survey data in Unit 9E is sparse. The lack of snow cover has prevented any recent surveys (Butler 2008). In addition, much of the survey data is difficult to compare for trend analyses due to variation in survey methods, survey area, and amount of effort (Nielson 2008, Watts 2009, pers. comm.).

Harvest History

Between 2000–2008, reported moose harvest in Unit 9E has remained relatively stable with a slight decrease (**Figure 1**). Most of the reported moose harvested has been by nonresidents. Between 2000–2008, annual harvest has ranged from 40–72 for nonresidents, 3–20 for non-Federally qualified users, and 4–22 for Federally qualified subsistence users (ADF&G 2009). Nonresident success is higher than other groups because many employed guides and most flew out to hunt, which provides better access to areas where the moose are located (Butler 2008). The average reported hunter success between 2000–2008 was 62% for nonresidents, 34% for non-Federally qualified residents, and 33% for Federally qualified subsistence users (ADF&G 2009).

The reported number of local moose hunters and moose harvest generally indicated that the amount of effort is related to the amount of harvest (**Figure 2**): The reduced harvests since 2000 are not thought to reflect moose population changes, but rather that hunter effort has decreased (Butler 2004, 2008).

Between 2000–2006, about 89% of the reported harvest has occurred during the fall season for Unit 9. Reported harvest during winter has remained low and ranged from 7–15% of the total harvest (Butler 2008).

Household surveys conducted in Alaska Peninsula communities from 1994–1997 indicate low compliance with the State harvest ticket program. This is not uncommon in rural Alaska (Andersen and Alexander 1992). The surveys generally indicate higher harvest levels (Krieg et al. 1998). For instance, in Unit 9E for regulatory year 1994/95, 1995/96, and 1996/ 97, the amount of moose harvest based on harvest ticket returns was 6, 1, and 3, respectively. Household surveys estimated that 48 moose were harvested for 1994/95 and 1995/96 and 21 for 1996/97 in Unit 9E (Krieg et al. 1998).

Household survey data indicate that Unit 9E Bristol Bay residents from the Chigniks, Ivanoff Bay, and Perryville harvested all their moose (39) on Federal public lands during regulatory years 1995/96 and 1996/97 (Krieg et al. 1998). Depending on the community, Egegik, Pilot Point, Port Heiden, and Ugashik residents harvested from 0 to 50% of their moose (6 total) on Federal public lands for both regulatory years (Krieg et al. 1998).

Discussions by the Council indicate that local residents are having difficulty harvesting enough moose to meet their subsistence needs. This difficulty is compounded by the reduced availability of caribou due to the decline of the Northern Alaska Peninsula Caribou Herd. Currently, there is no Federal or State season for caribou in Unit 9E.

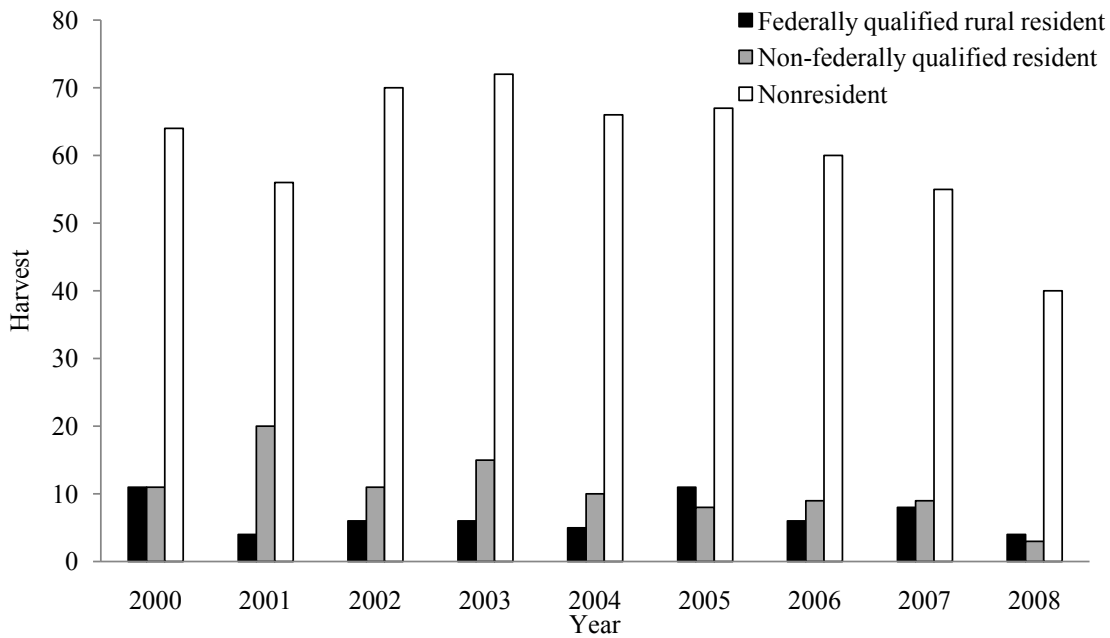


Figure 1. Unit 9E reported moose harvest by Federally qualified rural resident, Non-federally qualified resident, and nonresident hunters, 2000-2008 (ADF&G 2009).

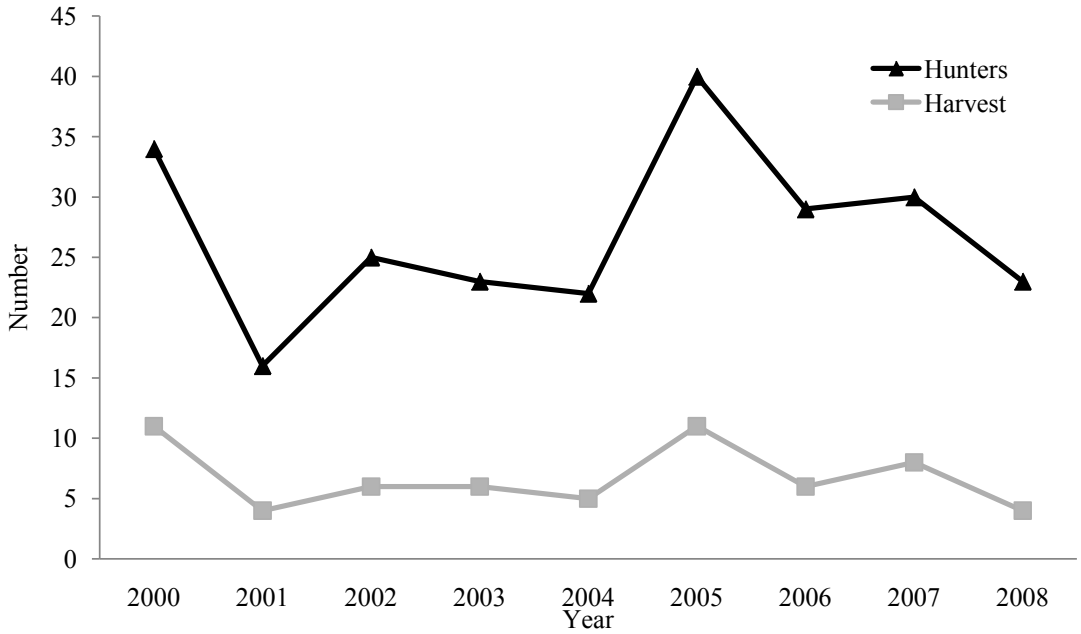


Figure 2. Unit 9E reported Federally qualified rural resident moose hunters and harvest, 2000-2008 (ADF&G 2009).

Other Alternatives Considered

The Federal Subsistence Board *Policy on Closures* states "the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users" (FSB 2007). An alternative management option to avoid the closure of Federal public lands is to consider longer seasons for Federally qualified subsistence users. Extending the Federal season may allow local residents to harvest more bulls during a time that bulls are near peak rut and more easily found. This idea was brought up by the chairman for the Western Interior Regional Advisory Council during the April 30, 2008 Federal Subsistence Board Public Meeting. The Federal season in August can be considered too early in the year and at a time when bulls are difficult to locate. Allowing more opportunity for a bull to be harvested may persuade locals against illegal cow harvest. However this option is not supported at this time since many local hunters in this region may not prefer to harvest bull moose late in the rut and the local concern is over low moose populations (FSB 2008). Further study and discussion would need to occur to determine if this is a viable option to help locals increase harvest of bull moose and still manage for a healthy population.

Effects of the Proposal

If adopted, this proposal would implement a closure of Federal public lands to non-Federally qualified moose hunters within a two mile buffer along waterways which may reduce competition. Between 2000 and 2008, an average of 131 nonlocal hunters took an average of 72 moose per year (**Table 2**). It is possible that competition for locals would be reduced by a portion of the number of past annual nonlocal hunter averages. However, it is difficult to determine how much competition would be reduced because many nonlocals hunt with the use of airplanes and can access areas where most locals do not hunt.

There are no Federal public lands within the immediate vicinity of Egegik, Pilot Point, Ugashik, and Port Heiden, the villages near the selected waterways. All Federal public lands are to the east and all selected waterways generally drain to the west. Therefore, only the upper stretches of the selected waterways are surrounded by Federal public lands (**Map 1**). These upper stretches can often become difficult to travel by boat due to low water levels. Therefore, a closure of Federal public lands within two miles of selected waterways may lead to some areas not being hunted at all by local and nonlocal hunters.

Determining a two-mile boundary from selected waterways would be difficult for hunters and law enforcement. Even a global positioning system (GPS) unit would do little to help determine a two-mile boundary in meandering and braided river systems that often change location from year to year. In addition, the State has jurisdiction along rivers up to the ordinary high water mark, so moose harvested below the ordinary high water mark would continue to be allowed under State of Alaska regulations.

Federally qualified subsistence users may be affected through a reduction in competition with nonlocal hunters. Non-Federally qualified users would be affected by having to hunt only on State or private lands within two miles of selected waterways. Therefore, some non-Federally qualified users may be deterred from hunting moose in Unit 9E. It would be up to all moose hunters to determine where Federal public lands are located to ensure compliance with State and Federal regulations.

OSM CONCLUSION

Defer Proposal WP10-52 pending the outcome of the Unit 9 working group.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL

Tabled Proposal WP10-52 to a time definite. With OSM support, ADF&G will form a working group to address the season dates, hunting corridors, and Federal land closure in Unit 9, and to address the issue of providing subsistence opportunities for rural residents of the Bristol Bay region. The working group will also engage in discussions regarding wolf and bear management to protect moose and caribou populations. The working group will present its results and recommendation to the Council at its September 2010 fall meeting in Dillingham at which time the proposal will be taken off the table for Council action.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-52

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-45, 46, 47, 48, 49, 50, 52
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within two mile buffer on either side of waterways to hunting of moose by non-federally qualified users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a 2-mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified hunters.

Other Comments: WP10-45 and 46 were proposals deferred by the Federal Subsistence Board (Board) to allow time for the formation of a Unit 9 moose workgroup tasked to analyze and discuss available information and provide recommendations and guidance for both the RAC and the Board. The Unit 9 moose work group will not fulfill the directives of the Board prior to the scheduled May 18 through 20, 2010 Board meeting. The Bristol Bay Regional Advisory Council, Alaska Department of Fish and Game, and the Office of Subsistence Management concur these proposals should be deferred until the Unit 9 moose work group successfully completes the assigned tasks.

Recommendation: Defer until the Unit 9 moose workgroup completes tasks assigned by the Department and the Federal Subsistence Board.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-52**.** There is no biological evidence to indicate that this measure is required to insure subsistence hunting opportunities or that the health of the moose population is in jeopardy due to current use patterns. There is no measurable conservation issue which will be addresses by adopting these proposals (WP10-47, 48, and 52). Opportunity for qualified rural residence has been substantially increased in the last decade (78 days). The current draft OSM staff analysis indicates that these proposals are inconsistent with the Federal Subsistence Board policy on closures.

Joe Klutsch, Alaska Professional Hunters Association

WP10-54 Executive Summary	
General Description	Proposal WP10-54 requests establishing community harvest quotas on the Kuskokwim River segment of Unit 18 and a reduction of the pool of Federally qualified users that are eligible to hunt moose in the Kuskokwim drainage portion of Unit 18, hereafter referred to as the moratorium area. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**Unit 18—Moose** *Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.* — *No Federal open season* *Federal public lands are closed to the taking of moose except to eligible rural residents.* ***Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag may hunt in this area—No individual harvest limit, but a village harvest quota. The harvest quota will be determined by the Yukon Delta National Wildlife Refuge manager.**** *NOTE: The original proposal in the Proposal Book requested: "Establish community harvest quotas on the Kuskokwim segment of Unit 18 moose with language to be determined by FWS staff." This language in the proposed regulation was developed with Refuge staff after the proposal book was published.
OSM Conclusion	**Support** Proposal WP10-54 **with modification** to include the results of the Section 804 analysis. **Unit 18—Moose** *Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.* — *No Federal open season* *Federal public lands are closed to the taking of moose except to eligible rural residents.*

continued on next page

WP10-54 Executive Summary *(continued)*	
	Only residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag may hunt in this area.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-54 **with modification** as described in the OSM Conclusion with further modification by the Council: 1. Establish a one antlered-bull season September 1–5 by joint Federal or State registration permits. 2. The Refuge Manager in consultation with AD&G Wildlife Conservation is authorized to set the harvest quota and extend the season by up to five days if harvest quota has not been met.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See the full comments following the analysis.*
ADF&G Comments	**Support** Proposal WP10-54 **with modification** to establish a season on Federal public lands that matches the State season with State registration permit and harvest quota: September 1 through September 10 season by registration permit; bag limit of 1 antlered bull; harvest quota based on moose population estimate in the hunt area and announced as a permit hunt condition; hunt reports required within 3 days of harvest to allow quota management. *See full comments following the analysis.*
Written Public Comments	**None**

STAFF ANALYSIS
WP10-54

ISSUES

Proposal WP10-54, submitted by the Yukon Delta National Wildlife Refuge (Refuge), requests establishing community harvest quotas on the Kuskokwim River segment of Unit 18 and a reduction of the pool of Federally qualified users that are eligible to hunt moose in the Kuskokwim drainage portion of Unit 18, hereafter referred to as the moratorium area.

DISCUSSION

In submitting Proposal WP10-54, the proponent hopes to limit the distribution of Federal permits to harvest moose in the moratorium area due to conservation concerns for the moose population. The proponent does not request an open hunting season for moose, but is anticipating a hunt in the future.

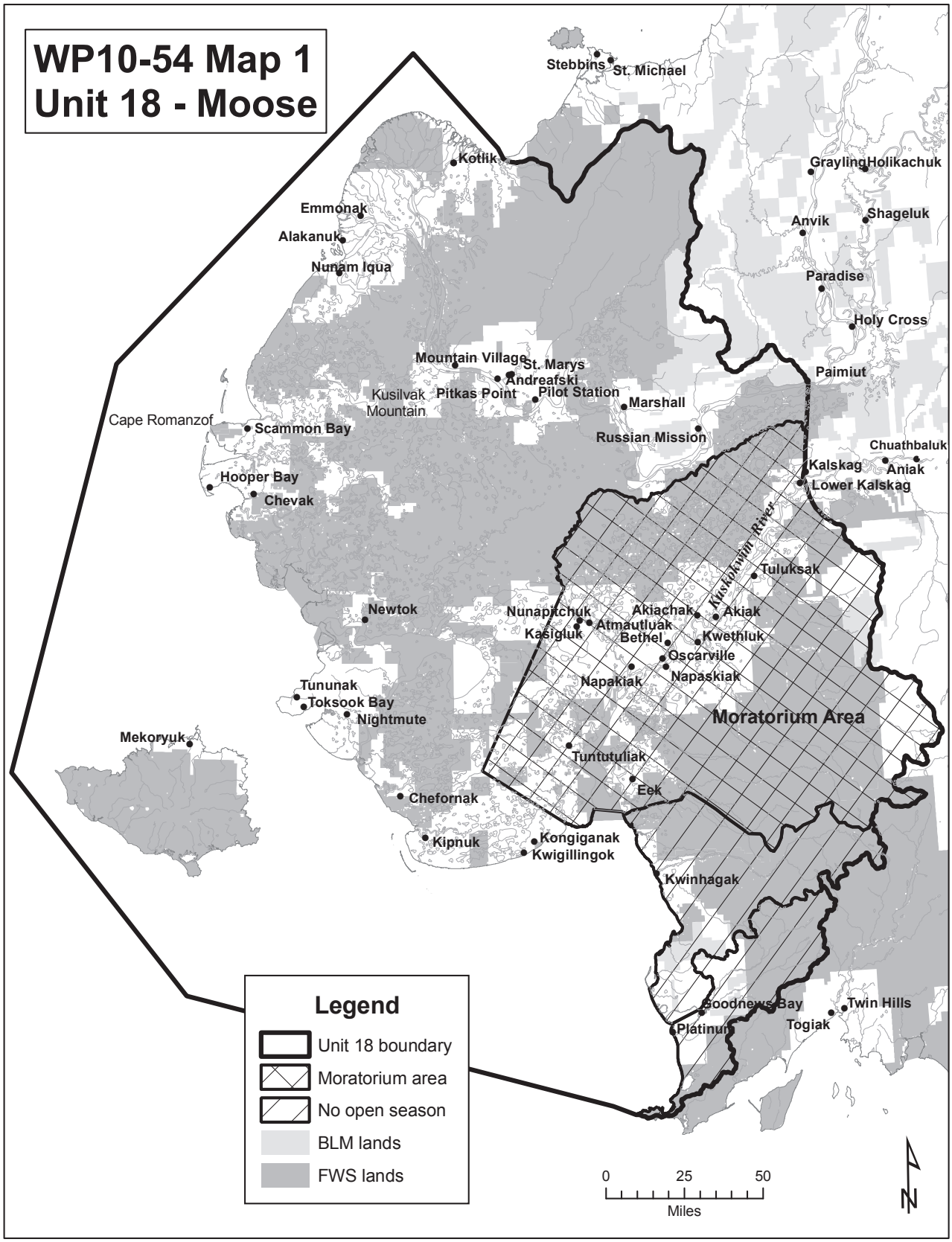
Because this proposal requests that the pool of Federally qualified users be reduced, it requires application of ANILCA Section 804 criteria to establish priority among those with a positive customary and traditional use determination to harvest moose in the moratorium area. The Board closed the moratorium area to non-Federally qualified users in 2004. The proponent anticipates Federal public lands in the moratorium area re-opening to moose hunting at some point in the future. When this occurs, there will be a small number of moose available to harvest relative to the large number of subsistence users with a customary and traditional use determination to harvest moose (42 communities including Bethel). The potential for harvest to exceed the harvestable surplus is considered high. A Section 804 analysis is based on the application of three criteria, including customary and direct dependence upon the populations as the mainstay of livelihood, local residency, and the availability of alternative resources; application of this analysis is necessary to determine the Federally qualified users eligible to harvest moose in the moratorium area.

The moratorium area consists of the area drained by the lower Kuskokwim River and its tributaries in Unit 18, and is defined as that portion of Unit 18 east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, to the easternmost point of Takslesluk Lake along the Kuskokwim River drainage boundary to the Unit 18 border, and then north of and including the Eek River drainage (**Map 1**).[1]

Existing Federal Regulation

Unit 18—Moose *Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border, and north of (and including) the Eek River drainage.*	*No Federal open season*

[1] On November 14 the Alaska Board of Game adopted a proposal to change the boundary for the lower Kuskokwim area registration moose hunt. OSM has received a similar proposal and is scheduled to act on that proposal during the current wildlife cycle.


WP10-54 Map 1
Unit 18 - Moose
Stebbins
St. Michael
Kotlik
Grayling
Holikachuk
Emmonak
Alakanuk
Nunam Iqua
Anvik
Shageluk
Paradise
Holy Cross
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Paimiut
Kusilvak Mountain
Cape Romanzof
Scammon Bay
Russian Mission
Chuathbaluk
Kalskag
Aniak
Lower Kalskag
Hooper Bay
Chevak
Kuskokwim River
Tuluksak
Newtok
Nunapitchuk
Akiachak
Akiak
Atmautluak
Kasigluk
Bethel
Kwethluk
Oscarville
Napaskiak
Napakiak
Tununak
Toksook Bay
Nightmute
Moratorium Area
Mekoryuk
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Twin Hills
Togiak
Platinum
Legend
Unit 18 boundary
Moratorium area
No open season
BLM lands
FWS lands
0
25
50
Miles
N

Federal public lands are closed to the taking of moose by all users.

Proposed Federal Regulation

Unit 18—Moose

Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.	*No Federal open season*
Federal public lands are closed to the taking of moose ~~by all users~~ except ***by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag—No individual harvest limit, but a village harvest quota. The harvest quota will be determined by the Yukon Delta National Wildlife Refuge manager.****	

*NOTE: The original proposal in the Proposal Book requested: "Establish community harvest quotas on the Kuskokwim segment of Unit 18 moose with language to be determined by FWS staff." The new language in the proposed regulation was developed with Refuge staff after the proposal book was published.

Existing State Regulation

Unit 18—Moose

Unit 18, that portion easterly of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border, and then north of and including the Eek River drainage.	***Sept. 1–Sept. 10***
One antlered bull by permit available in person at ADF&G in Bethel and villages within the hunt area from Aug. 1–Aug. 25.	

Extent of Federal Public Land

Federal public lands comprise 64% of Unit 18, of which 96% is managed by the U.S. Fish and Wildlife Service and 4% is managed by the Bureau of Land Management. (**Map 1**). The U.S. Fish and Wildlife Service lands are located in the Yukon Delta National Wildlife Refuge. The Kuskokwim River main corridor, within the moratorium area, is comprised primarily of privately-owned, State-managed lands.

Customary and Traditional Use Determinations

Residents of Unit 18 and Upper Kalskag have a customary and traditional use determination for harvesting moose in Unit 18. In addition, residents of Unit 18, Upper Kalskag, Aniak, and Chuathbaluk have a customary and traditional use determination for harvesting moose in the Kuskokwim drainage upstream of (but excluding) the Tuluksak River drainage.

Regulatory History

Following a 2003 Alaska Board of Game action that established a five-year moratorium on moose hunting under State regulations for the moratorium area, described in this proposal, Federal Proposal WP04-51 also requested a five-year moratorium on Federal public lands for the moratorium area. Proposal WP04-51 was adopted by the Federal Subsistence Board in April 2004. The moratorium on moose hunting was established to promote colonization of underutilized moose habitat.

The Lower Kuskokwim Fish and Game Advisory Committee worked with the ADF&G, U.S. Fish and Wildlife, and area residents to consider alternative approaches to address moose population issues in the area prior to initiating a moratorium on hunting. The preferred solution, modeled after successful efforts on the Yukon River below Mountain Village, was to close the season for five years, or until the population grew to 1,000 moose. The population objective of 1,000 moose was established for an area that includes only those survey units along the Kuskokwim River corridor. The long-term objective set by the State is to reach 2,000 moose in this survey unit. Once the moose population is established, an initial bull only season would be opened. In order for the moratorium to succeed, it was essential that local residents understood and were committed to this five-year strategy. Considerable efforts have been made to communicate the growth potential of the affected moose population to the local communities. The moratorium was supported by resolutions made by the majority of the affected communities. A detailed history of Federal and State moose hunting regulations in the moratorium area from 1980 to the present is in **Appendix A**.

State Management Objectives for the Moratorium Area of Unit 18 (Perry 2008):

- Manage the lower Kuskokwim River population to increase above its estimated size of 75-250 moose to at least 2,000 moose.
- Manage to maintain the current age and sex structure with a minimum of 30 bulls:100 cows.
- Conduct seasonal sex and age composition surveys as weather allows.
- Conduct winter censuses and recruitment surveys in the established survey area on a rotation basis.
- Conduct fall and/or winter trend count surveys to determine population trends.
- Conduct hunts consistent with population goals.
- Improve knowledge of and compliance with harvest reporting requirements and hunting regulations through education and incentives.
- Address user conflicts through education and hunter contacts.

<u>Recent Events that Prompted this Request</u>

At its March 2009 meeting, the Alaska Board of Game established a registration hunt (RM615) in response to the five-year moratorium that ended on June 30, 2009. The 2009 State season was Sept.

1–Sept. 10 with a one antlered bull harvest limit by registration permit and a total harvest quota of 75 antlered bull moose. At its fall 2009 meeting, the Yukon-Kuskokwim Delta Regional Advisory Council did not opt to submit a proposal to open the moose season on the Federal public lands in the moratorium area, and the Federal public lands in the moratorium area have remained closed to the harvest of moose by non-Federally qualified users.

Biological Background

Calving data were obtained from collared moose along the Kwethluk River during May and June of 2007 (FWS 2008). Thirty-four out of a possible thirty-nine cows of breeding age gave birth (87%). A total of 52 calves (14 sets of twins, 2 sets of triplets, and 18 singles) were born to the 34 cow moose, the multiple birth rate (twins + triplets) was 47%. Cows with calves were resurveyed in late December 2007 to assess calf survival rate. The six-month calf survival rate for the affected moose population was 62% (FWS 2008). These values indicate the healthy condition of the pregnant cow moose in late spring prior to calving in early May and can be indicative of good habitat, mild winter conditions, and low predation rates.

In November 2007 moose composition counts were conducted along the lower Kuskokwim River from Lower Kalskag to Bethel and along the Kwethluk River from Elbow Mountain to the village of Kwethluk (FWS 2008). These areas had a bull:cow ratio of 98 bulls per 100 cows and calf:cow ratio of 73 calves per 100 cows. These values are indicative of good reproduction and calf survival.

In January 2008, a survey conducted along the lower Kuskokwim drainage survey block by the U.S. Fish and Wildlife Service and ADF&G estimated a population of 668 moose. It was hypothesized by the U.S. Fish and Wildlife Service and ADF&G staff that if lower Kuskokwim drainage tributaries were included with the survey block count that there could be about 1,002 moose along the lower Kuskokwim drainage and its tributaries. In 2009 environmental conditions were not adequate to conduct surveys along lower Kuskokwim drainage tributaries, so an accurate population estimate was not acquired.

Results from January 2008 population surveys revealed that the current annual growth rate is 27%–30% and the estimated population density is 0.5 moose/mi^2. This is a significant increase from the last survey conducted in 2004 that produced an observed total of less than 70 moose in the moratorium area. It is projected that if the moratorium could be extended (through June 30, 2010), the resulting population density could reach as high as 1.0 moose/mi^2 (Doolittle 2008, pers. comm.). Refuge biologists believe that the moose habitat along the Kuskokwim River drainage, including the Kasaralik, Tuluksak, Kwethluk, and Eek river drainages, is capable of supporting substantially more animals than currently reside in the area (Doolittle 2008, pers. comm.). Standing browse does not appear to be limiting the growth potential of the moose population. Moose browse surveys have not been conducted in past years within the affected area, thus there are no existing habitat data at this time. However, the Yukon Delta National Wildlife Refuge conducted surveys of the willow species along the Kwethluk River in the summer of 2009 (results are pending) and will conduct further surveys in the summer of 2010 (Doolittle 2009, pers. comm.). Browse surveys will facilitate analysis of the impacts this moose population is having on habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse.

Based on the actual survey and the tributary drainage estimate, the U.S. Fish and Wildlife Service and ADF&G set a potential harvest goal of 75 moose for the entire closed area, which included Federal public lands (FWS 2008). However, ADF&G chose not to reduce the harvest quota when Federal public lands remained closed to hunting. The 75 moose quota was surpassed and 110 moose were reported harvested during the State September 2009 hunting season (Doolittle 2009, pers. comm.).

Section 804 Analysis

Section 804 of ANILCA mandates that the taking on Federal public lands of fish and wildlife for nonwasteful subsistence uses shall be accorded priority over the taking on such lands of fish and wildlife for other purposes. Section 804 further requires that whenever it is necessary to restrict the taking of populations of fish and wildlife on such lands for subsistence uses in order to protect the continued viability of such populations, or to continue such uses, such a priority shall be implemented through appropriate limitations based on the application of three criteria, including customary and direct dependence upon the populations as the mainstay of livelihood, local residency, and the availability of alternative resources. A Section 804 analysis was developed for this proposal due to the small number of moose anticipated to be available for harvest and the large number of subsistence users with a customary and traditional use determination to harvest moose in the moratorium area of Unit 18.

There are 42 widely dispersed communities, roughly 20,000 people (ADCCED 2009), included in the customary and traditional use determination for moose in the moratorium area (presented in order from the Yukon drainage, the coastal area, and the Kuskokwim drainage): Russian Mission, Marshall, Pilot Station, St. Marys, Pitkas Point, Mountain Village, Kotlik, Emmonak, Alakanuk, Nunam Iqua (formerly Sheldon Point), Scammon Bay, Hooper Bay, Chevak, Newtok, Tununak, Toksook Bay, Nightmute, Mekoryuk, Chefornak, Kipnuk, Kwigillingok, Kongiganak, Platinum, Goodnews Bay, Quinhagak,[2] Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Bethel, Oscarville, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, Upper Kalskag,[3] Aniak, and Chuathbaluk.

Fourteen of these communities lie within the area that is the focus of this proposal: Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, and Lower Kalskag. The following paragraphs address these criteria as they relate to each of the communities included in the customary and traditional use determination for moose in the moratorium area of Unit 18.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

Published subsistence studies of the communities that have a customary and traditional use determination for moose in the moratorium area of Unit 18 include: Andrews 1989, Andrews and Peterson 1983, Brelsford et al. 1987, Charnley 1983, Coffing 1991, Coffing et al. 2001, Krauthoufer and Koster 2007, Pete 1986, Stickney 1983, Wolfe and Ellanna 1983, and Wolfe et al. 1983. Several of these reports focus on communities outside of the moratorium area. Based on available information, which is limited, there is no evidence to suggest that residents of communities not located in the moratorium area except Upper Kalskag regularly travel to the moratorium area to harvest moose.

Another source of information is the ADF&G harvest ticket database. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (Andersen and Alexander 1992), and western Alaska is no exception. The harvest report rate to ADF&G as compared to estimates from household harvest surveys during the same or similar years ranges from none to 97% (ADF&G 2009b), which means the residents of some communities do not report their moose hunting activities to ADF&G. Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not

[2] Quinhagak is also known as Kwinhagak; the former refers to more traditional orthography, and the latter to more contemporary orthography. Orth (1971:788), the standard source for spellings of Alaska Place Names, uses the spelling of Quinhagak, while the Native Village uses Kwinhagak. Both spellings are used in this analysis: Quinhagak used in the text and Kwinhagak on the maps.
[3] For the purpose of this analysis, Kalskag is referred to as Upper Kalskag to distinguish it from Lower Kalskag.

always reflect the true level of harvest, but they may provide an idea about the relative participation and where hunting occurs by community. First, harvest ticket data for the time period 1983 to 2004 indicate that residents of all communities included in the customary and traditional use determination for moose in the moratorium area have reported hunting or harvesting moose in the moratorium area, except Newtok, Nightmute, Nunam Iqua, Oscarville, Pilot Station, Pitkas Point, and Platinum (ADF&G 2009a; **Table 1**).

According to the ADF&G database, the communities included in the customary and traditional use determination for moose in the moratorium area use not only this area to harvest moose, they also use a range of other units and areas, most commonly in Units 18, 19A, 19B, 19D, 21A, and 21E (ADF&G 2009a). An examination of hunting and harvest by community by unit indicates that between 1983 and 2004, less than 50% of the total number of hunters in 38 of the 42 communities used the moratorium area for hunting moose, while in 4 of the 42 communities, 50% or more of the total number of hunters used the moratorium area for hunting moose. Of these latter four communities, the percentage of hunters using the moratorium area is as follows: Kasigluk (52%), Kwethluk (55%), Nunapitchuk (70%), and Tuluksak (56%). All four of these communities are located within the boundaries of the moratorium area in Unit 18.

Moose harvested from the moratorium area represented between 29% and 44% of the total reported moose harvested by residents of these four communities 1983-2004, the highest of all 42 communities (ADF&G 2009a). The percentage of the total moose harvest represented by the moratorium area moose harvest for each of these communities is as follows: Kasigluk (29%), Kwethluk (31%), Nunapitchuk (44%), and Tuluksak (38%). The relatively low percentages (less than 50%) indicate that even the communities with the highest hunt participation rates in the moratorium area, as revealed through the permit database, harvested the majority of their moose from other areas. The lower harvests from the moratorium area are indicative of the lower number of moose in that area.

Between 1983 and 2004, the residents of the majority of communities in the customary and traditional use determination for moose in the moratorium area reported using the moratorium area to hunt moose less than 30% of the time (ADF&G 2009a). This applies to all of the communities located outside of the moratorium area boundary except Kongiganak, and to some communities located within the moratorium area including Bethel, Lower Kalskag, Napakiak, Napaskiak, and Oscarville.

Additional information from household harvest surveys estimate that in 1998, 58% of Akiachak's moose harvest was taken from the moratorium area; in 2003 Lower Kalskag reported 20%, and Upper Kalskag 9% (ADF&G 2009b). During 1980–1983 Tuluksak hunters used only the moratorium area to hunt moose (Andrews and Peterson 1983:27). In 1983 Nunapitchuk hunters generally went north and east of the village and the moratorium area because moose were not abundant nearer the community (Andrews 1989:327). In 1983 for Kwigillingok, no harvest of moose was mentioned historically or otherwise (Stickney 1983:253).

In summary, two sources of data provide information on community moose harvest levels, the ADF&G permit database and household harvest surveys. The review of these data and ethnographic research, referenced above, suggest that generally communities within the moratorium area rely on the moratorium area to hunt moose at a higher level than other communities.

2. Local Residency—Proximity to the Resource

As mentioned previously, 14 communities are located within the boundary of the moratorium area, from north to south: Lower Kalskag Tuluksak Akiak, Akiachak, Kwethluk, Bethel, Oscarville, Atmautluak, Nunapitchuk, Kasigluk, Napaskiak, Napakiak, Eek, and Tuntutuliak. Another community, Upper Kalskag, is in very close proximity, approximately two miles north of the moratorium area boundary in Unit 19A.

Table 1. The reported moose harvest in communities included in the customary and traditional use determination for moose in the moratorium area of Unit 18, cumulative 1983 - 2004 (ADF&G 2009a).

	Moratorium Area		Statewide	
Community	**Number of hunters**	**Number harvested**	**Number of hunters**	**Number harvested**
Akiachak	159	26	418	93
Akiak	43	6	149	39
Atmautluak	50	8	121	27
Bethel	788	81	4,765	1,941
Eek	111	23	226	105
Kasigluk	113	21	219	72
Kwethluk	283	40	513	130
Lower Kalskag	36	14	211	61
Napakiak	35	3	139	64
Napaskiak	45	12	270	117
Nunapitchuk	253	32	360	72
Oscarville	0	0	3	3
Tuluksak	128	26	228	69
Tuntutuliak	50	13	140	65
Alukanuk	13	4	481	306
Aniak	7	4	1,231	507
Chefornak	3	2	21	13
Chevak	4	1	220	62
Chuathbaluk	2	1	145	76
Emmonak	10	6	617	366
Goodnews Bay	1	0	21	3
Hooper Bay	5	2	318	117
Kipnuk	9	1	45	11
Kongiganak	43	13	130	52
Kotlik	2	1	359	179
Kwigillingok	13	3	58	23
Marshall	4	3	449	208
Mekoryuk	1	0	60	19
Mountain Village	1	1	1,052	597
Newtok	0	0	35	6
Nightmute	0	0	9	4
Nunam Iqua	0	0	0	0
Pilot Station	0	0	347	157
Pitkas Point	0	0	16	6
Platinum	0	0	3	3
Quinhagak	5	0	57	28
Russian Mission	4	1	519	287
Saint Marys	1	1	828	349
Scammon Bay	3	1	159	123
Toksook Bay	4	3	68	25
Tununak	7	1	44	5
Upper Kalskag	18	7	249	96

Bold = community located in the moratorium area of Unit 18.

Aniak and Chuathbaluk are located approximately 26 miles and 36 miles, respectively, upriver from Upper Kalskag in Unit 19A.

Three communities, Quinhagak, Goodnews Bay, and Platinum, are located near the mouth of the Kuskokwim River in Unit 18. Quinhagak is the closest of these three communities located approximately 20 miles south of the moratorium area boundary.

Kongiganak and Kwigillingok lie at the mouth of the Kuskokwim River on the Bering Sea coast within 25 miles of the moratorium boundary. In addition to Kongiganak and Kwigillingok, six other communities are located along the Bering Sea coast: Toksook Bay, Tununak, Hooper Bay, Scammon Bay, Nunam Iqua, and Alakanuk. Seven communities are located within 20 miles of the Bering Sea coast: Kipnuk, Chefornak, Nightmute, Newtok, Chevak, Emmonak, and Kotlik. The remaining six communities in the customary and traditional use determination for moose in the moratorium area lie along the Yukon River: Mountain Village, Pitkas Point, St. Marys, Pilot Station, Marshall, and Russian Mission.

3. Availability of Alternative Resources

All of the communities in the customary and traditional use determination for moose in the moratorium area in Unit 18 have subsistence-based economies. The wild resources used vary according to geographic location of the community and species availability. Caribou has been an important alternative resource to moose, although in recent years the availability of caribou has been in decline.

Residents of Unit 18 generally harvest moose, if available, close to home, and hunting in other areas generally only occurs when visiting relatives. Beginning in 2009, a moose season opened for 10 days in September on the State-managed lands in the moratorium area. The hunt was managed through a 75 bull moose harvest quota (FWS 2008). There are over 2,500 households in the moratorium area, thus, few of the hunters could have been successful (ADCED 2009; **Table 2**).

In close proximity to residents of the lower Yukon drainage, and Scammon Bay, Hooper Bay, and Chevak, there are alternatives for harvesting moose outside of the moratorium area. In the lower Yukon drainage there are one- to two-moose harvest limits, and fall and winter hunting seasons. Other communities located in Unit 18 along the Bering Sea coast are in the "remainder" area of Unit 18 and there is a one bull moose harvest limit, and fall and winter hunting seasons, although moose are scarce in most of the area. In proximity to communities south of the mouth of the Kuskokwim River, including Goodnews Bay and Platinum, there is a small quota of moose available to hunt in the Goodnews River drainage.

Moose hunting in the central Kuskokwim River area (in Unit 19A) is closed to residents of Unit 18 except residents of Tuluksak and Lower Kalskag, and the number of permits is limited. Upper Kalskag, Aniak, and Chuathbaluk are also eligible to hunt in Unit 19A.

For residents within the moratorium area, there are no differences in the availability of alternative resources because of the similarities of the communities and similarities of their subsistence harvests and uses.

Summary of Section 804 Analysis

While 42 communities are included in the customary and traditional use determination for moose in the moratorium area of Unit 18, the communities that are located in the moratorium area and Upper Kalskag have exhibited the highest level of dependence on and closest proximity to the moose population in the moratorium area. This finding is based on the total statewide hunting effort and harvest of moose in each

Table 2. The population of communities located within the moratorium area of Unit 18, 1990 and 2000, and number of households, 2000 (ADCED 2009).

Community	1990	2000	2000 Number of Households
Eek	254	280	76
Tuntutuliak	300	370	84
Nunapitchuk	378	466	105
Kasigluk	425	543	101
Atmautluak	258	294	60
Napakiak	318	353	90
Napaskiak	328	390	82
Oscarville	57	61	15
Bethel	4,674	5,471	1,741
Kwethluk	558	713	153
Akiachak	481	585	133
Akiak	285	309	76
Tuluksak	358	428	86
Lower Kalskag	291	267	66
Total	8,965	10,530	2,868

community and the percentage of the hunting effort and harvest of moose reported in the moratorium area. While the residents of communities that are in the moratorium area have not always reported that the majority of their hunting effort nor the majority of their harvest of moose took place in the moratorium area, their level of use in the moratorium area is highest of all Federally qualified users residing in 42 communities in most cases; the few exceptions are described above. In addition, most of the hunters living outside of the moratorium area have other moose populations available to them, in the lower Yukon drainage area of Unit 18, the remainder area of Unit 18, the Goodnews Bay drainage in Unit 18, and Unit 19A.

The residents of communities located within the boundary of the moratorium area and Upper Kalskag have exhibited the highest levels of reliance on the moose in the area. The distribution of permits to hunt moose on Federal public lands in the moratorium area should be restricted to the residents of the area and Upper Kalskag.

Distribution of Permits

The U.S. Fish and Wildlife Service, Yukon-Kuskokwim National Wildlife Refuge would be the Federal agency responsible for distributing Federal permits for the moose hunt in the moratorium area. The harvestable surplus is determined utilizing the results of aerial surveys and balancing the sex ratio by

using both bull and cow harvests as appropriate. The U.S. Fish and Wildlife Service would consult with ADF&G to determine the number of Federal permits to be distributed each year.

Effects of Proposal

This proposal does not include opening the Federal season for harvesting moose on Federal public lands in the moratorium area of Unit 18. If adopted, this proposal would have no effect on the moose population, subsistence uses, or nonsubsistence uses of moose until the season is opened. If this proposal is not adopted, there also would be no effects on the moose population, subsistence uses, or nonsubsistence uses of moose because there is no Federal open season.

In the future, when a Federal season is opened in the moratorium area, the pool of Federally qualified users would most likely be restricted by the application of the three criteria in ANILCA Section 804, due to the small number of moose anticipated to be available for harvest and the large number of subsistence users with a customary and traditional use determination to harvest moose.

OSM CONCLUSION

Support Proposal WP10-54 **with modification** to include the results of the Section 804 analysis.

The modification should read:

Unit 18—Moose	
Unit 18, that portion east of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.	*No Federal open season*
Federal public lands are closed to the taking of moose ~~by all users~~ except ***by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautluak, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag may hunt in this area.***	

Justification

In the future, when Federal public lands open to moose hunting in the moratorium area of Unit 18, it will be necessary to limit the distribution of Federal permits to harvest moose due to conservation concerns for the moose population. Adoption of this proposal as modified would be necessary to limit the pool of eligible users. Forty-two communities are included in the customary and traditional use determination for moose in the moratorium area. The Section 804 analysis determined that only residents of communities in the moratorium area and Upper Kalskag are most dependent on moose in the moratorium area. The Yukon Delta National Wildlife Refuge staff would work with residents of the eligible communities to determine how permits would be distributed within the communities.

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APPENDIX A

Federal Regulatory History

1990	Unit 18 Remainder, one bull	Sept. 1–Sept. 30 Dec. 20–Dec. 30
1991	Unit 18 Remainder, one antlered moose	Sept. 1–Sept. 30 Winter season to be announced
1992–1993	Unit 18 Remainder, one antlered moose Federal public lands closed to the taking of moose except to eligible rural residents	Sept. 1–Sept. 30 Winter season to be announced
1994–1995	Unit 18 Remainder, one antlered moose Unit 18 Remainder, one bull, evidence of sex required. A 10-day hunt will be opened by announcement sometime between Dec. 1 and Fed. 28. Federal public lands closed to the taking of moose except to eligible rural residents.	Aug. 25–Sept. 25 Winter season to be announced
1996–2003	Unit 18 Remainder, one antlered moose Unit 18 Remainder, one bull, evidence of sex required. A 10-day hunt will be opened by announcement sometime between Dec. 1 and Fed. 28. Federal public lands closed to the taking of moose except to eligible rural residents.	Sept. 1–Sept. 30 Winter season to be announced
2004–2009	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of (and including) the Eek River drainage. Federal public lands closed to the taking of moose except to eligible rural residents.	No open season

State Regulatory History—Resident

1980–1981	18 Remainder, one bull	Sept. 1-Dec. 31
1982–84	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Nov. 15-Dec. 31
1985–87	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Feb. 1-Feb. 10
1988–92	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Dec. 20-Dec. 30
1993–2003	18 Remainder, one bull, harvest ticket required	Sept. 1-Sept. 30 Winter season to be announced
2004–2008	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.	No open season
2009	Unit 18, lower Kuskokwim Closed Area, easterly of line from the mouth of the Ishkawik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim river drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.	Sept. 1–Sept. 10
	One antlered bull by permit available in person at ADF&G in Bethel and villages within the hunt area from Aug. 1–Aug. 25.	

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-54 **with modification** as described in the OSM Conclusion with further modification by the Council:

1. Establish a one antlered-bull season September 1–5 by joint Federal or State registration permits.

2. The Refuge Manager in consultation with AD&G Wildlife Conservation is authorized to set the harvest quota and extend the season by up to five days if harvest quota has not been met.

People would know that they would have to come back after the first five days to check-in with the Refuge Manager. This would allow all interested Federally qualified users to participate while protecting resource so it can continue to grow to its potential population numbers. There is a need for moose population surveys in the affected area. The Refuge staff needs to communicate with the village people.

It is the intent of the Council to submit a special action request to establish a moose harvest season and harvest limit for the moratorium area of Unit 18, depending on the Board's action on the proposal.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-54

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The DOI solicitor's advice to the ISC was that the portion of the Regional Council recommendation that requested a season and harvest limit for moose is beyond the scope of the original proposal. The ISC noted that the Regional Council was aware of this potential outcome during their deliberations and therefore voted to submit a temporary special action request if their recommendation was not supported in its entirety. This would allow the Board to address this special action request prior to the fall 2010 hunting season.

Comments WP10-54
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-54: This proposal establishes community harvest moose quotas for federal subsistence users within the Lower Kuskokwim hunt area in Unit 18.

Introduction: The Lower Kuskokwim hunt area in Unit 18 was closed to hunting for a period of 5 years to allow for population growth as moose expanded into previously unoccupied habitat associated with the Kuskokwim River drainage. During the 2009-2010 regulatory year, the Alaska Board of Game approved a registration permit hunt for residents only with a harvest quota of 75 moose based on population estimates of 1,000 moose in the hunt area. In November 2009, the Alaska Board of Game made no changes to the registration permit hunt based on hunter effort (approximately 1,100 applications) and total harvest (approximately 105 moose) during the first year the hunt was reopened. Continued hunting with low harvest quotas will allow harvest opportunity at the same time allowing herd growth and expansion.

Impact on Subsistence Users: Opening a federal subsistence registration permit hunt on federal public lands in the Lower Kuskokwim hunt are in Unit 18 allows federal subsistence users the opportunity to hunt moose in local areas rather than traveling long distances to the Yukon River drainage or the Middle Kuskokwim River. Approximately 1/3 of the moose population in the hunt area is on federal public lands, mostly of the tributaries of the Kuskokwim.

Opportunity Provided by State: In Unit 18, the State season in the Lower Kuskokwim River hunt area is September 1 through September 10 by registration permit hunt RM615. The bag limit is 1 antlered bull. Permits are available at Alaska Department of Fish and Game in Bethel and from village license vendors during August 1 through August 25. Harvest quota is based on moose population estimate and will be announced as a hunt condition on permit RM615. In 2009-2010 the harvest quota was 75 bulls.

Conservation Issues: Low harvests rates are sustainable based on the current minimum population size of 1,000 moose and will allow for future herd growth and expansion.

Enforcement Issues: Emergency closures based on achieving harvest quota make it difficult for federal subsistence hunters in the field to learn of these announcements.

Other Comments: Allocation of a community harvest quota by federal delegated officials will require coordination by state and federal managers to ensure that overharvest does not occur.

Recommendation: Support, with modification to establish a season on federal public lands that matches the state season with state registration permit and harvest quota: September 1 through September 10 season by registration permit; bag limit of 1 antlered bull; harvest quota based on moose population estimate in the hunt area and announced as a permit hunt condition; hunt reports required within 3 days of harvest to allow quota management. This approach minimizes confusion for hunters and law enforcement and recommends cooperative harvest quota management among state and federal managers. If adopted, this action would be effective in the seventh year since initial closure in the lower Kuskokwim hunt area and fulfills the original strategy supported by both state and federal managers of closing the area for 5 years or reaching 1,000 moose.

WP10-55 Executive Summary	
General Description	Proposal WP10-55 requests a prohibition on the possession or use of shot shells containing size T lead shot or smaller while hunting or trapping in Unit 18. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	*§__.26(n)(18)(iii)***(D)** ***In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.***
OSM Conclusion	**Support** Proposal WP10-55 w**ith modification** to provide clear, understandable regulatory wording. The modified regulation should read: *§__.26(n)(18)(iii)****(D) Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.***
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-55 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-55 **with modification**. The Department supports adoption of this proposal but, most importantly, urges that the final Federal regulation be modified to clarify that a person may not be in possession of shot shells containing lead shot less than or equal to .20” in diameter, including loose shot used in muzzleloading firearms, while taking game in Unit 18.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-55

ISSUES

Proposal WP10-55, submitted by the Yukon Delta National Wildlife Refuge, requests a prohibition on the possession or use of shot shells containing size T lead shot or smaller while hunting or trapping in Unit 18.

DISCUSSION

Two species of eider that inhabit Unit 18, the spectacled and Steller's eider, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size T lead shot (this is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting and tapping. The Federal Subsistence Management Program prohibition of the use of lead shot was implemented for Unit 18 for the periods February 27 to June 30, 2009 and November 12 to June 30, 2010 respectively based on Temporary Special Actions WSA 08-03 and WSA09-09.

Existing Federal Regulations

The following regulation is currently in place via Temporary Special Action (WSA09-09) through June 30, 2010:

> *In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.*

Proposed Federal Regulations

> *§__.26(n)(18)(iii)***(D)** ***In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot in muzzle loading firearms, is prohibited while hunting and trapping game.***

Existing State Regulations

The current State of Alaska regulation 5 AAC 92.080 (14) states:

> *Taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size T, 0.20 caliber (inches) or smaller, including loose shot used in muzzleloading firearms, and while in immediate personal possession of lead shot, is prohibited.*

This restriction includes the taking of game under hunting or trapping regulations.

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 64% of the Unit 18 and consist of 96% U.S. Fish and Wildlife Service (Yukon Delta National Wildlife Refuge) and 4% Bureau of Land Management lands.

Customary and Traditional Use Determinations

See the analysis for Temporary Special Action WSA09-09 (Appendix 1).

Regulatory History

See Appendix 1.

Current Events Involving Species

See Appendix 1.

Biological Background

See Appendix 1.

Effects of the Proposal

Adoption of the proposed restriction should provide conservation benefits to threatened spectacled and Steller's eiders and also to other waterfowl species, by reducing the possibility of ingesting lead shot and the resulting exposure to lead shot in the environment and its effects if ingested.

Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfowl with significant lead toxicity levels. Adoption of the proposal would facilitate continued cooperation with the community of Hooper Bay that originally requested the restriction of the Alaska Board of Game.

While steel shot shells are readily available for 12 gauge shotguns, steel shot shells for .410 gauge shotguns are harder to find and relatively expensive. The Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) noted challenges associated with getting .410 gauge steel shotgun shells before unanimously supported Special Action Request WSA09-09 (YKDRAC 2009).

There has been confusion about the current State and Federal regulatory wording. There is a need to clarify that size T shot is .20 caliber to help avoid possible confusion with size TTT shot. Prior to the March 2009 Council meeting ADF&G indicated that it would be submitting a proposal to the Alaska Board of Game to clarify the regulatory language (Cunning 2010, pers. comm.).

The Yukon Delta National Wildlife Refuge requested the following wording in Federal and State regulations to provide clear, understandable regulatory wording that does create unintended consequences (Sundown 2010, pers. comm.):

> *Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.*

The modified wording proposed by the refuge was presented to the Yukon-Kuskokwim Delta Federal Subsistence Regional Advisory Council at their March meeting in Bethel. The Council recommendation that this modified wording be adopted. If possible, it would be helpful to align these State and Federal regulations.

OSM CONCLUSION

Support Proposal WP10-55 w**ith modification** to provide clear, understandable regulatory wording.

The modified regulation should read:

> *§__.26(n)(18)(iii)**(D) Taking of wildlife in Unit 18 while in possession of lead shot size T, .20 caliber or less in diameter, is prohibited.***

Justification

In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size t lead shot (lead shot that is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting or trapping in Unit 18. Based on recommendations from Council, the Federal Subsistence Board prohibited of the use of lead shot for hunting and trapping in Unit 18 during parts of the past two regulatory years.

Two species of eider that inhabit Unit 18, the spectacled and Steller's, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. Because eliminating the use of lead shot in spectacled and Steller's eider breeding habitat is a high priority in the recovery efforts of these species, adoption of the ban of lead shot is warranted. The proposed regulation would provide conservation benefits to the threatened spectacled and Steller's eiders and also to other waterfowl species. Adoption of the proposal would also favor prudent and responsible management of Unit 18 waterfowl species, upland habitat, and the species that utilize those habitats. This proposal was not submitted to benefit upland bird or fur animal species in Unit 18; however, eliminating or even reducing the deposition of additional lead shot into the environment would help to reduce the chance of lead exposure for all species. Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfall with significant lead toxicity levels. Rejection of this proposal could adversely affect the wildlife resources in Unit 18 and ultimately adversely affect subsistence users.

This proposal would eliminate multiple sources of lead deposition in Unit 18. The lead shot prohibitions was previously supported by the Council and adopted by the Board (Temporary Special Actions WSA08-03 and WSA09-09). The Yukon Delta National Wildlife Refuge is requesting this modified regulatory language and the Yukon-Kuskokwim Delta Federal Subsistence Regional Advisory Council is recommending this regulatory language. This is intended to provide clear, understandable regulatory wording.

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Appendix 1

Federal Subsistence Board
1011 E. Tudor Rd., MS 121
Anchorage, Alaska 99503-6199

U.S. FISH and WILDLIFE SERVICE
BUREAU of LAND MANAGEMENT
NATIONAL PARK SERVICE
BUREAU of INDIAN AFFAIRS

USDA
U.S. FOREST SERVICE

FWS/OSMJ9145/GG

DEC 7 2009

Eugene Peltola, Manager
Yukon Delta National Wildlife Refuge
P.O. Box 346
Bethel, Alaska 99559

Dear Mr. Peltola:

This letter responds to Special Action request (WSA09-09) submitted by the Yukon Delta National Wildlife Refuge which asks the Federal Subsistence Board (Board) to prohibit the possession or use of lead shot size T or smaller, including loose shot used in muzzle loading firearms, while hunting or trapping game in Unit 18.

The Board approved WSA09-09. In making its decision, the Board considered the staff analysis, the recommendation from the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council, and comments from the Interagency Staff Committee, copies of which are enclosed with this letter. The Board concluded that this action will provide conservation benefits to threatened spectacled and Steller's eiders, and other waterfowl species, by reducing lead toxicity caused by inadvertent ingestion of lead shot deposited in the environment. This prohibition will remain in effect until the end of the current regulatory year, June 30, 2010.

Thank you for bringing this resource matter to the attention of the Federal Subsistence Management Program. If you have any questions, you may contact Mr. Peter 1. Probasco, Assistant Regional Director of the Office of Subsistence Management, at (907) 786-3403.

Sincerely,

Michael R. Fleagle
Chair, Federal Subsistence Board

Enclosures

cc: Federal Subsistence Board
Interagency Staff Committee
Chair, Yukon Kuskokwim Delta Subsistence Regional Advisory Council
Coordinator, Yukon Kuskokwim Delta Subsistence Regional Advisory Council
Peter 1. Probasco, OSM
Tina Cunning, ADF&G
Alaska Wildlife Troopers, D Detachment

STAFF ANALYSIS
SPECIAL ACTION REQUEST
WSA09-09

ISSUE

Special Action WSA09-09, submitted by the Yukon Delta National Wildlife Refuge (NWR), requests that there be a prohibition on the possession or use of shot shells containing size T lead shot or smaller for the taking of wildlife in Unit 18.

DISCUSSION

The proponent claims that the requested action would accomplish several objectives. The first objective is to help address waterfowl conservation within the NWR and the western Alaska waterfowl flyway. To manage for the decrease of lead toxicity in waterfowl species, the need for reductions in lead shot in the environment has been well documented. Waterfowl and other birds can be exposed to toxic amounts of lead from spent lead shot mistakenly ingested as food or grit. Because of high mortality related to this ingestion, lead shot was banned in Alaska for waterfowl hunting in 1991. In the years since the ban, studies in Alaska document significant lead exposure in waterfowl when compared to studies conducted in the lower 48 states. Two potential reasons for this are: 1) ice underlies much of Alaska's waterfowl nesting habitat which may keep lead shot near the surface and available to waterfowl for many more years when compared to the ice-free sediments further south; and 2) breeding habitat used by waterfowl in the summer is also used by upland species throughout the year; therefore, lead shot used legally to harvest upland bird or fur animal species may end up in waterfowl breeding habitat. Note: "upland bird" species include the following for Unit 18: Sandhill Cranes, grouse, and ptarmigan. "Fur animal" species include the following for Unit 18: beaver, coyote, arctic fox, red fox, marten, mink, weasel, muskrat, river otter, lynx, squirrel, hares, wolves, and wolverine. If the proposed regulatory language were adopted, it would extend the mandatory, non-lead shot use-zone beyond the wetlands and into the upland areas of Unit 18, benefiting waterfowl by helping to decrease the amount of lead shot in the environment. The second objective is to temporarily align Federal regulations with the current State regulations. The third objective is to join the Federal Subsistence Board (Board), the NWR, the State, and local hunters in a joint leadership role in conservation of waterfowl and wetlands in Unit 18. This Special Action Request, combined with support from local subsistence users and the action taken by the Alaska Board of Game and ADF&G in November 2007, can be viewed as a positive step in reducing further deposition of lead into the waterfowl breeding habitat and will contribute to cooperative efforts to recover two threatened eider species. In February 2009 the Board adopted WSA08-03 that temporarily placed the same restriction in Federal regulations as requested in WSA09-09. The proponent of the Special Action Requests has submitted a wildlife proposal to the Board requesting the lead shot restriction be made a regulation. The Board will take action on the proposal at its May 2010 wildlife meeting.

Two species of eider that inhabit Unit 18, the spectacled and Steller's eider, are listed as threatened under the Endangered Species Act and are directly affected by lead shot in their habitat. This request was accepted for consideration by the Board consistent with the "continued viability" language in Special Action regulation §__.19(b): *The Board may open, close, or restrict*

subsistence uses of a particular fish or wildlife population on public lands to assure the continued viability of a fish or wildlife population.

Existing Federal Regulation

The proposed lead shot restriction existed up through June 30, 2009, but has since lapsed with the new regulatory year. Therefore, there is currently no Federal regulation addressing the possession or use of lead shot for the purpose of taking upland bird or fur animal species in Unit 18 under hunting or trapping regulations.

Proposed Federal Regulation

In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot used in muzzle loading firearms, is prohibited while hunting or trapping.

Existing State Regulation

The current State of Alaska regulation 5 AAC 92.080 (14) states:

Taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size T, 0.20 caliber (inches) or smaller, including loose shot used in muzzle loading firearms, and while in immediate personal possession of lead shot, is prohibited.

This restriction includes the taking of game under hunting or trapping regulations.

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of the Unit 18 and consist of 62% FWS (Yukon Delta National Wildlife Refuge) and 2% BLM managed lands.

Customary and Traditional Use Determinations

Except for wolf, there has been no customary and traditional use determination made for fur animal species in Unit 18 either under hunting or trapping regulations, therefore all rural residents are qualified. As the Board does not have jurisdiction over the management of birds, the Board has not addressed customary and traditional use determinations for the bird species addressed by this analysis.

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination for wolves (hunting and trapping) in Unit 18.

Regulatory History

In November 2007, at the request of the community of Hooper Bay, the Alaska Board of Game adopted a ban on the use of shot shells containing size T lead shot (lead shot that is 0.20 inches in diameter) or smaller for the taking of wildlife when hunting or trapping. The FWS and ADF&G also conveyed support for the Hooper Bay proposal to the Alaska Board of Game. The Alaska Board of Game made this change to further protect waterfowl species that inhabit the same areas where upland bird and fur animal species are hunted in Unit 18.

The Board does not have jurisdiction over the management of spectacled eiders, Steller's eiders, or other waterfowl species. These species are managed by the FWS Division of Migratory Bird Management and the ADF&G.

In February 2009 the Board adopted WSA08-03 placing a lead shot restriction in Federal regulations for Unit 18.

Biological Background

This Special Action Request was not submitted to benefit upland bird or fur animal species in Unit 18; however, eliminating or even reducing the deposition of additional lead shot into the environment would help to reduce the chance of lead exposure for all species. The proposed regulatory language was submitted to specifically benefit waterfowl in the unit, especially the threatened spectacled and Steller's eiders. There is little detailed information on the effects of lead shot in the environment on upland bird and fur animal species and there is currently no lead toxicity-related conservation concerns for these species; therefore, the biological background and harvest history sections concentrate on lead toxicity in waterfowl.

The long-term effects of lead toxicity in waterfowl species have been widely documented and support the need to reduce lead pellet consumption in waterfowl. Results from research conducted on the Yukon-Kuskokwim Delta since the 1991 prohibition on lead shot for waterfowl hunting, has shown that ingestion of lead shot by threatened spectacled and Steller's eiders remains a significant problem and may be constraining efforts to support recovery of both species (FWS 2007). Consumption of lead shot deposition by waterfowl and other bird species occurs when the smaller lead pellets, such as lead shot size T and smaller, are mistaken for food such as seeds or are selected for grit. A summary of relevant research findings include the following:

- Based on research on the persistence of lead pellets in Alaskan wetlands where freeze-thaw dynamics or unique attributes trap pellets near the surface, these deposits remain available to waterfowl for many years. Exposure of waterfowl to toxic lead shot will continue for years even after the deposition is terminated (Flint 1998).

- Dead or dying eiders found on the Yukon-Kuskokwim Delta have been diagnosed with acute lead contamination (Flint and Grand 1997).

- X-ray images taken of female spectacled eiders nesting on the Yukon-Kuskokwim Delta showed that 12% contained lead shot pellets in their gizzards (Franson et al. 1998).

- Analyses of blood samples from spectacled eiders, while on the breeding grounds, on the Yukon-Kuskokwim Delta showed that 36% of females and 12% of ducklings had been exposed to lead. Further exposure levels increased over the summer, which is of concern because individuals most important to the population (successful breeding females) remain in breeding habitat longer and therefore increase their exposure to lead (Flint et al. 1997).

- Lead-exposed female spectacled eiders suffer about a 50% reduction in annual survival rates compared to un-exposed females (Grand et al. 1998).

Spectacled eider studies conducted in the lower Kashunuk River drainage on the coastal fringe of the Yukon-Kuskokwim Delta have shown that a large portion of annual mortality in females probably occurs on breeding areas (Flint and Grand 1997). Lead poisoning accounted for 40-60% of observed female mortality and this percentage has probably increased from historic levels (Flint and Grand 1997).

Blood lead concentration studies conducted on spectacled eiders and long-tailed ducks revealed high proportions of these species were exposed to lead contamination based on blood lead concentrations (Flint et al. 1997). However, because only 12% of the sampled nesting hens had spent lead shot in their gizzards, researchers are skeptical that the source of this exposure could be spent lead.

Habitat

Results from studies conducted in Unit 18 by the U.S. Geological Survey between 1998 and 2007 show a clear trend where lead shot settles into wetland sediment at a rate of approximately 1 cm per year (Flint 2008). Further analysis of sediment core studies revealed that after ten years of exposure the highest percentage of shot was recovered in the 8-10 cm layer, which indicates that the lead pellets are settling down between these layers where they may remain indefinitely. Previous sediment core studies conducted on Unit 18 tundra wetlands revealed no downward movement of pellets after three years of exposure; however, lead shot does settle into tundra wetlands on the Yukon-Kuskokwim Delta given sufficient time (Flint 1998). The overall conclusion from these wetland studies is that most lead shot deposition remains available to feeding waterfowl for an extended period of time (Flint 2008).

Current Events

At the October 3, 2008 meeting of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) that was held in Bethel, NWR staff presented regulatory language as an alternative to the preliminary staff recommendation stated in this analysis. NWR staff suggested the following regulatory language to the Council.

"In Unit 18 the possession or use of shot shells containing lead shot size T or smaller, including loose shot used in muzzle loading firearms, is prohibited while hunting or trapping."

Following its support for a ban on lead shot for Unit 18 that it made at its September 2007 meeting in Marshall, the Council unanimously supported the modified language suggested by NWR staff as its recommendation to the Board.

Comments received from ADF&G support the adoption of WSA09-09; however, the Department suggests that the regulatory language be modified to add ".20 caliber" after lead size T (Pappas 2009 pers. Comm.).

While the existing State regulation differs from its proposed revision, ADF&G will submit a proposal to the Alaska Board of Game to clarify that a person may not be in possession of shot shells containing lead shot less than or equal to .20 inches (caliber) in diameter while taking or in possession of game in Unit 18 (Pappas 2009 pers. Comm.).

At its October 2-3, 2009 meeting the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council recommended support of Special Action Request WSA09-09 and stated that they believe that lead shot contamination in birds is a human health as well as a natural resource conservation

issue. The Council provided testimony that locals classify eiders as "ocean ducks" that do not fly up the rivers to the interior portion of Unit 18, and think that the benefits of the lead shot restriction will be minimal in the coastal areas of Unit 18.

Effects of the Special Action

Adoption of the proposed restriction should provide conservation benefits to threatened spectacled and Steller's eiders and also to other waterfowl species, by reducing the possibility of ingesting lead shot and the resulting exposure to lead shot in the environment and its effects if ingested.

Despite the widespread concern of existing lead toxicities in Unit 18 aquatic and riparian habitats, no evidence has been provided that substantiates that continued use of lead shot for the taking of upland bird or fur animal species in Unit 18 through June 2010 would be detrimental to these species (Note: July 1, 2010 will be the start of the next regulatory year when regulatory changes are implemented). However, it is logical that by reducing the amount of lead shot available in the environment would result in reduced opportunities for ingestion of lead shot and thus a reduction in lead toxicity in waterfowl.

Because lead shot remains legal for the taking of ptarmigan and other small wildlife species, failure to adopt this request would result in further lead contaminate deposition in the wetlands of the Yukon-Kuskokwim Delta region. Wetland areas used by breeding waterfowl overlap with upland habitats used by other species during the winter where they are harvested by subsistence users. As a result of this overlap, lead shot deposition still occurs in waterfowl breeding habitat – regardless of the 1991 ban on lead shot.

Adoption of the proposed regulation would benefit all wildlife resources in the long term, but could adversely affect subsistence users who may be using lead shot for hunting upland bird and furbearer species in Unit 18. However, the NWR continues to conduct a free exchange of shot shells containing non-lead shot for those with lead shot this fall to reduce the economic impact on subsistence users in the region.

Adoption of the proposed regulatory change would benefit public health by reducing the chances of human consumption of waterfowl with significant lead toxicity levels. Adoption of the Special Action Request would facilitate continued cooperation with the community of Hooper Bay that originally requested the restriction of the Alaska Board of Game.

Adoption of the request would help to reduce confusion for hunters, village stores that sell ammunition, resource managers, and law enforcement personnel.

If this request is adopted it would be the second time the Board has changed a regulation that would affect subsistence users to benefit a species that does not fall under the jurisdiction of the Board. The first time occurred when the Board adopted WSA08-03 which temporarily placed the same lead shot prohibition in place for Unit 18 in February 2009.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-55 **with modification** as described in OSM Conclusion. There needs to be continued public education and outreach in the affected area. Lead shot is poison to the wildlife and people when ingested. This request has been approved by the Federal Subsistence Board twice through the Special Action Request in the past.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-55

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-055
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-55: This proposal restricts the use of lead shot in GMU 18 for shot shells containing shot size T or smaller on federal public lands.

Introduction: In November 2007, the Alaska Board of Game adopted lead shot restrictions in Unit 18 for hunting and trapping. The Federal Subsistence Board enacted similar though temporary restrictions by federal special action (WSA08-03 and WSA09-09). This proposal seeks permanent lead shot restrictions

Impact on Subsistence Users: Transition to non-toxic shot may affect hunters due to cost and availability of products through local vendors.

Opportunity Provided by State: The state regulation is found in 5 AAC 92.080 (14).

> **92.080. Unlawful methods of taking game; exceptions**:
> …
> (14) taking game in Unit 18 with a shotgun using any shot other than nontoxic material approved by the United States Fish and Wildlife Service, that is size t, .20 caliber or smaller, including loose shot used in muzzleloading firearms, and while in immediate personal possession of lead shot.

Conservation Issues: This regulation conserves wildlife by reducing the impacts to health resulting from ingestion of lead shot. Adoption of this proposal will significantly benefit waterfowl that nest in Unit 18, such as the spectacled eider.

Enforcement Issues: Uniform regulation related to the use of nontoxic shot will decrease enforcement problems and risk of enforcement action for subsistence users.

Recommendation: Adopt with modification. The Department supports adoption of this proposal but, most importantly, urges that the final federal regulation be modified to clarify that a person may not be in possession of shot shells containing lead shot less than or equal to .20” in diameter, including loose shot used in muzzleloading firearms, while taking game in Unit 18.

WP10-56 Executive Summary	
General Description	Proposal WP10-56 requests that the harvest limit in the lower Yukon area of Unit 18 (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) be changed to two moose per regulatory year. Hunters would be allowed to harvest one antlered bull in the fall season and one moose in the winter season. Hunters that do not harvest a moose in the fall would be allowed to harvest two moose during the winter season. The proposal also delegates authority to the Yukon Delta National Wildlife Refuge manager to restrict the season, if needed, after consultation with the Alaska Department of Fish and Game. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**Unit 18 — Moose** *Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull* — *Aug. 10–Sept. 30* *Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose.* ***A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year.*** *The Yukon Delta National Wildlife Refuge Manager may restrict the harvest* ***in the winter season*** *to only* ***1*** *antlered* ***bull*** ~~*bulls*~~ ***or only 1 moose per regulatory year*** *after consultation with the ADF&G.* — *Dec. 20–Jan. 20*
OSM Conclusion	**Support** Proposal WP10-56 **with modification** to extend the winter season to February 28.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-56 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

continued on next page

WP10-56 Executive Summary *(continued)*	
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-56

ISSUES

Proposal WP10-56, submitted by the Yukon Delta National Wildlife Refuge, requests that the harvest limit in the lower Yukon area of Unit 18 (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) be changed to two moose per regulatory year. Hunters would be allowed to harvest one antlered bull in the fall season and one moose in the winter season. Hunters that do not harvest a moose in the fall would be allowed to harvest two moose during the winter season. The proposal also delegates authority to the Yukon Delta National Wildlife Refuge manager to restrict the season, if needed, after consultation with the Alaska Department of Fish and Game.

DISCUSSION

The proponent states that there is no biological reason to limit the harvest to one moose per person per regulatory year, and that increasing the limit to two moose per regulatory year would provide Federally qualified subsistence users with additional harvest opportunity. The proponent further states that this regulatory change should help cull the moose population in the lower Yukon area of Unit 18 for which population estimates exceed 3000 moose with an average annual growth rate of 27% (FWS 2009).

Existing Federal Regulations

Unit 18 — Moose

Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village – 1 antlered bull	*Aug. 10–Sept. 30*
Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village – 1 moose. The Yukon Delta National Wildlife Refuge Manager may restrict the harvest to only antlered bulls after consultation with the ADF&G.	*Dec. 20–Jan. 20*

Proposed Federal Regulations

Unit 18 — Moose

Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull.	*Aug. 10–Sept. 30*

Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose. ***A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year.*** *The Yukon Delta National Wildlife Refuge Manager may restrict the harvest* ***in the winter season*** *to only* ***1*** *antlered* ***bull*** *~~bulls~~* ***or only 1 moose per regulatory year*** *after consultation with the ADF&G.*	*Dec. 20–Jan. 20*

Existing State Regulations

*Unit 18 Lower Yukon Area, that portion north and west *of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mt. Village.*	*Resident: 1 antlered bull*	*Harvest*	*Aug. 10–Sept. 30*
	-OR-		
	1 moose	*Harvest*	*Dec. 20–Feb. 28**
	Nonresident: One antlered bull	*Harvest*	*Sept. 1–Sept. 30*

*Note: At its November 13−16, 2009 meeting, the Alaska Board of Game adopted new regulation language to move the boundary between the lower Yukon and the remainder areas of Unit 18, south to a more discernible geographic land mark and extend the winter season from January 20 to February 28.

Extent of Federal Public Lands

Federal public lands (Yukon Delta National Wildlife Refuge) comprise approximately 60% of the lower Yukon area of Unit 18 **(Map 1).**

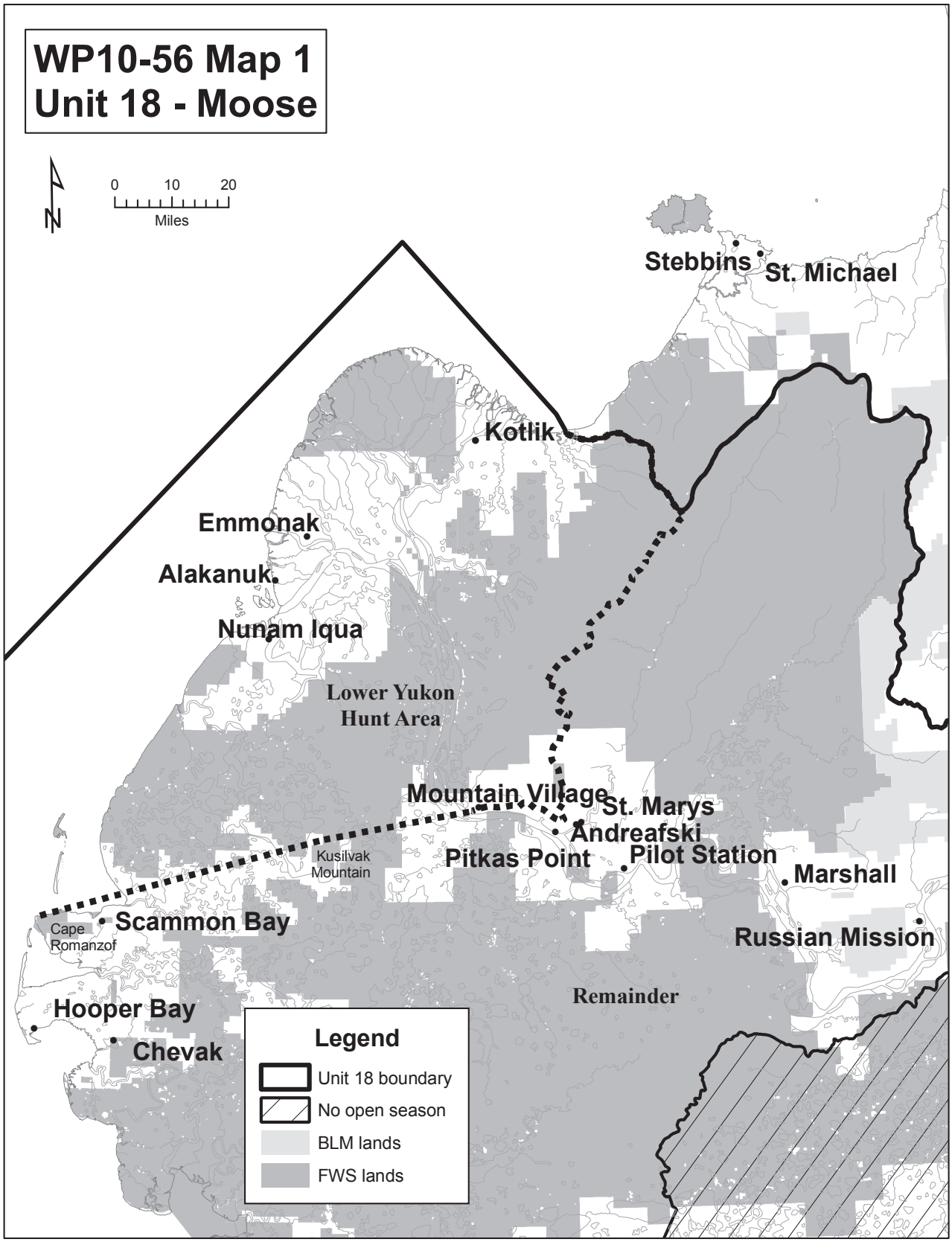
Customary and Traditional Use Determination

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in the lower Yukon area of Unit 18, which includes this hunt area.

Regulatory History

In November 2005, the Alaska Board of Game adopted State Proposal 04, in response to the rapid growth of the lower Yukon moose population. Action taken on the proposal modified the State harvest limit by allowing the harvest of antlered bulls only and established a winter season for antlered bulls and calves. During its November 2007 meeting, the Alaska Board of Game lengthened the fall moose season for the lower Yukon and remainder areas of Unit 18 by 21 days and the winter season in the lower Yukon by 10 days through the adoption of State Proposal 06.

At its March 2009 meeting, the Alaska Board of Game adopted Proposal 228, which liberalized the State harvest limit from antlered bulls to any moose for the Dec. 20–Jan. 20 season in the lower Yukon area of


WP10-56 Map 1
Unit 18 - Moose
N
0 10 20
Miles
Stebbins
St. Michael
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Kusilvak
Mountain
Cape
Romanzof
Scammon Bay
Russian Mission
Remainder
Hooper Bay
Chevak
Legend
Unit 18 boundary
No open season
BLM lands
FWS lands

Unit 18. The State believes that the affected moose population has increased to a size that can support the harvest of cows.

At its November 12, 2009 work session, the Federal Subsistence Board adopted Special Action WSA08-13, submitted by Scammon Bay Traditional Council, which requested the harvest limit in the lower Yukon area of Unit 18 be increased to two moose per regulatory year, with one allowed in the fall and one in the winter.

The Alaska Board of Game, at its November 13−16, 2009 meeting, adopted new regulations to extend the winter season from January 20 to February 28 and move the boundary between the lower Yukon and the remainder areas, south to a more discernable geographic land mark.

State Management Objectives for Unit 18—Moose (within the affected area):

- Maintain the current age and sex structure for the lower Yukon River population, with a minimum ratio of 30 bulls:100 cows.
- Conduct fall sex and age composition surveys as weather and funding allow. *Ongoing for affected population.*
- Conduct winter censuses and recruitment surveys in the established survey areas on a rotating basis. *Ongoing for affected population.*
- Allow a harvest of bulls without hindering a high rate of population increase. *Achieved for affected population.*
- Improve harvest reporting and compliance with hunting regulations. *Ongoing.*
- Minimize conflicts among user groups interested in moose within and adjacent to Unit 18. *Ongoing.*

Biological Background

In February 2008, the Yukon Delta National Wildlife Refuge and Alaska Department of Fish and Game conducted cooperative moose surveys in portions of Unit 18, including the furthest down river survey unit along the main stem of the Yukon River corridor from Mountain Village to Kotlik. The mid-point of the moose population estimate for this area was 2,828 moose when using traditional survey methods and 3,320 moose when a Sightability Correction Factor (SCF) was incorporated in the 2008 analysis (FWS 2008). Using the SCF population estimate on the lower Yukon River (from Mountain Village to Emmonak), the resulting moose density estimate was 2.8 moose/mi.^{2}. The affected area has experienced rapid moose population growth since the end of the moratorium in 1994 (**Figure 1)** with an average annual growth rate of 27% for the period of 1994–2008 (**Table 1**). Based on the 2008 survey results, it appears that this moose population could support additional harvest with the current population size, density, and productivity (Doolittle 2009, pers. comm.).

Habitat

Moose browse surveys have not been conducted within the affected area, thus there are no habitat data. Browse surveys would facilitate analysis of the impacts this moose population is having on its habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse. The Yukon Delta National Wildlife Refuge may conduct surveys of the willow species of the affected area in summer of 2010 (Doolittle 2009, pers. comm.).

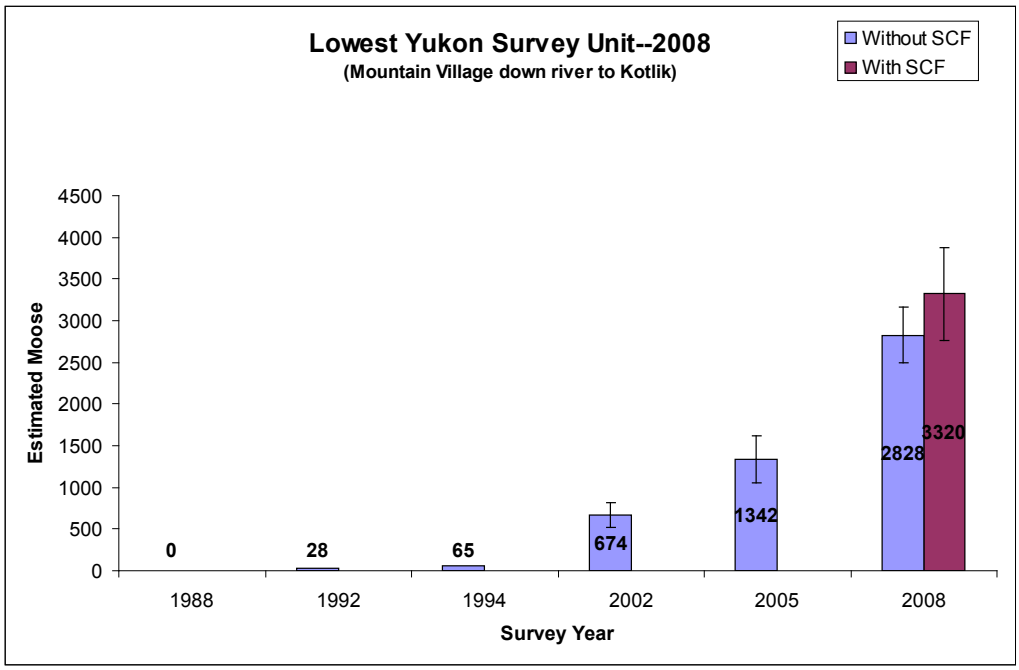


Figure 1. Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (FWS 2008).

Table 1. Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (Pappas 2009, pers. comm.).

Survey Year	Total Moose
1988	0
1992	28
1994	65
2002	674
2005	1,342
2008	2,828 (3,320*)

*Survey total of 2,828 recalculated with use of a Sightability Correction Factor (95% c.i.).

At the Federal Subsistence Board work session in November 2009, Mr. Gene Peltola, Refuge Manager of Yukon Delta National Wildlife Refuge, testified that if moose density continues to increase in the lower Yukon area of Unit 18, there is a risk that the population will exceed the carrying capacity of the habitat and experience a decline. Mr. Peltola stated that over the last three years there have been reports of localized calf and yearling die offs and this past winter reports of dead adult moose on the Yukon main stem. In addition, he stated that the refuge would prefer a proactive management approach because of the significance of the moose population to lower Yukon residents (FWS 2009).

Table 2. Total fall and winter moose harvest reported by year for the lower Yukon area of Unit 18, 2005–2009.

Year	Reported fall moose harvest[1]	Reported winter moose harvest[2]
2005	100	6
2006	117	14
2007	152	31
2008	Unavailable	29
2009	Unavailable	26 (13)[3]
Total	369	119[4]

[1] ADF&G 2009
[2] Doolittle 2009, pers comm.
[3] FWS 2010. Additional moose harvest under Special Action WSA08-13.
[4] Total includes the additional moose harvest under Special Action WSA08-13.

Harvest History

Reported harvest totals from the fall (2005–2007) and winter seasons (2005–2009) are provided in **Table 2**. There appears to have been an increase in hunter success for the fall and winter seasons since 2005. Even with the "any-moose" harvest limit provided in the 2009 winter season and the opportunity to harvest an additional moose provided under Special Action WSA08-13, the total reported harvest remains lower than anticipated. Of the 42 subsistence users that were issued permits under WSA08-13, 23 submitted permit reports, and 13 of those were successful. Harvest information is typically collected through harvest ticket or registration permit reports submitted by users, which may under count harvest (cf. Andersen and Alexander 1992). However, the reported moose harvest does show an increasing trend.

Alternatives to Consider

A more aggressive management approach would be to allow a fall "any adult" moose (bull or cow) harvest. Allowing the harvest of cow moose, the production component of the population, could slow the growth of this population. Additionally, the fall and winter season dates could be extended to provide more opportunity. The State has recently extended its winter season from January 20 to February 28 in the lower Yukon area of Unit 18.

If there is concern about potential overharvest, a community harvest reporting system could be used to manage the moose harvest in the lower Yukon area of Unit 18. However, this has not been proposed and would require further analysis to evaluate its utility in this area.

Other Relevant Proposals

Proposals WP10-57, -58, and -62, request that the boundary between the Unit 18 lower Yukon area and remainder of Unit 18 be redefined to be a natural geographic mid-point between the two areas. If the Federal Subsistence Board adopts any of these proposals, the language in the regulations defining the area of the fall and winter moose hunts in the lower Yukon will need to be rewritten to reflect the change.

Proposal WP10-59 requests that Federal Subsistence users be allowed to hunt moose from a motor boat under low or idle power. Adoption of Proposal WP10-59 and WP10-56 would most likely not create a conservation concern, because the moose population in the affected area is thought to be healthy enough to support any additional harvest.

Effects of the Proposal

Adoption of Proposal WP10-56 would provide additional opportunity for Federally qualified subsistence users to harvest moose in the lower Yukon area of Unit 18 during the Dec. 20–Jan. 20 season, when access is better by snowmachine. Federally qualified subsistence users would be required to harvest both moose from the lower Yukon area of Unit 18.

Adoption of the proposal would create differences between State and Federal regulations. During the Dec. 20–Jan. 20 season, it would be illegal for Federally qualified subsistence users to harvest an additional moose on State or private lands within or adjacent to Federal boundaries. As a result, a Federal registration permit would be required. A Federal registration permit would provide Federal subsistence users with documentation that they are hunting under Federal regulation and would provide a mechanism to monitor the Federal harvest.

Considering the relatively low level of reported annual harvest, adoption of the proposed harvest limit may not address the high growth rate of the moose population or the conservation concerns of the proponent. Even with the "any moose" winter season harvest limit combined with the proposed opportunity to harvest a second moose, the additional winter harvest is expected to be insignificant, with minimal impacts on the expanding population. However, the requested harvest limit expansion would help to facilitate management of the affected moose population and would provide Federally qualified subsistence users with the opportunity to harvest an additional moose in the winter season.

OSM CONCLUSION

Support Proposal WP10-56 **with modification** to extend the winter season to February 28 and require a Federal registration permit.

Unit 18 — Moose	
Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 antlered bull	*Aug. 10–Sept. 30*
Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village—1 moose. ***A hunter who harvested 1 antlered bull during the fall season in this hunt area may also harvest 1 additional moose during the winter season. A hunter who did not take a moose in the fall season in this hunt area may take 2 moose in the winter season. Hunters may not harvest more than 2 moose in this hunt area per regulatory year. A Federal registration permit is required for this hunt.*** *The Yukon Delta National Wildlife Refuge Manager may restrict the harvest* ***in the winter season*** *to only* ***1*** *antlered* ***bull*** ~~*bulls*~~ ***or only 1 moose per regulatory year*** *after consultation with the ADF&G.*	*Dec. 20–**Feb. 28*** ~~*Jan. 20*~~

Justification

The Federal Subsistence Board recently adopted Special Action WSA08-13 to increase the opportunity for Federal subsistence users to harvest moose in the lower Yukon area of Unit 18. Adoption of Proposal WP10-56 would continue to provide additional harvest opportunity. Little effect on the moose population is anticipated based on the growth rate of the moose population in the lower Yukon area and the lower than expected reported harvest during the any-moose harvest limit provided during the winter 2009 season. Furthermore, the Yukon Delta National Wildlife Refuge Manager would have the delegated authority to restrict the harvest if a conservation concern arose during the regulatory year. Modifying the proposal to extend the Federal winter season from January 20 to February 28 would align with the State winter season and provide Federal subsistence users with additional opportunity. The proposal must be modified to include a Federal registration permit requirement because the Federal and State harvest limits would be different for this hunt. If this proposal is adopted and the population growth continues to be a concern, a more aggressive approach could be proposed to allow the harvest of any moose in the fall season.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-56 **with modification** as described in OSM Conclusion. The moose population in the lower Yukon River area is healthy and still growing. This area provides more opportunity to those that need the resource for food. This request was previously allowed through Special Action Request and the harvest was relatively low.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-56

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-56
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-56: This proposal increases the federal subsistence winter bag limit for moose hunting in the Lower Yukon River hunt area (Unit 18). The winter federal subsistence season bag limit would be 2 moose per year, so a federal subsistence hunter taking a bull in the fall would be eligible to take 1 additional moose in the winter or a hunter with no take in the fall hunt would be eligible to take 2 moose in the winter hunt.

Introduction: Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity, which supports fall and winter seasons. This proposal seeks to utilize more of the harvestable surplus by federal subsistence hunters.

Impact on Subsistence Users: Increasing the winter bag limit will give federal subsistence users more hunting opportunity.

Opportunity Provided by State: In Unit 18, the Lower Yukon River hunt area was modified at the November 2009 Alaska Board of Game meeting. The Board of Game approved changes by emergency order announcement for the 2009-2010 winter season to reflect: 1) change to hunt area boundary, and 2) winter season. The revised state regulation becomes a permanent in 2010-2011, as follows:

5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.

Units and Bag Limits	**Resident Open Season (Subsistence and General Hunts)**	**Nonresident Open Season**
Unit 18 **Lower Yukon Area**, that portion north and west **of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village,** and excluding all Yukon River drainages upriver from Mountain Village**.**		
1 antlered bull; or 1 moose	Aug. 10 - Sept. 30 **Dec. 20 – Feb 28**	Sept. 1 - Sept. 30

Conservation Issues: The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations.

Enforcement Issues: Enforcement problems related to hunt area boundary will be decreased by using the Kashunuk River bank as a boundary because it is an identifiable geographic feature in an area of broad featureless terrain. None the less, difference in federal subsistence and state regulations resulting from adoption of this proposal create enforcement problems in areas of mixed land ownership, especially for annual bag limit accumulation issues. If adopted, a federal subsistence user that harvests a moose in a federal subsistence hunt may not participate in the state moose hunt for the remainder of the hunt season.

Other Comments: If adopted, the department requests the Federal Subsistence Board include specific language during deliberations clearly identifying the supporting facts for adopting this proposal. The department has continued concerns regarding past Federal Subsistence Board actions which established liberal bag limits for species during times of peak population conditions and the Board's refusal for reductions in the bag limits once the populations returned to normal levels. The department is cautious of the establishment of an artificially inflated bag limit as the standard definition for meaningful preference for federal subsistence uses when the population returns to normal levels.

Recommendation: Oppose. If adopted, modification is needed to clarify that the federal manager must consult with the department to determine when to restrict further harvest.

The department suggests consideration be given to modification of this proposal to establish a community harvest hunt under federal subsistence regulations in cooperation with the State which would establish harvest quotas per community. Developing a community harvest program will provide additional opportunity to take harvestable surplus from the growing moose population to meet the needs of the communities. Additionally, harvest reporting would improve and harvest quotas would be sensitive to biological fluctuations in the population.

WP10-57 Executive Summary	
General Description	Proposal WP10-57 requests a change in a portion of the regulatory boundary description for Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village. This area is referred to as the lower Yukon hunt area. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	*Unit 18, that portion north and west of a line from ~~Cape Romanzof to Kusilvak Mountain~~* ***the mouth of the Kashunuk River to Chakaktolik following the east bank of the Kashunuk River, then straight*** *to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*
OSM Conclusion	**Support** Proposal WP10-57 **with modification** to align with the recently adopted Alaska Board of Game boundary description. *Unit 18, that portion north and west of ~~Cape Romanzof to Kusilvak Mountain~~* ***the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik*** *to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-57 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-57 **with modification** to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across State and Federal public lands associated with the Lower Yukon River hunt area.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-57

ISSUES

Proposal WP10-57, submitted by the Yukon Delta National Wildlife Refuge, requests a change in a portion of the regulatory boundary description for Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village. This area is referred to as the lower Yukon hunt area.

DISCUSSION

The proponent states that the current regulatory language specific to the moose hunt boundary is ambiguous and that the existing straight line boundary is not easily identified on the ground, while the proposed boundary change would make it easier for subsistence hunters and law enforcement officers to identify the area.

The proponent also states that the Kusilvak Mountain is actually a mountain range of approximately 10 miles in length, and the straight line description from Cape Romanzof can be interpreted to intersect with Kusilvak Mountain at any number of arbitrary points (Sundown, 2010, pers. comm.; USGS 1952 and 1954).

This proposal would provide a regulatory boundary reflecting easily identified, prominent, natural geographic features found in the affected area, instead of the current straight line description used in the existing regulation (USGS 1953 and 1954).

Existing Federal Regulation

Unit 18 — Moose

Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.

Proposed Federal Regulation

Unit 18 — Moose

Unit 18, that portion north and west of a line from ~~Cape Romanzof to Kusilvak Mountain~~ ***the mouth of the Kashunuk River to Chakaktolik following the east bank of the Kashunuk River, then straight*** *to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*

Current State Regulation

Unit 18 — Moose

Unit 18, that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village (lower Yukon).

A proposal to change the southern boundary to the Kashunuk River was adopted by the Alaska Board of Game at its November 2009 meeting. That boundary change will be effective when the State publishes the new regulations booklet. This proposal seeks to align the Federal boundary with the State boundary.

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% U.S. Fish and Wildlife Service lands and 2% Bureau of Land Management lands. **Map 1** shows the extent of Federal lands in the area, the current boundary, the proposed boundary and is located within Yukon Delta National Wildlife Refuge.

Customary and Traditional Use Determinations

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village, and all drainages north of the Yukon River downstream from Marshall. The hunt area subject to this proposal lies within the area of that determination. The boundary change would be for the moose hunt.

Current Events

At its November 2009 meeting, the Alaska Board of Game adopted a boundary change that for the most part mirrors the proponent's request (Alaska Board of Game 2009). NWR staff worked with staff from ADF&G to finalize the recommendation to the Alaska Board of Game and had the support of both the Lower Yukon Advisory Committee and the Yukon Delta Regional Advisory Council (Sundown 2010, pers. comm.). The proponent concurs with the adopted State boundary change and believes a simple modification of WP10-57 is acceptable in order to align the regulatory descriptions (Sundown 2010, pers. comm.).

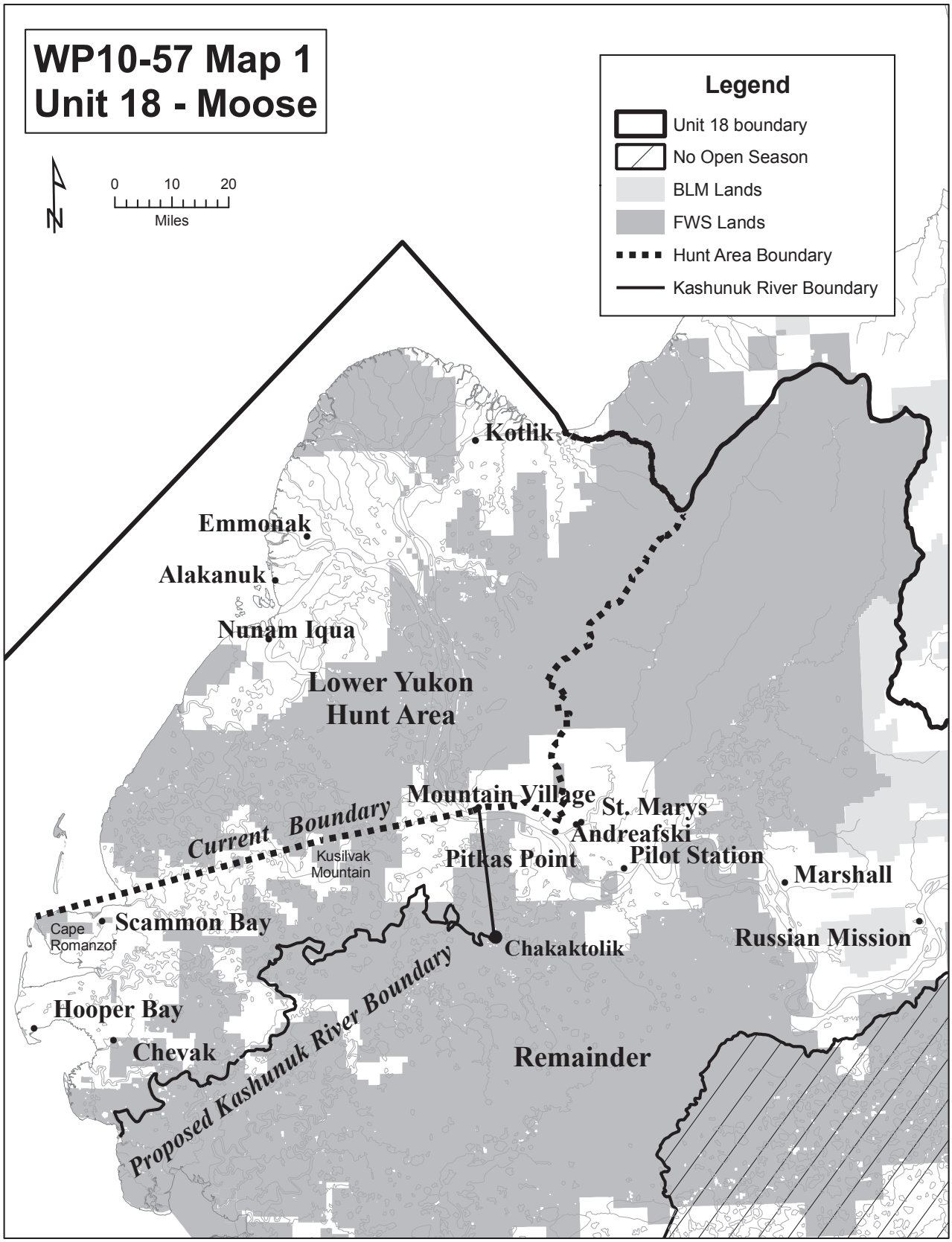
Biological Background

Following the moose hunting moratorium the lower Yukon moose population has been highly productive and growing. The most recent ADF&G moose surveys estimate the population sizes of 3320 in the lower Yukon hunt area and approximately 4000 in Unit 18 remainder (Perry 2009) (**Map 1**). As a result, the Alaska Board of Game has extended winter hunt seasons in this area (Alaska Board of Game 2009).

Effects of the Proposal

This proposal is similar to WP10-58/62 that addresses a boundary change on the lower Kuskokwim River hunt area. Both proposals identify distinctive natural features to help subsistence users and law enforcement officers to determine the boundary between moose hunting areas. Both proposals have interagency and local support to change the current ambiguous boundaries.

Adoption of the proposal would provide Federally qualified subsistence users and law enforcement with a easier identified boundary to separate the Lower Yukon hunt area from the Unit 18 remainder. Seasons and harvest limits are different in Unit 18 remainder and the lower Yukon hunt area. The Unit 18 remainder harvest limit is 1 antlered bull, while the lower Yukon hunt area allows a 1 moose harvest during the winter season, so a clear, definitive boundary is necessary for subsistence users.


WP10-57 Map 1
Unit 18 - Moose
Legend
Unit 18 boundary
No Open Season
BLM Lands
FWS Lands
Hunt Area Boundary
Kashunuk River Boundary
0 10 20
Miles
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pilot Station
Pitkas Point
Marshall
Current Boundary
Kusilvak
Mountain
Scammon Bay
Cape
Romanzof
Chakaktolik
Russian Mission
Hooper Bay
Chevak
Remainder
Proposed Kashunuk River Boundary

Adoption of the proposal would increase the size of the lower Yukon hunt area thereby increasing the area for subsistence users to harvest the 1 moose limit during the winter season.

OSM CONCLUSION

Support Proposal WP10-57 **with modification** to align with the recently adopted Alaska Board of Game boundary description.

The modified regulation should read:

> **Unit 18—Moose**
>
> *Unit 18, that portion north and west of ~~Cape Romanzof to Kusilvak Mountain~~* ***the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik*** *to Mountain Village, and excluding all Yukon River drainages upriver from Mountain Village.*

Justification

The Kashunuk River is an easily identified, natural geographic feature of the lower Yukon area. The current boundary is more difficult to determine for both subsistence users and law enforcement.

Adoption of the proposal with modification will bring the regulatory boundary description in alignment with the recently adopted State boundary description. In addition, it will simplify boundary identification for subsistence users and law enforcement. The proposal has interagency and local support.

The lower Yukon River area has a healthy, growing moose population which can support increased harvest opportunity.

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USGS 1952. Kwiguk topographic map. 1:250,000 scale. Reston, VA.

USGS 1953. Hooper Bay topographic map. 1:250,000 scale. Reston, VA.

USGS 1954. Marshall topographic map. 1:250,000 scale. Reston, VA

REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-57 **with modification** as described in OSM Conclusion. This would align with the recently adopted Alaska Board of Game boundary description. Aligning the Federal and State boundaries would reduce confusion on the boundary for subsistence users and law enforcement.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-57

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-57
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-57: This proposal modifies the hunt area boundary for the Lower Yukon River hunt area in Unit 18. The proponent has since agreed to a modification of this proposal to match the boundary realignment adopted by the Alaska Board of Game in 2009.

Introduction: Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity, and supports fall and winter seasons. The current federal subsistence hunt boundary in the vicinity of Kusilvak Mountain creates confusion among hunters, and the proposal attempts to use better geographic landmarks. The proposed language differs from the state hunt area approved at the November 2009 State Board of Game meeting.

Impact on Subsistence Users: Improving the federal subsistence hunt area boundary will make it easier for hunters to determine the proper season and bag limit within the Lower Yukon River hunt area and the adjoining Remainder of Unit 18 hunt area.

Opportunity Provided by State: In Unit 18, the Lower Yukon River state hunt area was modified at the November 2009 Alaska Board of Game meeting. The Board of Game approved changes by emergency order announcement to reflect: 1) change to state hunt area boundary and 2) state winter season. The revised state regulation applies to the state winter season in 2009-2010 and becomes a permanent regulation in 2010-2011, as follows:

5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.

Units and Bag Limits	**Resident Open Season (Subsistence and General Hunts)**	**Nonresident Open Season**
Unit 18 **Lower Yukon Area**, that portion north and west **of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village,** and excluding all Yukon River drainages upriver from Mountain Village**.**		
1 antlered bull; or 1 moose	Aug. 10 - Sept. 30 **Dec. 20 – Feb 28**	Sept. 1 - Sept. 30

Conservation Issues: The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations.

Enforcement Issues: Enforcement problems related to hunt area boundary will be decreased by using the Kashunuk River bank as a boundary, because it is an identifiable geographic feature in an area of broad featureless terrain.

Recommendation: Support with modification to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across state and federal public lands associated with the Lower Yukon River hunt area.

WP10-59 Executive Summary	
General Description	Proposal WP10-59 requests that the Federal Subsistence Board (Board) establish a regulatory provision for the harvest of moose from a motorized boat under low or idle power in the lower Yukon area (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) of Unit 18. *Submitted by Byran Ulak of Scammon Bay*
Proposed Regulation	*§__.26(b) Except for special provisions found at paragraphs (n) (1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:* *(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;* *(15) Taking swimming ungulates, bears, wolves, or wolverine;* *§__.26(n)(18)(iii)**(D) In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under low or idle power.*** *§__.26(n)(23)(iv)(A) You may take caribou from a boat moving under power in Unit 23.* *§__.26(n)(25)(iii)(B) You may take caribou and moose from a boat moving under power in Unit 25.* *§__.26(n)(26)(iv)(A) You may take caribou from a boat moving under power in Unit 26.*
OSM Conclusion	**Support** Proposal WP10-59 **with modification** to remove the words "low or idle."
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-59 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-59

ISSUES

Proposal WP10-59, submitted by Byran Ulak of Scammon Bay, requests that the Federal Subsistence Board (Board) establish a regulatory provision for the harvest of moose from a motorized boat under low or idle power in the lower Yukon area (that portion north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village) of Unit 18.

DISCUSSION

The proponent states that the proposed change in regulations would help increase hunter success rates by allowing Federally qualified subsistence users to shoot from a motor-driven boat under low or idle power. The proponent believes that the proposed regulatory change may cause moose harvest to increase slightly in the lower Yukon River area of Unit 18.

It is a common practice of subsistence users in the area to hunt moose from a motor-driven boat under slow power in the early morning and evening hours when animals frequent the river banks. A slow speed is used to avoid scaring moose from river banks by keeping motor noise to a minimum. A motor-driven boat under slow power provides a relatively stable platform for shot placement. No accidents have been reported as a result of this activity (Robert Sundown 2009).

While statewide Federal subsistence regulations do not allow the harvest of wildlife from a motor-driven boat under power, exceptions are allowed under special provisions.

Existing Federal Regulation

> *§__.26(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:*
>
> > *(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;*
> >
> > *(15) Taking swimming ungulates, bears, wolves, or wolverine;*
>
> *§__.26(n)(23)(iv)(A) You may take caribou from a boat moving under power in Unit 23.*
>
> *§__.26(n)(25)(iii)(B) You may take caribou and moose from a boat moving under power in Unit 25.*
>
> *§__.26(n)(26)(iv)(A) You may take caribou from a boat moving under power in Unit 26.*

Proposed Federal Regulation

> *§__.26(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:*

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;

(15) Taking swimming ungulates, bears, wolves, or wolverine;

*§__.26(n)(18)(iii)**(D) In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under low or idle power.***

§__.26(n)(23)(iv)(A) You may take caribou from a boat moving under power in Unit 23.

§__.26(n)(25)(iii)(B) You may take caribou and moose from a boat moving under power in Unit 25.

§__.26(n)(26)(iv)(A) You may take caribou from a boat moving under power in Unit 26.

Current State Regulation

General Hunting Restrictions

You may not take game by:

A motor-driven boat or motorized land vehicle, unless the motor has been shut off and the progress from the motor's power has ceased, EXCEPT:

A motor-driven boat may be used as follows:
- *in Units 23 and 26 to take caribou;*
- *in Unit 22 to position hunters to select individual wolves for harvest*
- *under the authority of a permit issued by the department*

Extent of Federal Public Lands

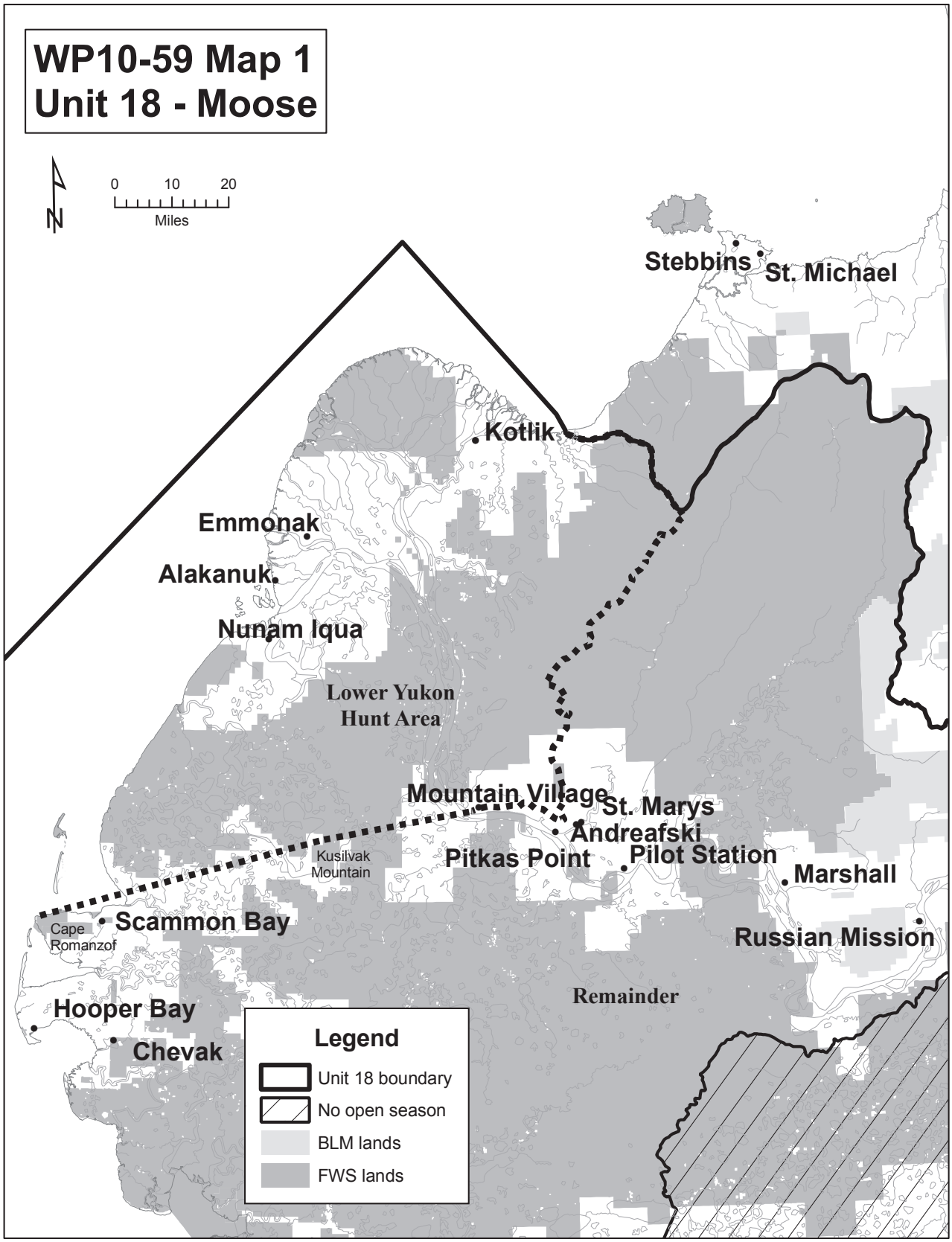
Federal public lands (Yukon Delta National Wildlife Refuge) comprise approximately 60% of the lower Yukon area of Unit 18 (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional use determination for moose in the lower Yukon area of Unit 18, which includes this hunt area.

Regulatory History

The regulation for Unit 23 allowing the harvest of caribou from a boat moving under power was adopted at the inception of the Federal Subsistence Management Program from State regulations. In 1994, the Board adopted Proposal 82 to allow the harvest of caribou from a boat moving under power in Unit 26 (FSB 1994). In 1995, the Board adopted Proposal 52 to allow the harvest of caribou and moose from a motor boat under power in Unit 25 (FSB 1995). The intent of this regulatory proposal was to "enhance and protect subsistence uses for residents of Stevens Village and other villages in Unit 25" (FWS 1995). The Board adopted the proposal as recommended by the Eastern Interior and Southcentral Subsistence


WP10-59 Map 1
Unit 18 - Moose
N
0 10 20
Miles
Stebbins
St. Michael
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Kusilvak
Mountain
Cape
Romanzof
Scammon Bay
Russian Mission
Remainder
Hooper Bay
Chevak
Legend
Unit 18 boundary
No open season
BLM lands
FWS lands

Regional Advisory Councils (FSB 1995). The Eastern Interior Council's recommendation stated that the proposal supports subsistence needs and reflects current practices.

Biological Background

In February 2008, the Yukon Delta National Wildlife Refuge and Alaska Department of Fish and Game conducted cooperative moose surveys in portions of Unit 18, including the furthest down river survey unit along the main stem of the Yukon River corridor from Mountain Village to Kotlik. The mid-point of the moose population estimate for this area was 2,828 moose when using traditional survey methods and 3,320 moose when a Sightability Correction Factor (SCF) was incorporated in the 2008 analysis (FWS 2008). Using the SCF population estimate on the lower Yukon River (from Mountain Village to Emmonak), the resulting moose density estimate was 2.8 moose/mi.^{2}. The affected area has experienced rapid population growth since the end of the moratorium in 1994 (**Figure 1)** with an average annual growth rate of 27% for the period of 1994–2008 (**Table 1**). Based on the 2008 survey results, it appears that the affected population could support additional harvest with the current population size, density, and productivity (Doolittle 2009, pers. comm.).

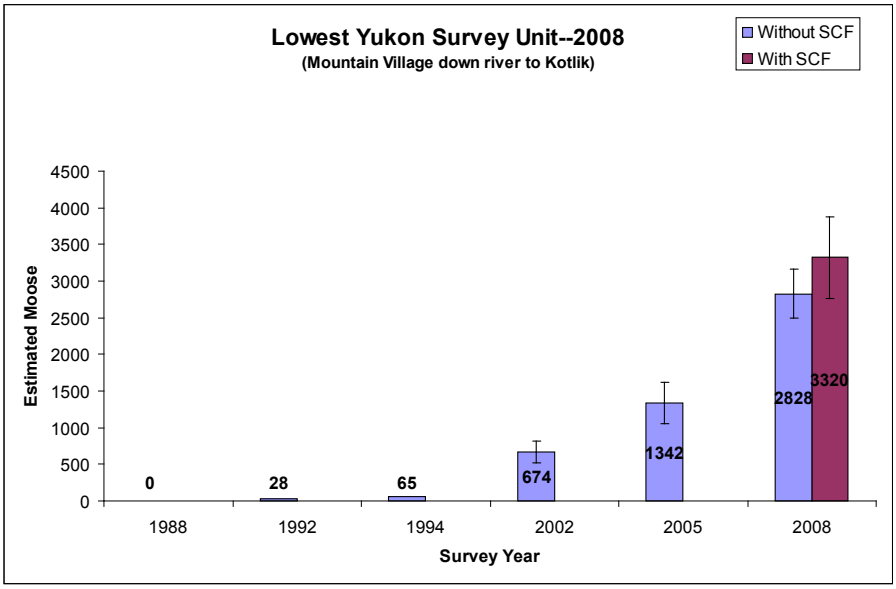


Figure 1. Moose population estimates for the lowest Yukon River survey unit, 1988–2008 (FWS 2008).

Habitat

Moose browse surveys have not been conducted within the affected area, thus there are no habitat data. Browse surveys would facilitate analysis of the impacts this moose population is having on its habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse. The Yukon Delta National Wildlife Refuge may conduct surveys of the willow species of the affected area in summer of 2010 (Doolittle 2009, pers. comm.).

Table 1. Moose population survey results for the lowest survey unit along the main stem of the Yukon River, 1988–2008 (Pappas 2009).

Survey Year	Total Moose
1988	0
1992	28
1994	65
2002	674
2005	1,342
2008	2,828 (3,320*)

* Survey total of 2,828 recalculated with use of a Sightability Correction Factor (95% c.i.).

At the Federal Subsistence Board work session in November 2009, Mr. Gene Peltola, Refuge Manager of the Yukon Delta National Wildlife Refuge, testified that if moose density continues to increase in the lower Yukon area of Unit 18, there is a risk that the population will exceed the carrying capacity of the habitat and experience a decline. Mr. Peltola stated that over the last three years there have been reports of localized calf and yearling die offs, and this past winter, reports of dead adult moose on the Yukon main stem. In addition, he stated that the refuge would prefer a proactive management approach because of the significance of the moose population to lower Yukon residents (FSB 2009).

Harvest History

Reported harvest totals from the fall 2005-2007 are provided in **Table 2**. Based on these numbers, there has been an increase in hunter success since 2005 during the fall seasons.

Table 2. Total fall moose harvest reported by year for the lower Yukon area of Unit 18, 2005–2007 (ADFG 2009).

Year	Reported fall moose harvest
2005	100
2006	117
2007	152
Total	369

Other Relevant Proposals

Proposals WP10-57, -58, and -62, request that the boundary between the lower Yukon area of Unit 18 and the remainder of Unit 18 be redefined to be a natural geographic mid-point between the two areas. If the Federal Subsistence Board adopts any of these proposals, the regulatory language in Proposal WP10-59 defining the lower Yukon area of Unit 18 will need to be rewritten to reflect the change.

Proposal WP10-56 requests that Federal Subsistence users be allowed to harvest two moose annually in the area affected by Proposal WP10-59. If WP10-56 is adopted, Federally qualified subsistence users would be required to have a Federal registration permit to participate in this moose hunt. Adoption of Proposal WP10-56 and WP10-59 would not likely create a conservation concern, because the moose population in the affected area is thought to be healthy enough to support any additional harvest.

Effects of the Proposal

Adoption of Proposal WP10-59 would allow Federal subsistence users to harvest moose in the lower Yukon area of Unit 18 from a motor-driven boat under power. The proposed regulation specifies the power setting of "low or idle" which may be open to interpretation and difficult to enforce. The harvest of a swimming moose would remain prohibited by §__.26(b)(15). Based on biological information on moose in the affected area, any additional harvest that could result from adoption of Proposal WP10-59 would not likely create a conservation concern. Adoption of this proposal would result in differences between the State and Federal regulations in the lower Yukon area of Unit 18.

OSM CONCLUSION

Support Proposal WP10-59 **with modification** to remove the words "low or idle."

The modified regulation should read:

*§__.26(n)(18)(iii)**(D) In that portion of Unit 18, north and west of a line from Cape Romanzof to Kusilvak Mountain to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, you may take moose from a boat moving under power.***

Justification

Adoption of this proposal as modified would support the current practice of subsistence users in the area to harvest moose from a boat under power. Removing the words "low or idle" from the regulation eliminates potential user interpretation and law enforcement issues that could arise from this language, simplifies the regulation, and makes it consistent with what was previously adopted for Units 23, 25 and 26.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-59 **with modification** as described in OSM Conclusion. There have been no reported accidents caused by hunting from moving boats. Resources in the area can sustain the additional harvest of moose. The moose population in the area is healthy and growing. Some people do this as a practical activity while hunting. Keeping the boat under power while hunting in the area is important for safety (to avoid sweepers, rocks, etc.).

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-59

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-59
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-59: This proposal modifies federal subsistence methods and means of taking game to allow moose to be taken while under power in a boat being operated within the Lower Yukon River hunt area in Unit 18.

Introduction: Under federal regulations § 100.26 (4) and (15), taking swimming wildlife from a moving boat is illegal. Moose population in the Lower Yukon River hunt area has increased dramatically in recent years. The population is estimated at about 3,300 moose, has high bull:cow ratios and productivity which supports fall and winter seasons. Current federal subsistence methods of take prohibit taking a moose while under power in a boat or while moose are swimming. Traditional method of harvesting moose from the Lower Yukon River hunt area has not included pursuit and take of swimming game.

Opportunity Provided by State: State regulations prohibit the take of game from boats under power in 5 AAC 92.080 (4), as follows:

> **92.080. Unlawful method of taking game; exceptions.** The following methods of taking game are prohibited:
> …
> (4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, except that a

State regulations prohibit the taking big game while swimming in 5 AAC 92.085 (7), as follows:

> **92.085. Unlawful method of taking big game; exceptions.** The following methods and means of taking big game are prohibited in addition to the prohibitions in 5 AAC 92.080:
> …
> (7) while a big game animal is swimming, except that a swimming caribou may be taken in Unit 23;

Enforcement Issues: Changing the federal subsistence method of take to include boats under power would contribute to enforcement issues related to take of big game while swimming and take of other game (e.g., waterfowl hunting). Adopting methods of take regulations that are divergent from the state hunting regulations will increase user confusion and increase enforcement problems.

Recommendation: Oppose. Federal subsistence hunting regulations only apply on federal public lands; federal subsistence hunting regulations do not apply on nonfederal lands and waters (unlike federal subsistence fishing regulations). The boat accessible waters of the Lower Yukon River are state-owned and are not subject to federal subsistence wildlife regulations.

WP10-58/62 Executive Summary	
General Description	Proposals WP10-58 and 62 request a change in the existing boundary description that separates Unit 18 Remainder and the Kuskokwim River drainage in Unit 18 relevant to the moose regulations. Proposal 62 clarifies the proposed boundary change listed in Proposal 58. *Submitted by the Native Village of Nunapitchuk*
Proposed Regulation	*Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, ~~to the easternmost point of Taksleslu k Lake~~* ***to the east bank of the Johnson River at Nunavakanukakslak Lake, continuing upriver to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake then following the south bank east to the border of Unit 18*** *and north of (and including) the Eek River drainage.*
OSM Conclusion	**Support** Proposal WP10-58/62 **with modification** to align with the recently adopted Alaska Board of Game boundary description. *Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, ~~to the easternmost point of Taksleslu k Lake~~* ***then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank easterly*** *to the Unit 18 border and north of (and including) the Eek River drainage.*
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposals WP10-58/62 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Adopt** Proposals WP10-58/62 **with modification** to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across Federal and non-Federal lands associated with the Lower Kuskokwim River federal subsistence hunt area.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-58/62

ISSUES

Proposals WP10-58 and 62, submitted by the Native Village of Nunapitchuk, request a change in the existing boundary description that separates Unit 18 Remainder and the Kuskokwim River drainage in Unit 18 relevant to the moose regulations. Proposal 62 clarifies the proposed boundary change listed in Proposal 58.

DISCUSSION

The proponent states that the Johnson River serves as a locally-known divide between the Yukon and Kuskokwim River drainages in Unit 18. The intent of the proposal is to provide a regulatory boundary reflecting locally-known land features, instead of the current Kuskokwim River drainage boundary used in the existing regulation that is not easily identified on the ground. The Johnson River is the most easily recognizable map feature in contrast to the hydrologic divide between the Yukon and Kuskokwim River drainages (USGS 1954a, 1954b, 1980).

The proponent states that the boundary change should make it easier for subsistence moose hunters to identify Unit 18 Remainder from the Kuskokwim River Drainage. The current boundary is more difficult to determine for both hunters and law enforcement and the proponent has worked with refuge staff to develop this proposal (Sundown 2010, pers. comm.).

The proponent also states that this change will provide more opportunity to harvest Yukon origin moose in the area north and west of the Johnson River. Moose found in the upper Johnson River area are associated with the high density Yukon River moose populations. The lower portion of the Johnson River area is associated with the Kuskokwim moose population and remains in the revised Kuskokwim River drainage hunt area description (Alaska Board of Game 2009).

Existing Federal Regulation

Unit 18—Moose

Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the easternmost point of Takslesluk Lake, then along the Kuskokwim River drainage boundary to the Unit 18 border and north of (and including) the Eek River drainage.

Proposed Federal Regulation

Unit 18—Moose

Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, ~~to the easternmost point of Takslesluk Lake~~ ***to the east bank of the Johnson River at Nunavakanukakslak Lake, continuing upriver to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake then following the south bank east to the border of Unit 18*** *and north of (and including) the Eek River drainage.*

Current State Regulations

Unit 18—Moose

Unit 18 Lower Kuskokwim, easterly of a line from the mouth of the Ishkowik River to the closest point of Dall Lake then to easternmost point of Takslesluk Lake then along the Kuskokwim River drainage boundary to the Unit 18 border, and north of and including the Eek River drainage.

A proposal to change the southern boundary to the Johnson River was adopted by the Alaska Board of Game at its November 2009 meeting. That boundary change will be effective when the State publishes the new regulations booklet. This proposal seeks to align the Federal boundary with the State boundary.

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, with the majority of these (62% of the unit) consisting of U.S. Fish and Wildlife Service lands and 2% consisting of Bureau of Land Management lands. **Map 1** shows the extent of Federal lands in the area, the current boundary, the proposed boundary and is located within Yukon Delta National Wildlife Refuge.

Customary and Traditional Use Determinations

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional use determination for moose in Unit 18 remainder, the area covered by this proposal.

Rural residents of Unit 18, Upper Kalskag, Aniak and Chuathbaluk have a positive customary and traditional use determination for moose in Unit 18, that portion of the Yukon River drainage upstream of Russian Mission and that portion of the Kuskokwim River drainage upstream of (but excluding) the Tuluksak River drainage, the area covered by this proposal.

Regulatory History

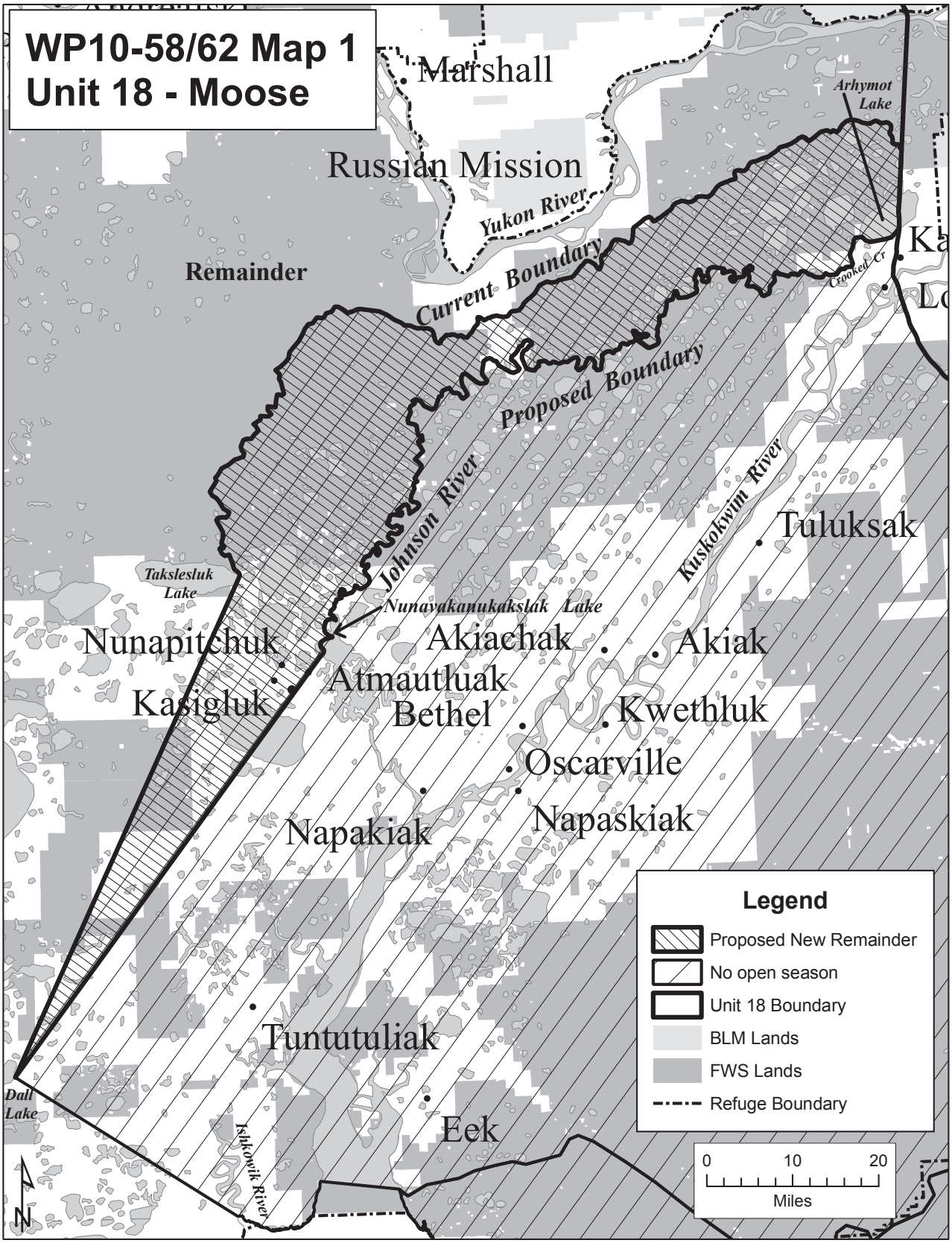
The regulatory boundary between the Unit 18 remainder and the Kuskokwim River drainage portions of Unit 18 was established by the Federal Subsistence Board in April 1995. In March 2004 the Alaska Board of Game adopted the same boundary description to separate the lower Kuskokwim River drainage from the Remainder of Unit 18 in State regulations. The Federal and State boundary descriptions have remained in alignment since the 2004/05 regulatory year.

Current Events

At its November 2009 meeting, the Alaska Board of Game adopted a boundary change that mirrors the proponent's request, but slightly amends the boundary to a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River, Crooked Creek and Arhymot Lake (Alaska Board of Game 2009). Staff from ADF&G proposed the boundary change and worked with Yukon Delta National Wildlife Refuge staff and the Lower Kuskokwim Fish & Game Advisory Committee to finalize the recommendation (Sundown 2010, pers. comm.).

Effects of the proposal

This proposal is similar to WP10-57 that addresses a boundary change on the lower Yukon River hunt area. Both proposals identify distinctive natural features to help subsistence users and law enforcement


WP10-58/62 Map 1
Unit 18 - Moose
Marshall
Russian Mission
Yukon River
Arhymot Lake
Remainder
Current Boundary
Proposed Boundary
Crooked Cr
Johnson River
Kuskokwim River
Tuluksak
Taksleslukk Lake
Nunayakanukakslak Lake
Nunapitchuk
Akiachak
Akiak
Atmautluak
Kasigluk
Bethel
Kwethluk
Oscarville
Napaskiak
Napakiak
Tuntutuliak
Dall Lake
Eek
Isikowik River
N
Legend
Proposed New Remainder
No open season
Unit 18 Boundary
BLM Lands
FWS Lands
Refuge Boundary
0
10
20
Miles

officers to determine the boundary between moose hunting areas. Both proposals have interagency and local support to change the current ambiguous boundaries.

Adoption of the proposal would provide Federally qualified subsistence users and law enforcement with a clearer boundary to separate the Kuskokwim River drainage area from the Unit 18 remainder for purposes of moose hunting.

It will allow subsistence users more opportunity to harvest healthy Yukon origin moose stocks by increasing the size of Unit 18 remainder to include the upper Johnson River area. Adoption of the proposal would also give subsistence users greater opportunity to harvest for those who access from the Kuskokwim and Johnson Rivers.

OSM CONCLUSION

Support Proposal WP10-58/62 **with modification** to align with the recently adopted Alaska Board of Game boundary description.

The modified regulation should read:

> **Unit 18— Moose**
>
> *Unit 18, that portion east of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, ~~to the easternmost point of Taksleslukk Lake~~* ***then to the east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank easterly*** *to the Unit 18 border and north of (and including) the Eek River drainage.*

Justification

The Johnson River upriver of Nunavakanukakslak Lake is an easily identified, natural geographic mid-point between the Yukon and Kuskokwim Rivers. The current boundary is more difficult to determine for both subsistence users and law enforcement.

Adoption of the proposal with modification will bring the regulatory boundary description into alignment with the recently adopted State boundary description. In addition it will simplify boundary identification for Federally qualified subsistence users and law enforcement.

The upper Johnson River area is generally associated with the healthy Yukon River moose populations. These moose are likely distinct from the Kuskokwim and lower Johnson River populations.

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USGS. 1954a. Baird Inlet topographic map. 1:250,000 scale. Reston, VA.

USGS. 1954b. Marshall topographic map. 1:250,000 scale. Reston, VA.

USGS. 1980. Russian Mission topographic map. 1:250,000 scale. Reston, VA.

REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposals WP10-58/62 **with modification** as described in OSM Conclusion. This would align with the recently adopted Alaska Board of Game boundary description. Aligning the Federal and State boundaries for the Kuskokwim area would help both subsistence hunters and law enforcement personnel.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-58/62

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-58 and WP10-62
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-58 and WP10-062: These proposals modify the boundary of the Lower Kuskokwim River federal subsistence hunt area in Unit 18 by using identifiable geographic features in an area with featureless terrain.

Introduction: The Lower Kuskokwim hunt federal subsistence hunt area in Unit 18 was closed to all hunting for 5 years to allow for population growth as moose expanded into previously unoccupied habitat associated with the Kuskokwim River drainage. In 2009-2010 regulatory year, the Alaska Board of Game approved a registration permit state hunt for residents only with a harvest quota of 75 moose based on population estimates of 1,000 moose in the hunt area. In November 2009, the Alaska Board of Game changed the hunt area boundary but made no changes to the registration permit season and bag limit based on hunter effort (approximately 1,100 applications) and total harvest (approximately 105 moose) during the first year the hunt was opened. Continued hunting with low harvest quotas will allow harvest opportunity at the same time allowing herd growth and expansion.

Impact on Subsistence Users: Improving the hunt area boundary will make it easier for federal subsistence hunters to determine the proper season and bag limit within the Lower Kuskokwim River federal subsistence hunt area and the adjoining Remainder of Unit 18 hunt area.

Opportunity Provided by State: In Unit 18, the Lower Kuskokwim River state hunt area was modified at the November 2009 Alaska Board of Game meeting. Department staff proposed the boundary change and worked with the Yukon Delta refuge and Lower Kuskokwim Fish and Game Advisory Committee to finalize the recommendation. The Board of Game approved the hunt area boundary that will be a permanent regulation in 2010-2011, as follows:

5 AAC 85.045 (a) (16). Hunting seasons and bag limits for moose.

Units and Bag Limits	Resident Open Season (Subsistence and General Hunts)	Nonresident Open Season
(16)		
Unit 18 **<u>Kuskokwim Area</u>**, that portion easterly of a line from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the **<u>east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60º 59.41' Latitude; W 162º 22.14' Longitude),</u>**		

continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the lake south bank easterly to the Unit 18 border and north of and including the Eek River drainage.		
1 antlered bull by registration permit only	Sept. 1 - Sept. 10	No open season.

Conservation Issues: Low harvests rates are sustainable based on the current minimum population size of 1,000 moose and will allow for future herd growth and expansion. The revised boundary identifies and protects the Lower Kuskokwim River moose population for future conservative management.

Enforcement Issues: Enforcement problems related to hunt area boundary will be decreased by using a line parallel to the Johnson River along portions of the hunt area to separate the Kuskokwim River drainage area from the Unit 18 Remainder. Other changes to the boundary use identifiable geographic feature in an area of broad featureless terrain.

Recommendation: Adopt with modification to use the boundary adopted by the Alaska Board of Game so there is a uniform hunt area across federal and non-federal lands associated with the Lower Kuskokwim River federal subsistence hunt area.

WP10-60 Executive Summary	
General Description	Proposal WP10-60 requests that the harvest limit for caribou in Unit 18 be reduced from three to two. S*ubmitted by the Yukon Delta Wildlife Refuge*
Proposed Regulation	**Unit 18–Caribou** *~~3~~* **2** *caribou; however, no more than 1 caribou may be taken***,** *from Aug. 1–Nov. 30* *Aug. 1–Mar. 15*
OSM Conclusion	**Support** Proposal WP10-60 **with modification**, to include a 1-bull restriction and extend the 1 caribou restriction from Aug. 1–Nov. 30 to Aug. 1–Jan. 31.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-60 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-60 **with modification** to include a 1 bull restriction and extend the 1 caribou restriction dates to August 1 through January 31 or, preferably, adopt WP10-53.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-60

ISSUES

Proposal WP10-60, submitted by the Yukon Delta Wildlife Refuge, requests that the harvest limit for caribou in Unit 18 be reduced from three to two.

Note: A similar proposal (WP10-53) requesting a reduction of the harvest limit to two caribou and additional harvest restrictions in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B is being analyzed separately.

DISCUSSION

The proponent states that the decline of the Mulchatna Caribou Herd (MCH) warrants a decrease in the harvest limit. The proposed regulatory change would align the Federal harvest limit with the existing State harvest limit of two caribou for the unit. However, State regulations are more restrictive than the Federal regulations: The State allows for the harvest of two caribou, but no more than one bull; and the State season allows for only one caribou from Aug. 1–Jan. 31 versus the Federal season that currently allows for one caribou from Aug. 1–Nov. 30.

Existing Federal Regulation

Unit 18–Caribou

3 caribou; however, no more than 1 caribou may be taken from Aug. 1–Nov. 30	*Aug. 1–Mar. 15*

Proposed Federal Regulation

Unit 18–Caribou

*~~3~~ **2** caribou; however, no more than 1 caribou may be taken**,** from Aug. 1–Nov. 30*	*Aug. 1–Mar. 15*

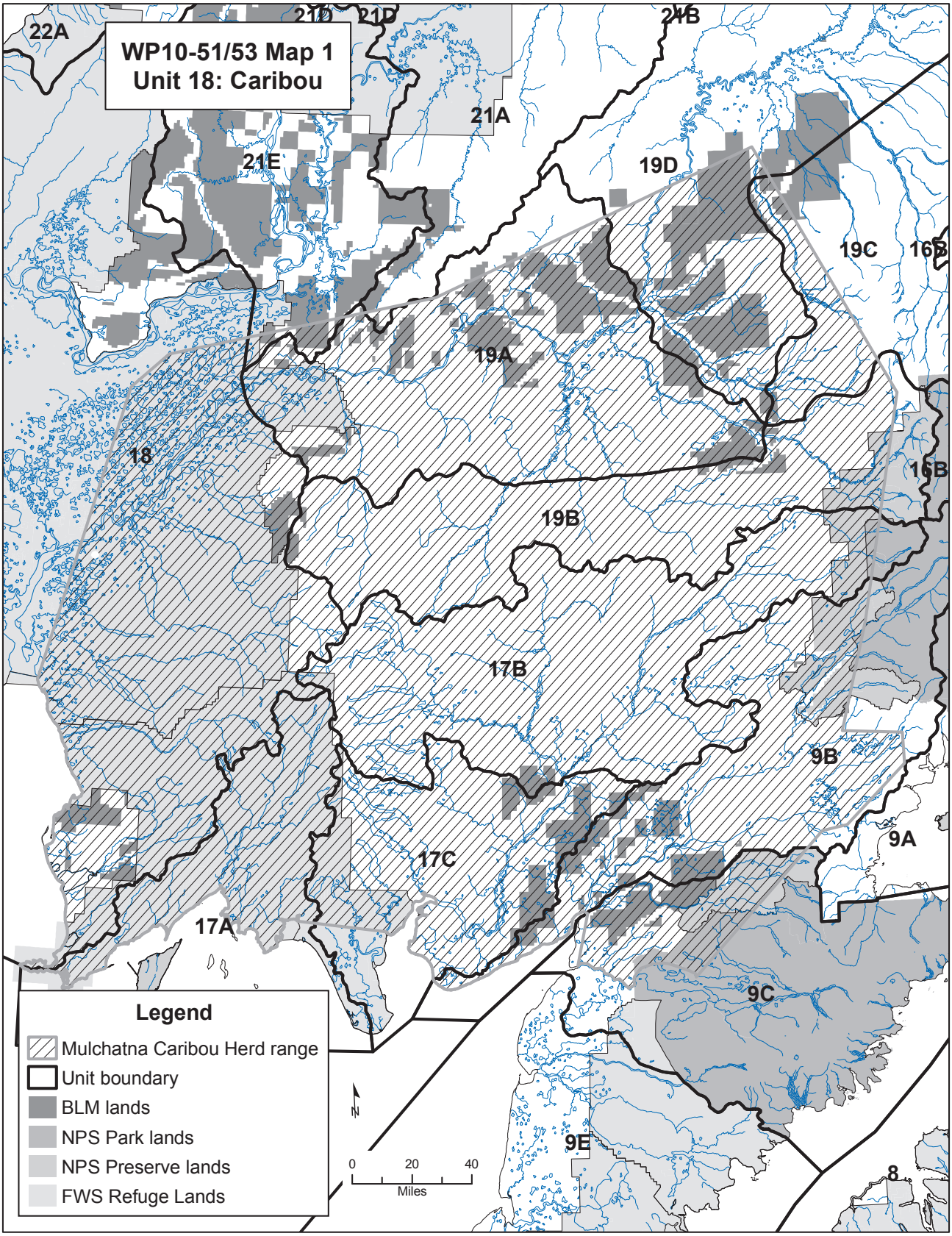
Existing State Regulations

Unit 18–Caribou

Resident: Two caribou; no more than one bull may be taken, and only one caribou may be taken from Aug. 1–Jan. 31	*Aug. 1–Mar. 15*
Nonresident	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 62% US Fish and Wildlife Service and 2% Bureau of Land Management lands (**Map 1).**


WP10-51/53 Map 1
Unit 18: Caribou
22A
21D
21D
24B
21A
21E
19D
19C
16B
19A
18
16B
19B
17B
9B
9A
17C
17A
9C
9E
8
Legend
Mulchatna Caribou Herd range
Unit boundary
BLM lands
NPS Park lands
NPS Preserve lands
FWS Refuge Lands
N
0
20
40
Miles

Customary and Traditional Use Determinations

Rural residents of Unit 18, St. Michael, Stebbins, Togiak, Twin Hills, Upper Kalskag, and Manokotak have a positive customary and traditional use determination for caribou in Unit 18.

Regulatory History

State and Federal regulations for the MCH were liberalized during the dramatic population increase that occurred in the 1990s. Numerous modifications were made to the Federal regulations for various units as the MCH population increased and expanded into new range.

In 1997, the Federal Subsistence Board (Board) adopted proposal WP97-52 with modification to increase the harvest limit from one caribou to an "up-to-five caribou" limit and to have a "to-be-announced" season between Aug. 25 and Mar. 31 in Unit 18. Previously, the season dates were Dec. 15–Jan. 9 and Feb. 23–Mar. 15. The proposal was adopted to protect the Kilbuck Caribou Herd (KCH), but also allowed more harvest on the increasing MCH that overlapped the KCH range. In 2002, because the MCH occupied Unit 18 on a more frequent basis, the Board adopted proposal WP02-28 with modification which changed the regulations to allow for a harvest of five caribou during Aug. 1–Mar. 31with no measures to protect the KCH. The MCH and KCH were believed to have been assimilated into one herd (Hinkes et al. 2005) which is now referred to as the MCH. In 2004, the Board adopted WP04-50, further liberalizing the caribou season from Aug. 1–Mar. 31 to Aug. 1–Apr. 15 for all of Unit 18.

After the population began to dramatically decline, regulations became more restrictive. In March 2006, the Alaska Game Board adopted new State regulations to reduce harvest limits within the range of the MCH from five to two caribou. In March 2007, the Alaska Game Board further restricted caribou harvest to allow no more than one bull to be taken, and no more than one caribou to be taken Aug. 1–Jan. 31. The Federal Subsistence Board followed suit and adopted proposal WP07-23 with modification to reduce the harvest limit from five caribou to three and to reduce the season from Aug. 1–Apr. 15 to Aug. 1–Mar. 15 in Units 9B; a portion of 17A; 17B; a portion of 17C; 18; a portion of 19A; and 19B. In addition, adoption of proposal WP07-23 allowed only one caribou to be taken from Aug. 1–Nov. 30 for Unit 18, which aligned with State regulations. In March 2009, the Alaska Board of Game eliminated nonresident harvest on the MCH due to the harvestable surplus being lower than the amount needed for subsistence.

Biological Background

The ADF&G's management objectives for the MCH were to maintain a population of 100,000–150,000 with a minimum bull:cow ratio of 35:100 and to maximize opportunity to hunt caribou (Woolington 2007). However, at the Feb. 27–Mar. 9, 2009 Southcentral/Southeast meeting in Anchorage, the Alaska Board of Game reduced the population objective to 30,000–80,000 caribou, citing that these numbers are more realistic for this herd (ADF&G 2009). The Alaska Board of Game also reduced harvest objectives from 6,000–15,000 to 2,400–8,000 during this meeting (ADF&G 2009). The latest photocensus provided a minimum estimate of 30,000 caribou, near the minimum population objective (Table 1) (Woolington 2009). Since 2001, bull:cow ratios have been estimated at less than 35 bulls:100 cows which is below the management objective for the herd (**Table 1**).

The MCH increased at an average annual rate of 17% between 1981 and 1996 and approximately 28% from 1992–1994. Overall herd size peaked in 1996, at approximately 200,000 animals with a peak bull:cow ratio of 42:100 (Woolington 2007). The dramatic population growth is attributed to mild winters, movements onto new unexploited range, low predation, and an estimated annual harvest of less than 5% of the population since the late 1970s (Woolington 2007). Since 1996, the population, bull:cow ratio,

Table 1. Mulchatna caribou herd composition counts and population estimates, 1991-2009 (Woolington 2007, 2009).

Regulatory Year	Bulls:100 Cows	Calves:100 cows	Composition Sample Size	Estimate of Herd Size
1991/92	—	—	—	90,000[a]
1992/93	—	—	—	115,000[a]
1993/94	42.1	44.1	5,907	150,000[a]
1994/95	—	—	---	180,000[a]
1995/96	—	—	---	190,000[a]
1996/97	42.4	34.4	1,727	200,000[a]
1997/98	—	—	—	—[b]
1998/99	40.6	33.6	3,086	—[b]
1999/00	30.3	14.1	4,731	175,000[c]
2000/01[e]	37.6	24.3	3,894	—[b]
2001/02	25.2	19.9	5,728	—[b]
2002/03	25.7	28.1	5,734	147,000[d]
2003/04[f]	17.4	25.6	7,821	—[b]
2004/05[g]	21	20	4,608	85,000[h]
2005/06[i]	13.9	18.1	5,211	—[b]
2006/07[j]	14.9	25.5	2,971	45,000[k]
2007/08[l]	23	15.8	3,943	—[b]
2008/09[m]	19.3	23.4	3,728	30,000[n]

[a] Estimate derived from photo-counts, corrected estimates, subjective estimate of the number of caribou in areas not surveyed, and interpolation between years when aerial photo surveys not conducted.

[b] No current population estimate based on surveys.

[c] Estimate based on photocensus conducted July 8, 1999.

[d] Estimate based on photocensus conducted June 30, 2002.

[e] NOTE: Fall 2000 bull:cow ratio and bull percentages corrected from previous table.

[f] Based on pooling data from surveys conducted 10/11/2003 and 10/14/2003.

[g] Based on pooling data from surveys conducted 10/12/2004 and 10/30/2004.

[h] Estimate based on photocensus conducted July 7, 2004.

[i] Based on pooling data from surveys conducted 10/10/2005 and 10/14/2005.

[j] Based on pooling data from surveys conducted 10/13-14/2006 and 10/22/2006.

[k] Based on photocensus conducted July 11,2006

[l] Based on pooling data from surveys conducted 10/7-8/2007 and 10/11/2007.

[m] Based on pooling data from surveys conducted 10/7 and 10/8/2008.

[n] Minimum estimate (Woolington 2009)

and calf:cow ratio have significantly declined (Table 1). Possible signs of stress in the MCH include an outbreak of hoof rot in 1998 and low calf:cow ratios in fall 1999 (Woolington 2001).

The MCH ranges across approximately 60,000 square miles, primarily within Units 9B, 9C, 17, 18, and 19 (**Map 1**). Wintering areas during the 1980s and early 1990s were along the north and west side of Iliamna Lake, north of Kvichak River but telemetry data indicated the MCH had been moving to the south and west for wintering (Van Daele and Boudreau 1992 *cited* in Woolington 2007). Starting in the mid-1990s, caribou from the MCH began wintering in Unit 18 south of the Kuskokwim River and southwestern Unit 19B in increasing numbers. During the winter of 2004/05, much of the herd wintered in Unit 18, south of the Kuskokwim River, and another large part of the herd wintered in the middle Mulchatna drainage. During 2005/06, large numbers wintered near the lower Kvichak River.

Harvest History

Harvest on the MCH continues to decline (Woolington 2007). Total reported MCH harvest was 2,171 in 2005, but had declined to 516 by 2008 (ADF&G 2009). The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06 (Woolington 2007).

Most of the harvest occurs in August and September (66% in 2004/05 and 47% in 2005/06) (Woolington 2007). Additionally, March also accounts for a relatively high amount of the harvest: 10% in 2004/05 increasing to 23% in 2005/06. Data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years (Woolington 2007).

Reported harvest during the other nine months has always been relatively low. Between 1991–2006, harvest in July accounted for ≤0.2% of the total annual harvest; October, November, December, January, and February accounted for ≤6%; and April accounted for ≤9% (Woolington 2007). It should be noted, however, that these data only account for the reported harvest and some harvest may be occurring that is unreported.

In Unit 18, both resident and nonresident harvest has generally declined since 2003, when the reported harvest for the unit was at the highest (**Table 2).**

Table 2. Unit 18 reported caribou harvest by residency, 2000–2008 (ADF&G 2009).

Year	Resident	Nonresident	Other	Total
2000	136	1	1	138
2001	375	5	11	391
2002	200	54	4	258
2003	559	119	29	707
2004	364	96	14	474
2005	447	80	5	532
2006	272	47	5	324
2007	352	19	3	374
2008	196	4	21	221

Effects of the Proposal

If this proposal is adopted, harvest limits would be reduced to two caribou for Unit 18 from the current harvest limit of three, which may help reduce harvest and stabilize the population.

This proposal will only affect Federally qualified subsistence users through a reduced harvest limit. Non-Federally qualified users will not be affected as harvest limits will remain the same under State regulations.

OSM CONCLUSION

Support Proposal WP10-60 **with modification**, to include a 1-bull restriction and extend the 1 caribou restriction from Aug. 1–Nov. 30 to Aug. 1–Jan. 31.

The modified regulation should read:

Unit 18–Caribou	
Unit 18—~~3~~ **2** *caribou; however,* **no more than 1 bull may be taken, and** *no more than 1 caribou may be taken from Aug. 1–~~Nov. 30~~* **Jan. 31**	*Aug. 1–Mar. 15*

Justification

Based on the declining MCH population, management concerns necessitate a reduction in harvest in order to help elevate conservation concerns for this resource. Adopting the proposal with modification may reduce overall harvest and help the population stabilize. The modification is supported by the Yukon Delta Wildlife Refuge after receiving the 2008 survey data and the OSM support for WP10-60 with modification is the same for WP10-51 and -53 with modification for the harvest limit and season dates.

Restricting harvest to one bull would help to increase the bull:cow ratio. Since 2001, the bull:cow ratios have been below ADF&G's management objective of 35 bulls:100 cows. Reducing the bull harvest should help increase the number of bulls in the herd and ensure that pregnancy rates and calf production is adequate to help increase the population.

Restricting harvest so that no more than one caribou may be taken from Aug. 1–Jan. 31 instead of Aug. 1–Nov. 30 will further reduce harvest, although slightly, and will align the Federal regulations with State regulations. The opportunity to harvest a second caribou would be reduced by approximately two months for hunters that want to harvest more than one caribou in early winter. Harvest would decrease for the hunters that opportunistically harvest more than one caribou in early winter, but do not hunt in late winter. However, opportunity would still exist for subsistence hunters that wish to harvest two caribou after Jan. 31.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-60 **with modification** as described in OSM Conclusion. The Mulchatna Caribou Herd caribou population has been declining. There is a need to for conservation of the resource and to rebuild the Mulchatna caribou population.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-60

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-60
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-60: This proposal changes the Unit 18 federal subsistence caribou bag limit to the following: 2 caribou, however, no more than 1 caribou may be taken from August 1 through November 30.

Introduction: Recent declines in the Mulchatna herd have resulted in reduced state bag limits through action by the Alaska Board of Game. The state bag limit is: 2 caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken August 1 through January 31. This proposal provides a different federal subsistence bag limit compared to the current state bag limit.

Impact on Subsistence Users: If adopted, federal subsistence users harvest limit would be reduced by one caribou.

Opportunity Provided by State: In Unit 18, the state hunting season is August 1 through March 15 for residents only with a bag limit of two caribou; however, no more than 1 bull may be taken, and no more than 1 caribou may be taken August 1 through Jan 31. Unit 18 contributes a small portion of the total Mulchatna Caribou Herd annual harvest.

Conservation Issues: Reduced harvest in the Mulchatna Caribou Herd is needed to promote herd growth. Limiting take of bulls is needed for herd growth. Limiting take to 1 caribou prior to January 31 is needed as a conservation measure to limit harvest on specific segments of the herd during fall migration period. This proposal does not limit the federal subsistence take of bull caribou. Low bull:cow ratios indicate reduction of bull harvest is needed in future management of the herd. **The department prefers proposal WP10-53 to align caribou bag limits across the range of the Mulchatna Caribou Herd.**

Enforcement Issues: Uniform federal subsistence and state bag limits would decrease the potential for enforcement problems across the mixed land ownership patterns in the area. In Unit 18, the proposed federal subsistence bag limit would be different than the state bag limit, creating confusion among hunters.

Recommendation: Support with modification to include a 1 bull restriction and extend the 1 caribou restriction dates to August 1 through January 31 or, preferably, adopt WP10-53.

WP10-61 Executive Summary		
General Description	Proposal WP10-61 requests that a moose season be established for that portion of Unit 18 within the Kanektok River drainage and south to and including the Arolik River drainage. The season dates requested are September 1 to 30 with a one antlered bull harvest limit by State registration permit. The proponent also requests that the Board delegate the authority for any needed closures in the affected area to the Togiak National Wildlife Refuge manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council. *Submitted by the Native Village of Kwinhagak IRA Council*	
Proposed Regulation	**Unit 18 — Moose**	~~*No Federal open season*~~
	Unit 18 ~~*— south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.*~~ ***Kanektok River drainage, and south to the Arolik River drainage—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.***	***Sept. 1 – Sept. 30***
OSM Conclusion	**Oppose**	
Yukon/Kuskokwim Delta Regional Council Recommendation	**Oppose**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments		
Written Public Comments	**None**	

STAFF ANALYSIS
WP10-61

ISSUES

Proposal WP10-61, submitted by the Native Village of Kwinhagak[1] IRA Council, requests that a moose season be established for that portion of Unit 18 within the Kanektok River drainage and south to and including the Arolik River drainage. The season dates requested are September 1 to 30 with a one antlered bull harvest limit by State registration permit. The proponent also requests that the Board delegate the authority for any needed closures in the affected area to the Togiak National Wildlife Refuge manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.

DISCUSSION

The proponent's intent is to establish a moose season on Federal public lands within the affected area. The proponent believes that a season should be established for the affected area because there is already a moose season on state lands and establishing a Federal subsistence moose season that would align with existing State regulations would provide a meaningful opportunity to Federal users consistent with ANILCA. The proponent also states that establishing a Federal moose season would allow hunters to access Federal public land instead of being restricted to "small enclaves of State land such as gravel bars". Finally, the proponent states that more moose will be migrating into the area from other nearby populations that have increased due to recent moratoriums on moose hunting and these moose should be available to Federally qualified users.

Existing Federal Regulation

Unit 18 — Moose	
Unit 18 south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.	*No Federal open season*

Proposed Federal Regulation

Unit 18 — Moose	~~*No Federal open season*~~
Unit 18 ~~*— south of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.*~~ ***Kanektok River drainage, and south to the Arolik River drainage—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council.***	***Sept. 1 – Sept. 30***

[1]Kwinhagak is also known as Quinhagak; the latter refers to more traditional orthography, and the former to more contemporary orthography. Orth (1971:788), the standard source for spellings of Alaska Place Names, uses the spelling of Quinhagak, while the Native Village uses Kwinhagak. Since this proposal was submitted by the Naitive Village Council, Kwinhagak is the spelling used in this analysis.

Current State Regulation

Unit 18 — Moose		
Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage – One antlered bull.	*Harvest*	*Sept. 1 – Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 61% U.S. Fish and Wildlife Service (USFWS) and 2% Bureau of Land Management (BLM) lands. Federal public lands associated this proposal consist of a portion of the Togiak NWR and limited BLM lands **(**see **Map 1)**. Drainages affected by the proposal include the Kanektok and Arolik River drainages.

Customary and Traditional Use Determinations

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional use determination for moose in the Kanektok and Arolik River drainages of Unit 18.

Regulatory History

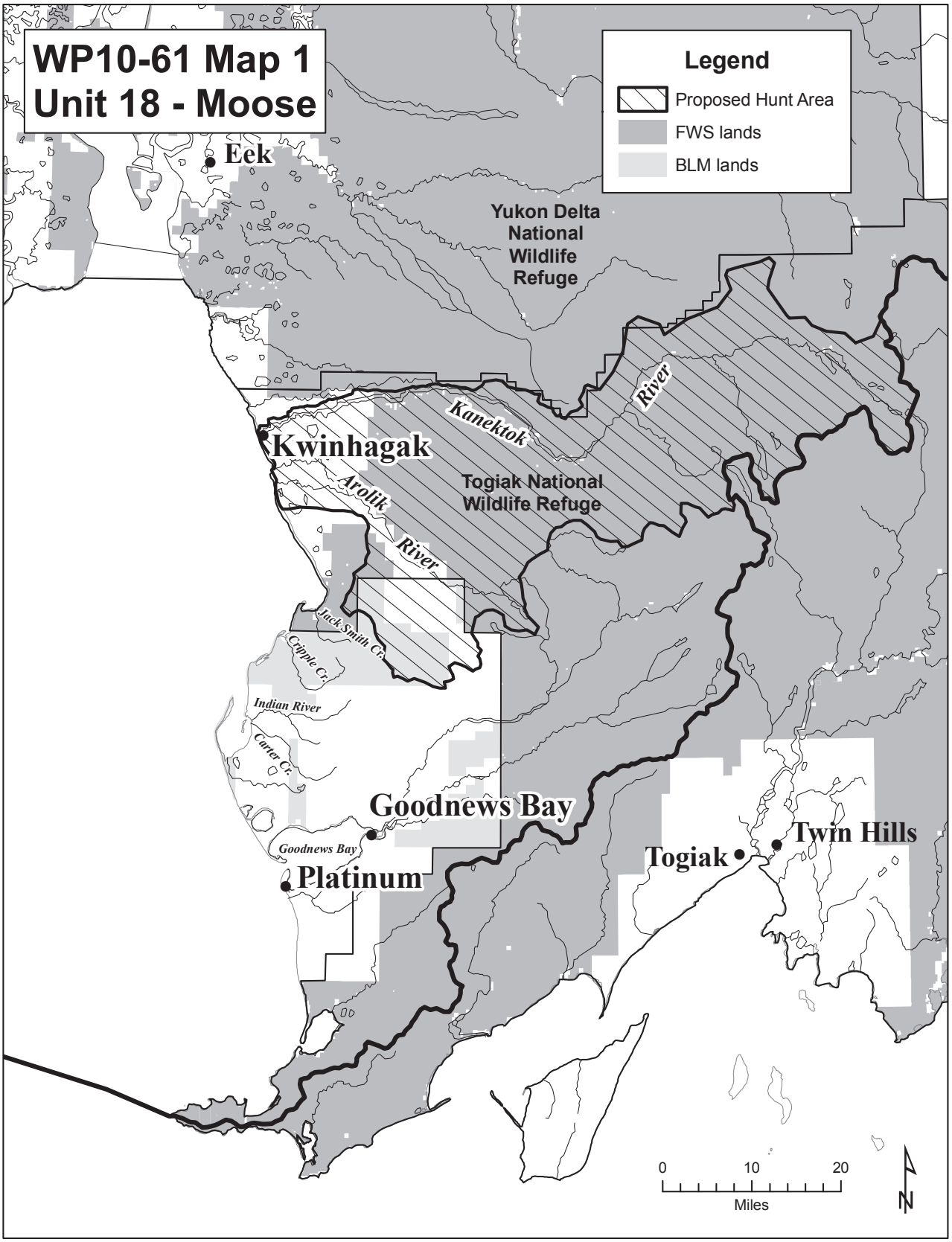
See **Appendix A**

Biological Background

Moose surveys have been conducted in late winter (February to April) in the Kanektok and Arolik River drainages in 13 of the past 19 years (Aderman 2009, pers. comm.). Annual survey counts have ranged from 0 to 10 moose (**Figure 1**) (Aderman 2009, pers. comm.). During the most recent count (April 2009), a total of 4 moose were observed, although some moose may have been "missed" due to incomplete snow cover (Aderman 2009, pers. comm.). Late winter surveys generally produce numbers lower than those seen in fall surveys due to winter mortality from predation, hunting, starvation, disease, and/or abandonment. There were no surveys conducted during six of the last 19 years due to the lack of adequate snow cover, necessary for conducting aerial moose population surveys (FWS 2008a).

The area encompassed by the Kanektok and Arolik River drainages totals about 1,400 mi^2 (Aderman 2009, pers. comm.). Good quality moose habitat (willows and cottonwood) occurs primarily along the rivers and their tributaries and is estimated to be about 180 mi^2 or 13% of the area (Aderman 2009, pers. comm.). The area could likely support an estimated 180 to 360 moose using an expansion estimate of one to two moose per square mile (Aderman 2009, pers. comm.). Similar habitat in other areas nearby are experiencing similar production levels. The Goodnews River drainage directly to the south, an area with similar habitat, had a moose hunting moratorium in place for four years (2004 to 2007). An agreement maintained a "no open season" under Federal and State regulations for the Goodnews River drainage, until a minimum total of 100 observed moose were observed in the affected area, or until 2009. In 2008 the 100 moose threshold was reached and a moose season was established. **Figure 1** shows late winter survey results for both areas from 1991 to 2009.

Late winter moose surveys should be considered as posthunt or pre-calving counts, and as such, reflect minimum counts of the population near its lowest point during any given year (Aderman 2009, pers. comm.). Thus, the prehunt or post-calving population should be larger than the late winter count, assuming similar calf production and survival rates as those observed in adjacent areas. The prehunt population in the Kanektok and Arolik River drainages has likely been less than 25 moose (Aderman


WP10-61 Map 1
Unit 18 - Moose
Legend
Proposed Hunt Area
FWS lands
BLM lands
Eek
Yukon Delta National Wildlife Refuge
Kwinhagak
Kanektok
River
Togiak National Wildlife Refuge
Arolik
River
Jack Smith Cr.
Cripple Cr.
Indian River
Carter Cr.
Goodnews Bay
Goodnews Bay
Platinum
Togiak
Twin Hills
0
10
20
Miles
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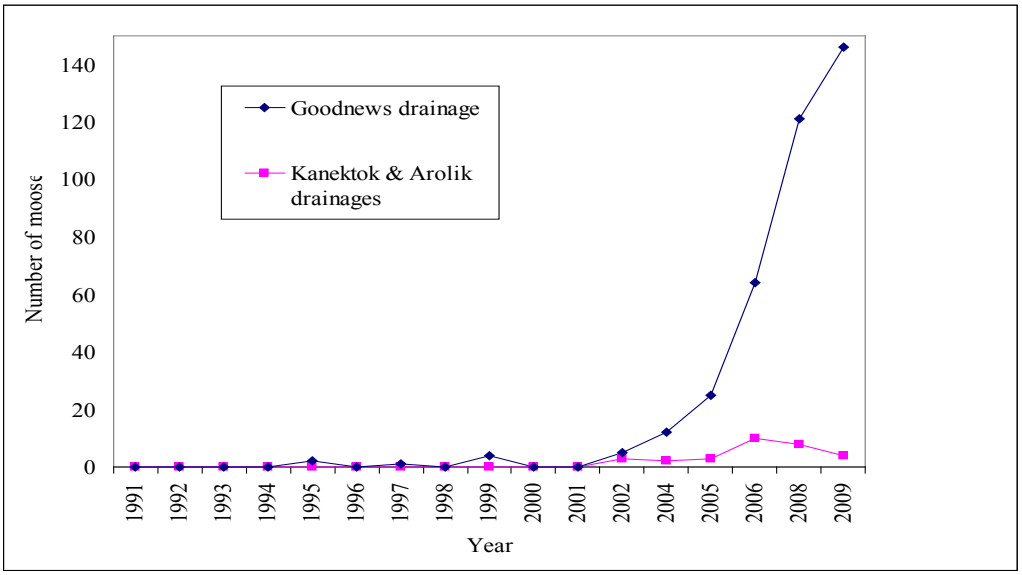

Figure 1. Moose survey counts conducted during late winter (February to April) in the Kanektok, Arolik, and Goodnews River drainages from 1991 to 2009 (Aderman 2009, pers. comm.).

2009, pers. comm.). If population growth is the objective, harvest rates should be sex and age specific and generally be less than 10 to 12 percent of the population (Timmerman and Buss 1998), which would allow no more than 2 animals for harvest in the affected area.

Harvest History

Quinhagak is located in Uniform Coding Unit (UCU) 1701 which is a subsection within Unit 18 and is situated on the Kanektok River near the Bering Sea coast (**Map 1**). UCU 1701 is the primary area of moose harvest effort for Quinhagak residents (FWS 2008b). ADF&G harvest ticket data indicates there has been an increase in reported effort and harvest by residents of Quinhagak in UCU 1701 between 1983 and 2007. Most years had a reported harvest of zero moose with more recent years of 2005, 2006, and 2007 having reported harvests of 3, 4, and 3 moose respectively (**Table 1**).

Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not always reflect the actual level of harvest, but they may provide an idea about the relative participation and where hunting occurs by community (FWS 2008b).

Effects of the proposal

Adoption of the proposal would establish a moose season on Federal public lands within the Kanektok and Arolik River drainages using a State registration permit. A State general harvest moose season has been in place in this area since at least 1990. However, Federal public lands have remained closed to moose hunting due to the low moose population and conservation concerns in the affected area. Adoption of the proposal would provide the Togiak NWR manager the authority to close the season if needed after consultation with ADF&G and the Chair of the Yukon-Kuskokwim Subsistence Regional Advisory Council. The moose population in the Kanektok and Arolik River drainages is likely less than 25 animals prior to the hunting season and the reported harvest (under the State season) has been three to six moose annually between 2005 – 2007 (**Table 1**). Even though a few moose may immigrate into the area from

Table 1. Reported number of hunters who hunted (harvested) moose in the UCU 1701 portion of Unit 18 from 1983 to 2007 (ADF&G 2009).

Year	Kwinhagak	Other Unit 18 resident	Other Alaska Resident
1983	0 (0)	1 (0)	0 (0)
1986	2 (0)	0 (0)	0 (0)
1992	8 (0)	0 (0)	0 (0)
1993	1 (0)	0 (0)	0 (0)
1994	1 (0)	0 (0)	0 (0)
1995	2 (0)	1 (0)	0 (0)
1996	1 (0)	1 (1)	0 (0)
1998	1 (0)	1 (0)	0 (0)
2000	1 (0)	1 (0)	0 (0)
2002	0 (0)	0 (0)	1 (0)
2003	2 (1)	1 (0)	0 (0)
2004	1 (1)	5 (1)	1 (0)
2005	17 (3)	6 (0)	2 (1)
2006	11 (4)	8 (2)	1 (0)
2007	11 (3)	10 (2)	1 (0)

growing populations in adjacent areas, it appears that a sustainable harvest rate of 10–12% is already being accounted for through the existing State season. Additional harvest that could occur from adoption of this regulation is likely to cause conservation concerns and be detrimental to the longer term harvest opportunities for Federally qualified subsistence users.

The recent moose hunting moratoriums in adjacent areas to the south and north of the Kanektok and Arolik River drainages have led to increased moose populations in these areas. State and Federal managers worked with local residents in those areas prior to establishing these moratoria. They have also met with the residents of Kwinhagak regarding a possible moratorium in the Kanektok and Arolik River drainages and will continue to work with local residents there to help establish a healthy moose population in their area.

OSM CONCLUSION

Oppose the proposal.

Justification

Adoption of the proposal would likely lead to additional harvest of moose on Federal public lands. It appears that the existing harvest rate of moose in the affected area is already at or possibly exceeding the rate needed to sustain the population. Additional harvest that could occur from adoption of this regulation would likely cause conservation concerns and be detrimental to the longer term harvest opportunities for subsistence users.

State and Federal managers have met with the residents of Kwinhagak regarding a possible moose hunting moratorium in the Kanektok and Arolik River drainages and will continue to work with local residents there to help establish a healthy moose population in their area.

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APPENDIX A

Regulatory history of moose hunting season and harvest limits for Unit 18 within the Kanektok and Arolik River drainages.

Federal Regulatory History — Unit 18 Moose

1990/91	*Unit 18 remainder — 1 bull*	*Sept. 1–Sept. 30* *Dec. 20–Dec. 30*
1991/92–1992/93	*Unit 18 — …and those portions contained in the…Kanektok and Goodnews drainages.*	*No open season*
	Unit 18 remainder — 1 antlered bull moose. A 10-day hunt falling sometime between Dec. 1 and Feb. 28 shall also be opened by announcement of the Federal Subsistence Board. *Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.*	*Sept. 1–Sept. 30* *Winter season to be announced*
1993/94	*Unit 18 — …and those portions contained in the… Kanektok and Goodnews drainages.*	*No open season*
	Unit 18 remainder — 1 antlered moose. A 10-day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28. *Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.*	*Sept. 1–Sept. 30* *Winter season to be announced*
1994/95	*Unit 18 — Goodnews River and Kanektok River drainages.* *Unit 18 remainder — 1 antlered moose. A 10-day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28.* *Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag.*	*No open season* *Aug. 23–Sept. 25* *Winter season to be announced*
1995/96–1997/98	*Unit 18 — Goodnews River and Kanektok River drainages.* *Unit 18 remainder — 1 antlered bull. A 10–day hunt (1 bull, evidence of sex required) will be opened by announcement sometime between Dec. 1 and Feb. 28.* *Federal public lands in Unit 18 are closed to the hunting of moose except by rural Alaska residents of Unit 18 and Upper Kalskag during Federal open seasons.*	*No open season* *Sept. 1–Sept. 30* *Winter season to be announced*
1998/99–2006/07	*Unit 18 — South of and including the Kanektok River drainages.* *Note: Regulations supporting a three-year moratorium on moose hunting in the Goodnews River drainage were established by the Alaska Board of Game for 2006/07–2008/09 and are included in Federal Subsistence Management Regulations for Harvest of Wildlife 2006/07–2008/09.*	*No open season*
2007/08	*Unit 18 — South of and including the Kanektok River drainages.*	*No open season*
2008/09	*Unit 18 — South of and including the Kanektok River drainages to the Goodnews River drainage. Federal public lands are closed to the taking of moose by all users.*	*No open Season*

State Regulatory History — Unit 18 Moose

			Resident Season
1990/91–1992/93	Remainder of Unit 18 — One bull. Evidence of sex is required	Harvest	Sept. 1–Sept. 30 Dec. 20–Dec. 30
1993/94–1994/95	Remainder of Unit 18 — One bull. Evidence of sex is required	Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced by Emergency Order during the period Dec. 20–Jan. 20 — One bull, evidence of sex is required.	Harvest	Winter season to be announced
1995/96–2003/04	Remainder of Unit 18 — One bull. Evidence of sex is required	Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced — One bull, evidence of sex is require.	Harvest	Winter season to be announced
2004/05	Remainder of Unit 18 — One bull. Evidence of sex is required	Harvest	Sept. 1–Sept. 30
	A ten-day winter season will be announced Dec. 1–Feb. 28 — One bull, evidence of sex is required.	Harvest	Winter season to be announced
2005/06	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One bull, evidence of sex is required.	Harvest	Sept. 1–Sept. 30
	Unit 18 — that portion south of and including the Goodnews River drainage.		No open season
2006/07–2007/08	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One antlered bull, evidence of sex is required	Harvest	Sept. 1–Sept. 30
	Unit 18 — …and that portion south of and including the Goodnews River drainage. Note: A three-year moratorium on moose hunting in the Goodnews River drainage was established by the Alaska Board of Game for 2006/07–2008/09.		No open season
2008/2009	Unit 18 — that portion south of the Eek River drainage and north of the Goodnews River drainage — One antlered bull, evidence of sex is required.	Harvest	Sept. 1–Sept. 30
	Unit 18 — …and that portion south of and including the Goodnews River drainage. One antlered bull by State Registration permit — RM 620. Permit available in person in Goodnews Bay Aug. 1–20. Season will be closed by emergency order when 10 bulls are taken.		Aug. 25–Sept. 20

REGIONAL ADVISORY COUNCIL RECOMMENDATION

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-61. This area has been closed under the Federal regulations. It would be premature to have a hunt authorized in the Federal regulations. There is a need to allow the moose population in the area to build up before moose harvest is allowed in the proposed area.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-61

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WP10-63/68 Executive Summary	
General Description	Proposal WP10-63 requests that the existing August 27–September 20 moose season be shifted five days later to September 1–25 within the Units 21D, 24C and 24D portions of the Koyukuk Controlled Use Area. The season length would remain the same. *Submitted by the Koyukuk/Nowitna National Wildlife Refuge* Proposal WP10-68 requests changes in seasons and harvest limits for moose in the Koyukuk Controlled Use Area portions of Units 21D, 24C, and 24D. *Submitted by the Western Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*See analysis for regulatory language.*
OSM Conclusion	**Support** Proposals WP10-63 and WP10-68 **with modification** to clarify the regulatory language for the "to be announced" seasons.
Western Interior Regional Council Recommendation	**Support** Proposals WP10-63 and WP10-68 **with modification** described in the OSM Conclusion with further modification to require a 5-inch antler stem (one-half ear length) during the April season.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Support** Proposal WP10-63. **Oppose** Proposal WP10-68
Written Public Comments	**None**

STAFF ANALYSIS
WP10-63/68

ISSUE

Proposal WP10-63, submitted by the Koyukuk/Nowitna National Wildlife Refuge (Refuge), requests that the existing August 27–September 20 moose season be shifted five days later to September 1–25 within the Units 21D, 24C and 24D portions of the Koyukuk Controlled Use Area. The season length would remain the same.

Proposal WP10-68, submitted by the Western Interior Alaska Subsistence Regional Advisory Council (Council), requests changes in seasons and harvest limits for moose in the Koyukuk Controlled Use Area portions of Units 21D, 24C, and 24D.

DISCUSSION

Both proponents are requesting that the fall season dates be changed to align Federal and State general hunting seasons in the Koyukuk Controlled Use Area portion of Units 21D, 24C, and 24D. Both proponents also stated that local residents have voiced concerns about warmer than normal temperatures occurring in the early part of the fall moose hunting season, noting that the requested September 1–25 season would align with local user preferences that favor harvesting moose during the relatively cooler part of the fall season. Both of the proponents also stated that shifting the season dates would avoid an administrative burden on the Refuge staff. If the current Federal-only August 27–31 season were to remain in effect, there would be a need to conduct extensive public outreach, and for staff to operate a moose hunter check station on the lower Koyukuk River during August 25–September 2 (in addition to the Nowitna River Moose Hunters Check Station already operated August 26–October 2 by Refuge staff). Separate Federal permits would also have to be printed, issued, enforced and collected if the dates are not changed. ADF&G staff operates the Koyukuk River Moose Hunter Check Station at Ella's Cabin, from approximately August 29–September 28 each year, where the State registration permits for hunt RM-832 are issued and the hunt is administered, monitored and enforced. If the Federal season dates are shifted to match the State's season, then Federally qualified users would continue to hunt under the State registration permit and utilize the same check station.

The proponent of WP10-68 believes there is a harvestable surplus of cow moose, albeit a very limited one, in the Koyukuk Controlled Use Area, and wants to retain the opportunity to harvest cows during the March 1–5 "to be announced" season, which is the traditional and preferred time of year when local hunters harvest cows. However, the proponent would like to suspend cow harvest to help allow the population to recover. To accomplish this, the proponent is requesting a five-year moratorium on cow harvest during the September 1–5 "to be announced" season, during which 1 antlerless moose may be taken. In reality, this makes the harvest limit "1 bull". However, the proponent specifically wants the "1 antlerless moose" limit wording to remain in regulation (WIRAC 2009).

A review of the Council's October 2009 meeting transcripts revealed that the proponent wants the proposed April 10–15 "to be announced" season to be mandatory if there is no March 1–5 "to be announced" season in the same year (WIRAC 2009).

Existing Federal Regulations

Unit 21D — Moose	
Unit 21D Koyukuk Controlled Use Area – 1 moose; however, antlerless moose may be taken only during Aug. 27–31 and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 27–Sept. 20 season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and Middle Yukon Fish and Game Advisory Committee.	*Aug. 27–Sept. 20* *Mar. 1–5 season to be announced.*
Unit 24C and 24D — Moose	
Unit 24C and 24D, that portion within the Koyukuk Controlled Use Area and Koyukuk National Wildlife Refuge – 1 moose; however, antlerless moose may be taken only during Aug. 27–31 and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. During the Aug. 27 –Sept. 20 season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Middle Yukon and Koyukuk River Fish and Game Advisory Committees.	*Aug. 27– Sept. 20* *Mar. 1–5 season to be announced.*

Proposed Federal Regulations — WP10-63

Unit 21D — Moose	
*Unit 21D Koyukuk Controlled Use Area – 1 moose; however, antlerless moose may be taken only during ~~Aug. 27–31~~ **Sept. 1–5** and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. During the ~~Aug.~~ **Sept. 1**–~~20~~ –**25** season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and Middle Yukon Fish and Game Advisory Committee.*	~~*Aug. 27–*~~***Sept. 1***– ~~20~~ **25*** *Mar. 1–5 season to be announced.*

Unit 24C and 24D — Moose

*Unit 24C and 24D, that portion within the Koyukuk Controlled Use Area and Koyukuk National Wildlife Refuge – 1 moose; however, antlerless moose may be taken only during ~~Aug. 27–31~~ **Sept. 1–5** and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. During the ~~Aug.~~ **Sept. 1**–~~20~~ –**25** season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Middle Yukon and Koyukuk River Fish and Game Advisory Committee.*	~~Aug. 27–~~**Sept**. **1**– ~~20~~ **25** *Mar. 1–5 season to be announced.*

Proposed Federal Regulations — WP10-68 [1]

Unit 21D — Moose

*Unit 21D Koyukuk Controlled Use Area – 1 moose; however, antlerless moose may be taken only during ~~Aug. 27–31~~ **Sept. 1–5*** and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. **The harvestable surplus of cows will be determined for a quota. If it determined there is not a harvestable cow surplus, then a harvestable bull quota will be set, and to be taken from April 10 to April 15.** During the ~~Aug. 27–Sept. 20~~ **Sept. 1–25** season, a State registration permit is required. During the **five day to be announced season between** Mar. 1–5 ~~season~~, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Middle Yukon **and Koyukuk River** Fish and Game Advisory Committees.* ***A moratorium on cow moose harvest during the Sept. 1–5 season would remain in effect until July 1, 2016, but does not affect harvest for mortuary purposes.***	~~Aug. 27–~~**Sept**. **1**– ~~20~~ **25** *Mar. 1–~~5~~ **April 15** season to be announced*

[1] Per discussions with the proponent and further examination of meeting transcripts, it was determined that the intended dates for the fall season (Sept.1–25) and the intended dates for the requested cow moose moratorium were incorrectly shown in the proposal. The correct dates are shown here as the basis for the analysis.

Unit 24C and 24D — Moose

*Unit 24C and 24D, that portion within the Koyukuk Controlled Use Area and Koyukuk National Wildlife Refuge – 1 moose; however, antlerless moose may be taken only during ~~Aug. 27–31~~ **Sept. 1–5*** and the Mar. 1–5 season, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. **The harvestable surplus of cows will be determined for a quota. If it is determined there is not a harvestable cow surplus, then a harvestable bull quota will be set, and to be taken from April 10 to April 15.** During the ~~Aug. 27–Sept. 20~~ **Sept. 1–25** season, a State registration permit is required. During the **five day to be announced season between** Mar. 1–5 ~~season~~, a Federal registration permit is required. Announcement for the antlerless moose seasons and cow quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Middle Yukon Fish and Koyukuk River Game Advisory Committees.* ***A moratorium on cow moose harvest during the Sept. 1–5 season would remain in effect until July 1, 2016, but does not affect harvest for mortuary purposes.***	*~~Aug. 27–~~**Sept**. **1**– ~~20~~ **25*** *Mar. 1–~~5~~ **April 15** season to be announced.*

Existing State Regulations

Units 21D, 24C and 24D — Moose			
Unit 21D within the Koyukuk Controlled Use Area	*Resident: One bull by permit, available at Ella's Cabin check station, Huslia, or Hughes beginning Aug. 31. Trophy value must be destroyed.*	*RM-832*	*Sept. 1–Sept. 25*
	Resident: One bull with 50-inch antlers or 4 or more brow tines on at least one side by permit.	*DM-828/830*	*Sept. 5–Sept. 25*
	Nonresident: One bull with 50-inch antlers or 4 or more brow tines on at least one side by permit.	*DM-823/825/827/829*	*Sept. 5–Sept. 25*
Unit 24C within the Koyukuk Controlled Use Area	*Resident: One bull by permit available at Ella's Cabin check station, Huslia or Hughes beginning Aug. 31. Trophy value must be destroyed.*	*RM-832*	*Sept. 1–Sept. 25*
	Resident: One bull by permit	*DM-828/830*	*Sept. 5–Sept. 25*
	Resident: One bull	*Harvest*	*Dec. 1–Dec. 10*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit.	*DM-823/825 827/829*	*Sept. 5–Sept. 25*

Unit 24D within the Koyukuk Controlled Use Area	*Resident: One bull by permit available at Ella's Cabin check station, Huslia or Hughes beginning Aug. 31. Trophy value must be destroyed.*	*RM-832*	*Sept. 1–Sept. 25*
	Resident: One bull by permit	*DM-828/830*	*Sept. 5–Sept. 25*
	Resident: One bull	*Harvest*	*Dec. 1–Dec. 10*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit.	*DM-823/825 827/829*	*Sept. 5–Sept. 25*

State Management Objectives

Unit 21D

- Maintain a moose population of 9,000–10,000 for the subunit.
- Provide for a harvest of moose not to exceed 700 moose or 7% of the annual moose population estimate each regulatory year.
- Provide for moose hunting opportunity not to exceed 950 hunters per regulatory year.
- In combination with Unit 24, implement at least two habitat enhancement activities every five years.
- Reduce meat spoilage by hunters.
- Reduce the amount of spoiled meat observed at Ella's cabin and at hunting camps by 10% each regulatory year.
- Increase the number of people engaging in non consumptive uses of wildlife by >1% each regulatory year.

Unit 24

- Maintain a moose population of 10,000–12,000.
- Provide for a harvest of moose not to exceed 360 moose or 5% of the annual moose population estimate each regulatory year.
- Provide for moose hunting opportunity not to exceed 500 hunters per regulatory year.
- In combination with Unit 21D, implement at least two habitat enhancement activities every five years.
- Reduce the amount of spoiled meat observed at Ella's Cabin and at hunting camps by 10% each regulatory year.
- Increase the number of people engaging in nonconsumptive uses of wildlife by >1% each regulatory year

Extent of Federal Public Lands

Federal public lands comprise approximately 50% of Unit 21D and consist of 28% U.S. Fish and Wildlife Service and 22% Bureau of Land Management lands (see **Unit 21 Map**). Federal public lands comprise approximately 64% of Unit 24 and consist of 22% National Park Service, 21% Bureau of Land Management, and 21% U.S. Fish and Wildlife Service lands (see **Unit 24 Map**). These proposals address only the Koyukuk Controlled Use Area, of which the majority is U.S. Fish and Wildlife Service lands.

Customary and Traditional Use Determinations

Residents of Unit 21D, Huslia and Ruby have a positive customary and traditional use determination for moose in Unit 21D.

Residents of Unit 24, Anaktuvuk Pass, Koyukuk, and Galena have a positive customary and traditional use determination for moose in Unit 24.

Regulatory History

Local accounts of difficulties in harvesting moose in Unit 21 during the earlier part of the fall season resulted in numerous Special Action requests submitted to the Federal Subsistence Board from 2004 to 2008 requesting later season dates.

The Fall season dates were originally September 1–25, but were changed beginning with the 1999/2000 regulatory year to 27 August–September 20 at the request of local users (Stout 2010, pers. comm.). At its March 2008 meeting, the Alaska Board of Game adopted State Proposals 63 and 80, shifting the State season (RM-832) five days later for the entire Koyukuk Controlled Use Area, from August 27–September 20 to September 1–25. This change was requested by the Middle Yukon Fish and Game Advisory Committee and was supported by the Koyukuk River Fish and Game Advisory Committee and the Council. Special Action requests were granted by the Federal Subsistence Board in 2008 and 2009 to match the Federal season dates with these dates.

Biological Background

Unit 21D within the Koyukuk Controlled Use Area

Koyukuk River Mouth, Pilot Mountain, and Squirrel Creek Trend Count Areas (TCAs) Combined, Unit 21D

These trend count areas lie on the southern periphery of the Unit 21D portion of the Koyukuk Controlled Use Area, but are pertinent because of seasonal moose movements between the two areas. Results from November 2009 surveys in these three TCAs indicate a stable moose population and revealed a total of 774 cows which was higher than the 2001–2008 average of 660 cows observed in the three TCAs (**Table 1**) (Bryant and Scotton 2008). During the 2009 survey 195 bulls were observed, an increase from previous years. The 2009 bulls:100 cow ratio and the yearling bulls:100 cows ratio decreased slightly from the previous year (**Table 1**) due to the high number of cows observed. During the November 2009 survey only 130 calves were observed, down substantially from the previous eight-year average of 237 calves. The 2009 calf:cow ratio was 17 calves:100 cows, lower than the management objective of 30–40 calves:100 cows for the lower Koyukuk River moose population (ADF&G 2001, Bryant and Scotton 2009). This lower ratio can be explained partially due to recent years of good production and recruitment. Cows typically are 3 years or older when they first reproduce, and 4 years or older when they begin to produce twins, depending on body condition.

Dulbi River Mouth and Three Day Slough TCAs Combined, Unit 21D

These combined TCAs cover a discontinuous area (the two are not connected, but are within a few miles adjacent to each other along the Koyukuk River south of Roundabout Mountain.) totaling 277 mi² (Bryant and Scotton 2009). There were increases in 2008 within the combined TCAs for the adult cow and bull components of the population. The number of bulls was again high in 2009, despite annual harvest, and cow numbers were nearly identical to the high number observed in 2008. Results from the 2008 and 2009 survey showed that overall cow numbers increased substantially to 1,081 and 1,080 respectively, and were well above the average of 827 observed between 2002 and 2007. However, the number of cows (135) with calves was substantially lower than the highs of 248 and 302 seen in 2007 and 2006, respectively (**Table 2).** The number of twins observed in the fall surveys has been steadily declining since 2006. Total

Table 1. Combined TCAs, Koyukuk River Mouth (KRM), Pilot Mt. Slough (PMS), and Squirrel Creek (SC), 2001–2009 GSPE Summary, Koyukuk NWR, Alaska (Bryant and Scotton 2009).

Year	Total Bulls	Total Cows	Total Calves	Total moose	Total yrlg bulls	Bulls/100 cows	Calves/100 cows	Yrlgbulls/ 100 cows	Total cows w/ twins	Total cows w/ calves	Twins/100 cows/calv.
2001	234	687	136	1057	51	34	20	7	3	133	2
2002	179	583	260	1022	33	31	46	6	24	235	10
2003	159	693	253	1105	69	23	37	10	23	230	10
2004	185	684	301	1170	75	27	44	11	30	271	11
2005	152	623	238	1013	51	24	38	8	20	217	9
2006	136	634	180	950	44	22	28	7	17	164	10
2007	174	717	290	1181	66	24	41	9	25	264	10
2008	183	641	202	1026	76	29	32	12	13	189	7
2009	195	774	130	1099	72	25	17	9	3	127	2

observed bulls for 2008 and 2009 increased from 2005 (**Table 2**), which is indicative of good production and recruitment (Bryant and Scotton 2009). The 2009 bull:cow ratio of 29 bulls:100 cows was adequate for breeding. The yearling bull:100 cows ratio increased slightly the last three years from the 2001–2006 average of 7 yearling bulls:100 cows (Bryant and Scotton 2009).

Units 24C and 24D within the Koyukuk Controlled Use Area

The combined TCAs cover a contiguous area north/northeast of Huslia totaling 306 mi². Results from the 2009 surveys revealed an adult moose population of 1,195 up from the counts observed in both 2007 and 2008 (**Table 3**). Results also revealed that yearling-bull recruitment was adequate to maintain the adult bull population at 12 yearling bulls:100 cows. Recruitment has been consistently good, between 10 and 12 yearling bulls:100 cows since 2003. The 2009 production/survival-to-fall (the number of first-year calves that survived to November) was only 15 calves:100 cows, lower than any year since 2001 (**Table 3**). During the 2009 survey, 908 cows were observed, and the number is back to the long term average, after the decrease observed in 2008. A total of 354 bull moose were observed during the survey, which was above the 2001–2008 average of 282 bulls. The 2009 bull:cow ratio was 37 bulls:100 cows.

Note: the lower number of cows observed (798) in November 2008 prompted the closure of the March 2009 antlerless season.

Harvest History

For the period of 2006–2008, the number of registered hunters averaged 418 for the fall season in the Koyukuk Controlled Use Area portion of Units 21D, 24C, and 24D. In 2009, there was a 25% increase in the number of hunters to 522 (**Table 4**) (Stout 2010, pers. comm.).

The number of moose harvested increased by 21% in 2008 and an additional 8% in 2009, as compared to 2007 (**Table 5**) (Stout 2010, pers. comm.).

Effects of the Proposals

Adoption of these proposals would shift the Federal fall moose season in the Koyukuk Controlled Use Area portion of Units 21D, 24C, and 24D from August 27–September 20 to September 1–25. This change would address local concerns of warmer temperatures that occur during the early part of the current fall moose season.

Adoption of the proposals would align the Federal and State general fall hunting seasons for the affected area. This would reduce regulatory complexities which could reduce law enforcement issues.

The requested regulatory changes would eliminate a potentially significant administrative burden on Refuge staff if the current Federal-only August 27–31 season were to remain in effect.

Adoption of WP10-68 would make the April 10–15 “to be announced” season for bulls mandatory if there is no March 1–5 “to be announced” season for cows in the same year. However, if the harvest quota for bulls were determined to be zero for any particular year, there would then be no “to be announced” season in April.

Note: The Koyukuk/Nowitna National Wildlife manager does not support this mandatory aspect and believes he should retain managerial discretion for both “to be announced” seasons based on the biological status of the population (Moos 2009, pers. comm.).

Table 2. Combined TCAs, Dulbi River and Three-Day Slough, 2001–2008 GSPE Summary, Koyukuk NWR, Alaska (Bryant and Scotton 2009).

Year	Total Bulls	Total Cows	Total Calves	Total moose	Total yrlg bulls	Bulls/100 cows	Calves/100 cows	Yrlg bulls/100 cows	Total cows w/ twins	Total cows w/ calves	Twins/100 cows w/ calves
2001	178	862	117	1157	49	21	14	6	2	117	2
2003	155	904	198	1257	62	17	22	7	12	186	7
2004	183	820	229	1232	66	22	28	8	14	214	7
2005	156	743	161	1060	47	21	22	6	9	152	6
2006	224	901	341	1466	59	25	38	7	38	302	13
2007	250	732	270	1252	81	34	37	11	22	248	9
2008	322	1081	242	1645	98	30	22	9	13	229	6
2009	317	1080	140	1537	93	29	13	9	5	135	4

Table 3. Combined TCAs, Huslia Flats and Treat Island, 2001–2008 GSPE Summary, Koyukuk NWR, Alaska (Bryant and Scotton 2009).

Year	Total Bulls	Total Cows	Total Calves	Total moose	Total yrlg bulls	Bulls/100 cows	Calves/100 cows	Yrlg bulls/100 cows	Total cows w/ twins	Total cows w/ calves	Twins/100 cows w/ calves
2001	260	889	110	1259	51	29	12	6	1	108	1
2003	274	889	217	1380	85	31	24	10	7	206	3
2004	308	929	296	1533	102	33	32	11	23	271	9
2005	252	895	171	1318	103	28	19	12	3	162	2
2006	341	906	304	1551	93	38	34	10	23	281	8
2007	290	870	235	1395	100	33	27	12	15	219	7
2008	251	798	184	1233	95	32	23	12	10	174	6
2009	334	908	137	1379	113	37	15	12	10	127	8

Table 4. Hunter registration from ADF&G reported harvest returns for fall hunts RM-832, DM-823, -825, -827, -828, -829, and 830 for the Koyukuk Controlled Use Area portion of Units 21D, Unit 24C, and Unit 24D (Stout 2010, pers. comm.).

Year	Total Hunter Registration	Total Local Hunter Registration*	Total Other AK Res. Hunter Registration	Total Nonres. Hunter Registration
2006	433	265	157	11
2007	400	239	150	11
2008	422	229	177	16
2009	522	281	214	16

*Local communities include Kaltag, Nulato, Koyukuk, Galena, Ruby, Huslia, Hughes and Allakaket.

Table 5. Harvest by residency and success rates from ADF&G reported harvest returns for fall hunts RM-832, DM-823, -825, -827, -828, -829, and 830 for the Koyukuk Controlled Use Area portion of Units 21D, Unit 24C, and Unit 24D (Stout 2010, pers. comm.).

Year	Total Moose Harvest	Total Local Res. Harvest*	Total Other AK Res. Harvest	Total Nonres. Harvest	Local Res. % Success*	Other AK Res. % Success	Nonres. % Success
2006	167	92	67	8	36	49	84
2007	158	81	68	9	34	53	100
2008	201	102	87	12	51	64	86
2009+	222	109	104	9	45	49	56

*Local communities include Kaltag, Nulato, Koyukuk, Galena, Ruby, Huslia, Hughes and Allakaket.

A five year moratorium on cow moose harvest would go into effect for the September 1–5 “to be announced” season, during which 1 antlerless moose may be taken. Cow harvest would still be allowed in the March 1–5 “to be announced” season, which is the traditional and preferred time of year when local hunters harvest cows, if it is determined there is a harvestable surplus in any given year. A moratorium on cow harvest during the September 1–5 season would, in reality, make the harvest limit “1 bull”. However, the proponent specifically wants the “1 antlerless moose” wording to remain in regulation (WIRAC 2009).

Other Alternative Considered

A range of March 1–April 15 for the two “to be announced” seasons was considered. These dates would provide more flexibility to the refuge manager in responding to weather conditions and would conceivably even allow for a bull harvest March 1–5, if there were no harvestable surplus of cows during those dates. However, in general, both managers and hunters prefer consistent hunting season dates over a floating time period

A review of the Council’s October 2009 meeting transcripts revealed that there was much discussion about the dates of the Winter/Spring hunts, with the proponents of both proposals affirming the specific dates of March 1–5 and April 10–15 for the “to be announced” seasons (WIRAC 2009).

Current Events

During discussion of the proposal at the Council's 24-25 February 2010 meeting, the ADF&G Area Biologist in Galena offered and spoke to State Proposal 90A as an alternative for consideration. Proposal 90A requested a four-month winter/spring season (December 15-April 15) and a limit of one antlered bull with a minimum 5-inch antler on one side, in portions of Units 24B and 24C, with a four-year sunset clause (effective through June 30, 2014).

The Council was in agreement with the OSM Conclusion, but made an additional modification to the April 10-15 season to include the minimum 5-inch antler restriction (WIRAC 2010) put forth by the State Area Biologist. At its March 2010 meeting, the State Board of Game adopted Proposal 90A with a limit of one antlered bull, but did not adopt the minimum 5-inch antler restriction, due to the reported difficulty with accurately determining the size of an antler in the field. The Council is scheduled to discuss and reevaluate its recommendation on this proposal, in light of the March 2010 Board of Game action, during its teleconference on 14 May 2010. The outcome of the discussion will be reported at the Federal Subsistence Board 18-21 May 2010 meeting.

OSM CONCLUSION

Support Proposals WP10-63 and WP10-68 **with modification** to clarify the regulatory language for the "to be announced" seasons.

The proposed regulations would read:

Unit 21D — Moose	
Unit 21D Koyukuk Controlled Use Area – 1 ***bull*** *~~moose; however,~~*	*~~Aug. 27–~~**Sept**. **1**– ~~20~~* ***25***
1 antlerless moose by Federal permit *~~may be taken only during Aug. 27–31 and the Mar. 1–5 season~~, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited.* ***A harvestable surplus of cows will be determined for a quota.***	*Mar. 1–5 season to be announced*
or	***or***
1 bull by Federal permit, if there is no Mar. 1–5 season and if authorized by announcement by the Koyukuk/ Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. A harvestable surplus of bulls will be determined for a quota. *~~During the Aug. 27–Sept. 20 season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required.~~*	***Apr. 10–15 season to be announced***

*Announcement**s** for the ~~antlerless moose~~ **March and April** seasons and ~~cow~~ **harvest** quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and Middle Yukon **and Koyukuk River** Fish and Game Advisory Committee**s**.*	
Unit 24C and 24D — Moose	
*Unit 24C and 24D, that portion within the Koyukuk Controlled Use Area and Koyukuk National Wildlife Refuge — 1 **bull** ~~moose; however,~~*	*~~Aug. 27–~~**Sept**. **1**– ~~20~~ **25***
1 antlerless moose by Federal permit** ~~may be taken only during Aug. 27–31 and the Mar. 1–5 season~~, if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. Harvest of cow moose accompanied by calves is prohibited. **A harvestable surplus of cows will be determined for a quota.	*Mar. 1–5 season to be announced*
or	***or***
1 bull by Federal permit, if there is no Mar. 1–5 season and if authorized by announcement by the Koyukuk/Nowitna National Wildlife Refuge Manager and BLM Central Yukon Field Office Manager. A harvestable surplus of bulls will be determined for a quota. ~~During the Aug. 27–Sept. 20 season, a State registration permit is required. During the Mar. 1–5 season, a Federal registration permit is required.~~*	***Apr. 10–15 season to be announced***
*Announcement**s** for the ~~antlerless moose~~ **March and April** seasons and ~~cow~~ **harvest** quotas will be made after consultation with the ADF&G Area Biologist and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and Middle Yukon and Koyukuk River Fish and Game Advisory Committee**s**.*	

Justification

The requested five-day shift of the fall season would provide a locally preferred opportunity to harvest moose during a typically cooler period of the fall season.

Adoption of the proposal would align Federal and State fall moose seasons in the Koyukuk Controlled Use Area portion of Units 21D, 24C, and 24D, would reduce regulatory complexities due to mixed land jurisdictions with different seasons and would eliminate a potentially significant administrative burden on the Refuge staff if the current Federal-only August 27–31 season were to remain in effect.

The April 10–15 "to be announced" season for bulls will not be mandatory if there is no March 1–5 "to be announced" season for cows in the same year, as the Koyukuk/Nowitna National Wildlife manager should retain managerial discretion for both seasons, based on the biological status of the population.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

WESTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposals WP10-63 and WP10-68 **with modification** as described in the OSM Conclusion with further modification to require a 5-inch antler stem (one-half ear length) during the April season. The Council noted that local residents need a winter hunt and the recommended dates are at times when travel is still possible.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-63/68

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-63 and WP10-68
April 30, 2010; Page 1 of 3

Alaska Department of Fish and Game
***Comments to the Federal Subsistence Board* DRAFT**

Wildlife Proposal WP10-63: This proposal by Koyukuk/Nowitna Refuge would change season dates in the Koyukuk Controlled Use Area Registration federal subsistence moose hunt in Units 21D, 24C, and 24D from August 27 through September 20 to September 1 through 25.

Wildlife Proposal WP10-68: Four changes are proposed by the Western Interior Regional Advisory Council: 1) in Koyukuk Controlled Use Area portion of Units 21D, 24C, and 24D, expand late winter season from 5 days (March 1 through 5) to 45 days (March 1 through April 15); 2) establish a federal subsistence quota for moose in the late winter season; 3) establish a moratorium on cow moose harvest; and 4) shorten the fall federal subsistence season by 5 days. The Council subsequently modified the proposal to align the fall season in the Koyukuk Controlled Use Area to match the State fall season of September 1 through September 25.

Introduction: Proposal WP10-63 seeks to align the 24-day federal subsistence moose hunting season with the 24-day state season that was adopted by the Alaska Board of Game in 2008. Special Action Requests that accomplished this change were endorsed by the Federal Subsistence Board and federal subsistence managers in 2008 and 2009. This proposal eliminates the need for annual Special Action Requests.

Proposal WP10-68, as modified by OSM and the Council, would move the fall season to a later date to match the state season, retain the requirement to use the State registration permit, and authorize a March antlerless hunt with a federal permit requirement only after consultation with the Department confirming a harvestable surplus of cows determined for a quota. It also offers a bull by federal permit if no March antlerless season occurs.

Impact on Subsistence Users: An average of 392 hunters harvested an average of 145 moose from RY01 through RY09, as reported on the RM832 subsistence registration permit. Hunters have voiced concerns that warmer fall temperatures reduce hunter success in the late August portion of the season. Proposal WP10-63 will allow hunting later into September when temperatures are cooler and moose are moving to likely improve harvest success.

Proposal WP10-68 would provide an additional 45 days in late winter, assuming the intent was to keep 5 days of opportunity in March 15 though April 15. There would be flexibility in the ability of federal managers to open the season depending on favorable weather. Proposal WP10-68, through the moratorium, would eliminate antlerless moose harvest in regulation, which would benefit federal subsistence users, because the moose population will grow and the harvestable surplus will increase. Proposal WP10-68 would shorten the fall hunt by 5 days, which would not affect federal subsistence hunters, because they could hunt legally under state regulations.

Opportunity Provided by State: The season dates were September 1 through September 25 until 2000, when a change was submitted by the department on behalf of the Koyukuk Moose Hunters Working Group. The Alaska Board of Game adopted in 2008 a shift of the season from August 27 through September 20 to September 1 through September 25. Adoption of proposal

WP10-63 would align the federal hunt with the state regulations. Alaska residents are allowed one bull by permit (DM812) from September 5 through September 25 or one bull with the trophy value destroyed (RM832) September 1 through September 25. Nonresidents are allowed one bull with 50-inch antlers or four or more brow tines on at least one side from September 5 through September 25. In Units 24C and 24D (KCUA), the State season is currently one bull from September 1 through 25 and December 1 through 10. In Unit 21D (KCUA), the seasons are September 1 through September 25 and December 1 through 10. There is no December 1 through 10 federal subsidence moose hunting season in the 24D portion of the Koyukuk CUA.

Conservation Issues: From 1997 through 2008, the moose population in Koyukuk Controlled Area declined by 25%. The management objective for the area is for growth of the moose population to levels of the late 1990s. The Alaska Board of Game endorsed this strategy, closed antlerless moose harvest in the fall, and closed the spring hunts in order to protect that productive component (cows) of the population. Improved harvest success rates for subsistence hunters in fall hunts is consistent with the management strategy for Koyukuk Controlled Use Area, because improving fall harvest of bulls reduces dependency of winter harvest when cows are harvested.

Koyukuk Moose Management plan has objectives for growth. Was worked on by both agencies and presented to both Boards. Refuge authorizes cow harvest as "sustainable" even though the population is at a lower level.

Although fall bull harvest may increase slightly if Proposal WP10-63 is adopted, the bull:100 cow objectives are being met, therefore this opportunity can be provided without undermining the objective for growth. Unreported harvest of cows occurs annually, which is a conservation concern, and any additional harvest of cows would further undermine the objective for growth. Any spring hunt risks the harvest of cows, impacting the management objective of growth in the moose population.

The Department requests proposal WP10-68 be modified to a December 1 through 10 season in the Unit 24D portion of the Koyukuk Controlled Use Area to take advantage of bull harvest opportunity, as it exists in State regulations. The Department requests more specifics regarding the proposed consultation process and quota establishment in proposal WP10-68. The proposed regulatory language, as written, triggers conservation concerns.

The Alaska Department of Fish and Game's management responsibilities for sustainable populations and scientific role in determining "the harvestable surplus of cows will be determined for a quota" needs clarification in the "consultation" process for Proposal WP10-68. State population management objectives for Koyukuk Controlled Use Area are detailed in the Koyukuk River Moose Management Plan and Unit 21D and 24 Moose Management Reports. It is important to include Department population and bull:cow ratio objectives or biologically sustainable values for use by federal managers if Proposal WP10-68 is adopted.

Enforcement Issues: Proposal WP10-68 would take the state and federal subsistence moose hunting seasons further out of alignment and cause more enforcement issues, last minute planning for the subsistence hunter, and confusion over interpretation of the actual season dates

published in the federal subsistence regulation summary book versus in-season announcements by the refuge manager.

Recommendations: Support WP10-63. Oppose WP10-68.

WP10-65 Executive Summary	
General Description	Proposal WP10-65 requests that the winter season dates for moose in Unit 21E be changed from Feb. 1–10 to Feb. 15–Mar. 15. The proponent also requests that the harvest parameters for the winter hunt be announced by the Federal managers (U.S. Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross (GASH) Advisory Committee and the Council. The proponent further requests that a Federal registration permit be required for the winter season, that it be issued by the Innoko National Wildlife Refuge, and that only one permit be allowed per household. *Submitted by the Western Interior Subsistence Regional Advisory Council*
Proposed Regulation	*1 moose; however, only bulls may be taken from Aug. 20–Sept. 25.* ***The harvest parameters for the winter hunt to be announced by the Federal managers (Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross Advisory Committee and the Western Interior Regional Advisory Council. A Federal registration permit will be issued one per household by the Innoko National Wildlife Refuge.*** *Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the* ***winter*** *~~Feb.~~ season****.* *Aug. 20–Sept. 25* *Feb. 15~~–Feb. 10~~* ***Mar. 15***
OSM Conclusion	**Support** Proposal WP10-65 **with modification** to 1) change "harvest parameters" to "permit conditions, 2) provide emergency closure authority to the Innoko National Wildlife Refuge manager, and 3) have the Innoko National Wildlife Refuge Manager announce the permit conditions after consulting with local area Federal and State agencies and local fish and game advisory councils/committees as stipulated in a letter of delegation.
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP10-65 **with modification** as described in OSM Conclusion.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-65 **with modification** as described in OSM Conclusion.

continued on next page

WP10-65 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	**Support** Proposal WP10-65 **with modifications** to: (1) assure that the harvest quota remains consistent with the YIMMP, (2) due to conservation issues, require reasonable permit reporting in regulation for the winter hunt rather than leaving that as an optional permit condition, and (3) provide emergency closure authority to delegated federal official. The Federal Subsistence Board needs to specifically reference the harvest quota and management objectives of the YIMMP in the letter of delegation to the designated official.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-65

ISSUE

Proposal WP10-65 was submitted by the Western Interior Subsistence Regional Advisory Council (Council) and requests that the winter season dates for moose in Unit 21E be changed from Feb. 1–10 to Feb. 15–Mar. 15. The proponent also requests that the harvest parameters for the winter hunt be announced by the Federal managers (U.S. Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross (GASH) Advisory Committee and the Council. The proponent further requests that a Federal registration permit be required for the winter season, that it be issued by the Innoko National Wildlife Refuge, and that only one permit be allowed per household.

DISCUSSION

The proponent suggests that a longer winter season would allow local users to hunt moose when travel conditions are more optimal and may also help spread hunting pressure across a wider area. The proponent believes that a Federal registration permit would provide more accurate harvest data, which it hopes will result in more informed management decisions. The proponent requests that the harvest parameters identified by the Federal managers align with the harvest guidelines of the Yukon-Innoko Moose Management Plan, which would provide flexibility to limit the number of moose harvested or the sex of the moose to be harvested, when needed, for conservation purposes. The provision prohibiting harvest within one half mile of the Innoko and Yukon Rivers during the winter season would not change.

Two other provisions that were discussed by the Council during the development of its proposal but were not included in the proposal as submitted are a provision to provide the Innoko NWR manager emergency closure authority for the winter hunt and a 24-hour reporting requirement (WIRAC 2009). This was most likely an oversight when drafting the proposal.

Existing Federal Regulation

Unit 21E — Moose

1 moose; however, only bulls may be taken from Aug. 20–Sept. 25. Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.	*Aug. 20–Sept. 25* *Feb. 1–Feb. 10*

Proposed Federal Regulation

Unit 21E — Moose

1 moose; however, only bulls may be taken from Aug. 20–Sept. 25. ***The harvest parameters for the winter hunt to be announced by the Federal managers (Fish and Wildlife Service and Bureau of Land Management) after consultation with the ADF&G Area Biologist, the Bureau of Land Management wildlife biologist, and the chairs of the Grayling-Anvik-Shageluk-Holy Cross Advisory Committee and the Western Interior Regional Advisory Council. A Federal registration permit will be issued one per household by the Innoko National Wildlife Refuge.*** *Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the* ***winter*** *~~Feb.~~ season****.***	*Aug. 20–Sept. 25* *Feb. 1****5*** *~~–Feb. 10~~* ***Mar. 15***

Existing State Regulation

Unit 21E — Moose

Resident: One antlered bull	*Harvest*	*Sept. 5–Sept. 25*
Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit.	*DM837/839*	*Sept. 5–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 21E and consist of 44% Bureau of Land Management and 11% U.S. Fish and Wildlife Service lands (**Map 1**).

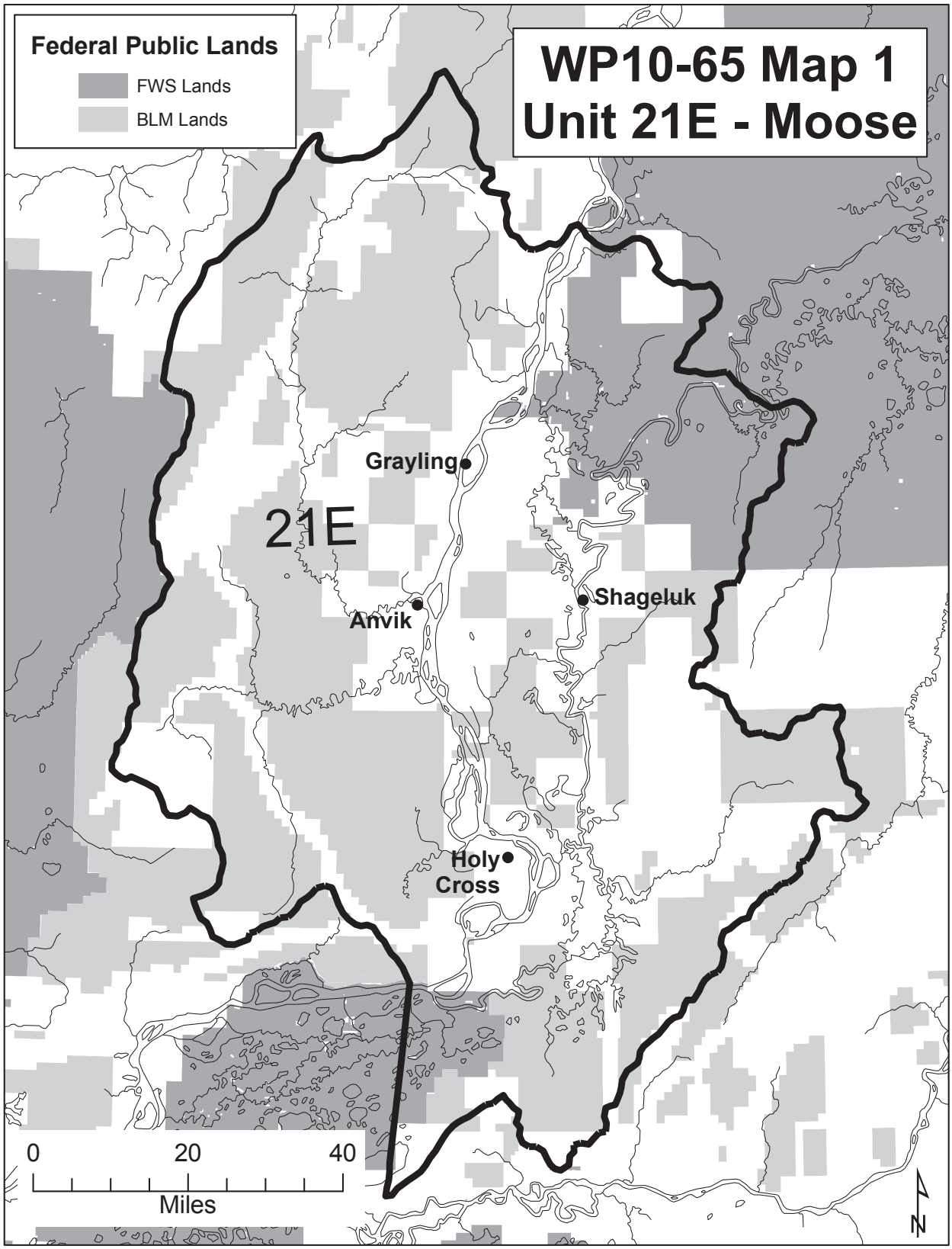
Customary and Traditional Use Determinations

Residents of Unit 21E and Russian Mission have a positive customary and traditional use determination for moose in Unit 21E.

Note: If proposal WP10-69 is adopted, or some modification thereof, then one or more of the communities of Lower Kalskag, Kalskag, Aniak, and/or Chuathbaluk may be added to the existing C&T use determination for moose in Unit 21E.

Regulatory History

The Paradise Controlled Use Area is almost entirely within Unit 21E and was established in 1978 by the Alaska Board of Game in response to concerns that hunter success rates favored non-rural users and the total harvest of moose in the area was threatening the population. The Paradise Controlled Use Area regulations placed a restriction on fly-in hunting for moose, air transport of hunters and hunting-related equipment, and the air transport of moose meat from the field. The Paradise Controlled Use Area access restrictions and the State's moose seasons for Unit 21E were adopted by the Federal Subsistence Board in 1990. During the 1990/1991 regulatory year the State and Federal moose seasons were Sept. 5 – 25 and Feb. 1–10 for Unit 21E. The winter season dates have not changed in Federal regulation since


Federal Public Lands
FWS Lands
BLM Lands
WP10-65 Map 1
Unit 21E - Moose
Grayling
21E
Shageluk
Anvik
Holy
Cross
0
20
40
Miles
N

then, although the State eliminated the winter season from its regulations beginning in the 2003/2004 regulatory year.

In 1995 the Federal Subsistence Board provided additional opportunity during the fall season by adding ten days to the early part of the season in Unit 21E with season dates of August 25 to September 25. The Federal subsistence Board subsequently extended the fall season by another five days in 1996 which resulted in season dates of Aug. 20 to Sept. 25. These fall season dates are still in effect today.

In January 2005 a cooperative moose planning effort called the Yukon-Innoko Moose Management Working Group was launched. The goal of the planning effort was to develop a proactive management plan to help maintain the moose population while also providing for high levels of human consumptive uses of moose in Units 21A and 21E (ADF&G 2006). The working group included representatives of the GASH and Lower Yukon Fish and Game Advisory Committees, the Western Interior and Yukon-Kuskokwim Delta Regional Advisory Councils, as well as non-local hunters and representatives who had commercial interests associated with hunting in the area. The result of the planning effort was the Yukon-Innoko Moose Management Plan, which was completed in March 2006. This plan was then endorsed by the Federal Subsistence Board in May 2006 through Resolution 06-01. A few of the key management goals, objectives and recommendations outlined in the plan are:

Goal:

- Manage to achieve an Intensive Management moose population of 9,000 to 11,000 moose in Unit 21E

Objectives:

- Manage harvest conservatively with a harvest rate less than or equal to 4% of the estimated population; harvest should be directed predominantly at bulls
- Manage the moose population toward maintaining a minimum post-hunt bull:cow ratio of 25–30 bull:100 cows.
- Manage the moose population toward maintaining a minimum fall post hunt calf:cow ratio of 30–40 calves:100 cows.
- Manage the moose population toward maintaining a minimum calf overwinter survival of 20% of the total population in late winter.

Recommendations:

- Provide for the harvest of up to 40 antlerless moose in winter.
- If cow harvest remains greater than 40 (including cows taken in the Federal season and those taken for potlatches etc.), consider the need to recommend closing the Federal winter season

The Working Group also recommended that "*if the Federal customary and traditional subsistence use determination (C&T) for Unit 21E is revised to make a large number of additional communities eligible, the federal winter season should be eliminated" (ADF&G 2006). Proposal WP10-69 requests a change to the existing C&T determination for moose in Unit 21E.*

Biological Background

Unit 21E Moose Geospatial Population Estimator (GSPE) Surveys

Results from winter surveys using the Geospatial Population Estimate (GSPE) in 2000, 2005, and 2009 appear to show a higher moose population in 2009 compared to the previous surveys (**Figure 1**). However, the 90% confidence intervals all overlap which precludes any conclusive trends in the Unit 21E moose population but the biologists conducting the surveys do believe the population is stable. The 5,070 mi.^{2} GSPE survey area included mainly that portion of Unit 21E east of the Yukon River and includes portions of the Innoko and Yukon Delta National Wildlife Refuges as well as BLM lands.

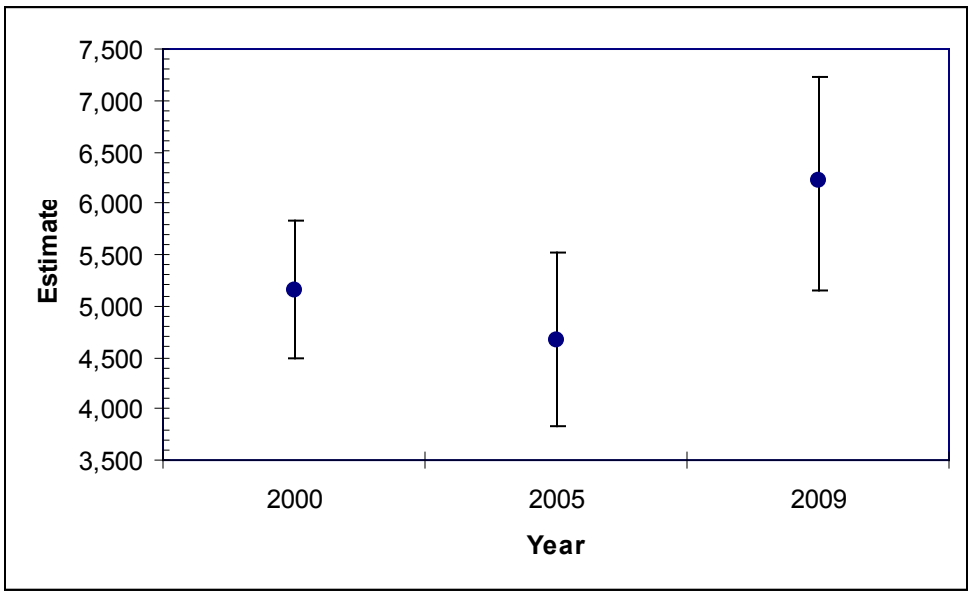


Figure 1. Unit 21E population estimates with 90% confidence intervals (ADF&G 2009a and Peirce and Seavoy 2008).

Unit 21E Moose Trend Count and Composition Surveys

Moose composition surveys in Unit 21E in 2007, 2008 and 2009 counted 84, 186, and 153 moose, respectively (**Table 1**). It is important to note that composition surveys flown in Unit 21E do not follow a rigid design for survey intensity or area covered. Therefore, actual numbers of moose observed during any given composition survey are subject to a large number of variables. The 2008 and 2009 survey data suggest that the bull:cow ratios and calf:cow ratios have declined since the 2007 survey (**Table 1**). The most recent calf:cow ratio was 18 in 2009 which is below the management object of 30–40 calves per 100 cows identified in the Yukon-Innoko Moose Management Plan. However, there was a considerable amount of flooding that occurred in 2009 which likely explain the low calf:cow ratio and the biologists conducting the survey reported that they were not able to survey a portion of the area that typically has more bulls which also partially explain the lower bull:cow ratio (Beyersdorf 2010 pers. comm.). There is a moose collaring study planned to begin in the spring of 2010 that should help address some of the moose survey data limitations in Unit 21E.

Similar to fall composition surveys, spring twinning surveys do not follow rigid protocols. Twinning surveys since 2007 show an opposite trend for calves from the fall composition surveys (**Table 2**). While

the data presented in **Tables 1** and **2** cover only a short time period, they appear to indicate that fewer calves are surviving than in previous years.

Table 1. Unit 21E moose composition surveys conducted during the fall of 2007, 2008, and 2009 (ADF&G 2007 and ADF&G 2008).

	Total						
Year	**Bulls**	**Yearling Bulls**	**Cows**	**Calves**	**Moose**	**Bulls/100 cows**	**Calves/100 cows**
2007	26	9	35	27	84	74	66
2008	59	28	95	35	186	62	37
2009	33	21	102	18	153	32	18

Table 2. Unit 21E spring moose twinning survey results (Kovach 2009, pers. comm.).

Year	Cows with Calves	Litters with Twins	Twinning Rate
2007	28	7	29
2008	32	15	47
2009	24	12	50

Harvest History

Reported moose harvests in Unit 21E by residents of Grayling, Anvik, Shageluk, and Holy Cross (GASH) indicate an annual average of 35 successful moose hunters (range = 27–43) from 2000 to 2009 (**Table 2**) (ADF&G 2009b). However, it should be noted that for some parts of Alaska, the ADF&G harvest ticket data do not typically reflect the actual level of harvest, although this data can provide an estimate of harvest trends over time for a particular area. A more accurate reflection of actual harvest for the GASH area communities is available for Unit 21E from two studies that included household surveys of moose harvests for calendar years 2002/2003 and 2003/2004 (Brown et al. 2004; Brown and Koster 2005). Household surveys conducted for 2002/2003 estimated a total harvest by GASH area residents of 133 moose (± 6% at 95% CI) in Unit 21E with 18 (10 cows) of those moose having been taken during the winter season (Brown et al. 2004). Household surveys conducted for the 2003/2004 calendar year estimated a total harvest by GASH area residents of 118 moose (± 4% at 95% CI) in Unit 21E with 16 (11 cows) of those moose having been taken during the winter season (Brown and Koster 2005). For these two study years the household survey data suggest that the total annual average moose harvest was 3.3 times higher than the harvest reported in the harvest ticket database. Household surveys were also conducted in 1990/1991 and the total estimated harvest by GASH area residents was 169 moose in Unit 21E (Wheeler 1993).

Information reported in the harvest ticket database does suggest that the GASH area hunter success rates have ranged between 55% and 83%, with a nine-year average of 68% (**Table 3**). Regardless of this relatively high success rate there does seem to be a downward trend in harvest success over the past ten years.

Table 3. Reported moose harvest ticket data for residents of the communities of Grayling, Anvik, Shageluk, and Holy Cross in Unit 21E, 2000-2009 and household moose harvest survey data for calendar years 2002/2003 and 2003/2004 (ADF&G 2009b; Brown et al. 2004; Brown and Koster 2005).

Year	Successful hunters	Unsuccessful hunters	Total hunters
	Number (%)	Number (%)	Number
2000			
Reported Harvest Ticket Total	39 (83%)	8 (17%)	47
2001			
Reported Harvest Ticket Total	32 (75%)	8 (25%)	40
2002			
Reported Harvest Ticket Total	39 (75%)	13 (25%)	52
2003			
Reported Harvest Ticket Total	43 (74%)	15 (26%)	58
* HH survey - Winter harvest	18 (10 cows)	na	na
* HH Survey - Total harvest	133 (75%) ± 6% at 95% CI	44 (25%)	177
2004			
Reported Harvest Ticket Total	32 (59%)	22 (41%)	54
* HH survey - Winter harvest	16 (11 cows)	na	na
* HH Survey – Total harvest	118 (67%) ± 6% at 95% CI	58 (33%)	176
2005			
Reported Harvest Ticket Total Reported Winter Harvest	40 (75%) 8	13 (25%)	53
2006			
Reported Harvest Ticket Total Reported Winter Harvest	39 (56%) 4	31 (44%)	70
2007			
Reported Harvest Ticket Total Reported Winter Harvest	34 (60%) 5	23 (40%)	57
2008			
Reported Harvest Ticket Total Reported Winter Harvest	27 (55%) 4	22 (45%)	49
2009			
** Reported Harvest Ticket Total	28	na	na

* Household survey data for the communities of Grayling, Anvik, Shageluk, and Holy Cross.
** Preliminary estimate.
na = Not available

Effects of the Proposal

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity and more flexibility to harvest moose during the winter season. Federal managers would be required to determine the harvest parameters each year after consulting with ADF&G and the chairs of the Western Interior Regional Council and GASH Fish and Game Advisory Committee. The term "harvest parameters" could be changed to "permit conditions" which would provide more flexibility to the Federal managers to adjust permit conditions, as needed, that may be different than those parameters related only to harvest. The harvest parameters would need to be consistent with the harvest guidelines identified in the Yukon-Innoko Moose Management Plan. The plan provides for flexibility to limit the number of moose harvested or the sex of the moose to be harvested, when needed, for conservation purposes. If adopted, a Federal registration permit would be established and only one permit would be issued per household. This would help to provide more accurate harvest data, which will likely result in more informed management decisions in the future.

Although a timeframe for a reporting requirement was not included in the proposal as submitted, the Council discussed a 24-hour reporting provision at length during its development of this proposal (WIRAC, 2009). If the 24-hour reporting requirement is still desired, it can be added to the permit without stipulating it in regulation.

The proponent also stated their intent to provide the Innoko National Wildlife Refuge manager with emergency closure authority although this provision was also not included in the proposal as submitted. It is likely that this was a mere oversight when drafting the proposal since it is clear in the record that the Council intended to include this provision. This would allow the Federal manager to react more quickly to any needed closures. Without this authority, a special action request would need to be submitted to the Federal Subsistence Board for its action. While Board action on these types of requests can be completed in a few days, they often take a week or more before final action is taken. Thus, providing emergency closure authority to the Refuge Manager may be appropriate.

A portion of the proposed regulation is duplicative by suggesting that the U. S. Fish and Wildlife Service and Bureau of Land Management announce the harvest parameters after consultation with the ADF&G Area Biologist and the Bureau of Land Management wildlife biologist. The details of who is to be consulted can be better described in a letter of delegation to the refuge manager.

It should be noted that the cumulative effects of adopting all three proposals (WP10-65, WP10-66, and WP10-69) could result in an increase in moose harvests to the degree that restrictions may need to be added in the future. Changes in harvest levels and patterns will need to be closely monitored to evaluate the effects of changes that are adopted. An early indication of possible concerns is that the most recent fall calf:cow ratio (18) in 2009 was below the management object of 30–40 calves per 100 cows identified in the Yukon-Innoko Moose Management Plan.

If this proposal is adopted, extensive outreach effort will need to occur to educate and implement these changes. The Innoko National Wildlife Refuge staff has committed to work with the GASH area communities to inform the residents of any changes and to implement a Federal registration permit for this hunt, if adopted. Since the State does not have a comparable winter season in the affected area it would require the use of detailed maps that clearly show the location of Federal public lands.

Until the moose collaring study results are available no conclusive assessments can be made regarding the status of the health of the moose population in Unit 21E, although local users do report a slight decline. Nonetheless, it appears that the population is stable and can continue to support a limited moose harvest

during the winter season. Hunters should be encouraged to harvest bulls as much as possible to favor productivity and yearling bull recruitment.

OSM CONCLUSION

Support proposal WP10-65 **with modification** to 1) change "harvest parameters" to "permit conditions, 2) provide emergency closure authority to the Innoko National Wildlife Refuge manager, and 3) have the Innoko National Wildlife Refuge Manager announce the permit conditions after consulting with local area Federal and State agencies and local fish and game advisory councils/committees as stipulated in a letter of delegation.

The modified regulation should read:

Unit 21E — 1 moose; however, only bulls may be taken from Aug. 20–Sept. 25.	*Aug. 20–Sept. 25*
The permit conditions and any needed closures for the winter hunt will be announced by the Innoko NWR Manager after consultation with local area Federal and State land managers and local fish and game advisory councils/committees as stipulated in the letter of delegation. *Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the* ***winter*** *~~Feb.~~ season****.***	*Feb. 1****5*** *~~–Feb. 10~~* ***Mar. 15***

Justification

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity and more flexibility to harvest moose during the winter season. Population data from surveys conducted from 2000–2009 indicate that the affected moose population is stable and can continue to support limited moose harvests during the winter season.

A more streamlined approach that would allow for these same provisions would be to delegate the authority to the Innoko National Wildlife Refuge manager to announce the permit conditions and any needed closures after consulting with the local Federal and State agencies and the local fish and game advisory councils and committees. The details of the delegation of authority conditions would be defined in a letter to the refuge manager.

The details for announcing the permit conditions and who must be consulted prior to authorizing the hunt or any closures can best be accomplished through a letter of delegation to the refuge manager. The 24-hour reporting requirement is a provision that can be added to the permit without stipulating it in regulation. The emergency closure authority would allow the Federal manager to react more quickly.

The term "harvest parameters" should be changed to "permit conditions" to provide more flexibility to the Federal managers to adjust permit conditions that may be different than those parameters related only to harvest. A Federal registration permit would be established and only one permit would be issued per household. This would help to provide more accurate harvest data and would likely lead to more informed management decisions in the future. This could also be stipulated in the delegation of authority letter.

All of these changes will need an extensive outreach effort to educate and implement these changes. The Innoko NWR staff has committed to working with the GASH area communities to inform them of the Federal registration permit requirement for this hunt.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-65 **with modification** as described in OSM Conclusion. The Council further recommends that the Innoko NWR manager be given clear authority to create two zones in Zone 21E, one above the communities with current customary and traditional use and one in the lower portion of Zone 21E. The purpose of the zones is to ensure that harvest is allocated throughout the entire Unit.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-65 **with modification** as described in OSM Conclusion. A Yukon-Kuskokwim Delta Subsistence Regional Advisory Council member participated in earlier discussions relating to this issue and found that the changes of harvest season date would make sense.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-65

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The ISC notes that the Innoko NWR manager would be provided authority through a letter of delegation to establish permit stipulations for managing moose harvest in Unit 21E using area specific quotas and reporting requirements as requested by the Western Interior Regional Council. Combined with improved reporting requirements and closure authority, the Refuge Manager would have the ability to better regulate the moose harvest and help meet the objectives the Yukon Innoko Moose Management Plan.

Comments WP10-65
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-65: This proposal would change the federal subsistence winter moose hunt in Unit 21E from a February 1 through 10 season with an any moose bag limit to a February 15 through March 15 season by federal registration permit with a quota and a bag limit of one moose per household.

Introduction: This proposal was submitted to lengthen and delay the federal subsistence moose hunting winter season in Unit 21. Federal subsistence delegated official would establish a quota in consultation with the Alaska Department of Fish and Game and require one federal subsistence registration hunt permit per household.

Impact on Subsistence Users: If adopted federal subsistence moose hunting opportunity will be expanded by 15 days and moved later in the winter when more sunlight and traveling conditions should improve opportunity for success.

Opportunity Provided by State: There is no state winter moose season in Unit 21E due to conservation concerns.

Conservation Issues: The Yukon Innoko Moose Management Plan (YIMMP) was endorsed by the Federal Subsistence Board, the Alaska Board of Game, and supported by the Western Interior Regional Advisory Council and the Grayling-Anvik-Shageluk-Holy Cross (GASH) Fish and Game Advisory Committee. The YIMMP included a provision for a harvest of up to 40 cow moose during a winter season, and this proposal is consistent with the YIMMP. If adopted, the requirement of a federal registration permit could improve the quality of federal subsistence harvest data by providing a mechanism for better harvest reporting during the winter moose season. The Alaska Board of Game closed the state winter general season moose hunt in 21E because the moose population could not withstand the substantial interest from Unit 18 hunters.

Enforcement Issues: Adoption of this proposal results in only federally qualified users hunting during the winter season and only on federal public lands. Adoption of this proposal could reduce harvest reporting violation citations.

Recommendation: Support with modifications to: (1) assure that the harvest quota remains consistent with the YIMMP, (2) due to conservation issues, require reasonable permit reporting in regulation for the winter hunt rather than leaving that as an optional permit condition, and (3) provide emergency closure authority to delegated federal official. The Federal Subsistence Board needs to specifically reference the harvest quota and management objectives of the YIMMP in the letter of delegation to the designated official.

WP10-66 Executive Summary	
General Description	Proposal WP10-66 requests that the fall moose season dates in Unit 21E be shifted by five days, from Aug. 20–Sept. 25 to Aug. 25–Sept. 30. *Submitted by the Western Interior Subsistence Regional Advisory Council*
Proposed Regulation	*1 moose; however, only bulls may be taken from Aug. ~~20~~ **25**–Sept. ~~25~~ **30**.* *Aug. ~~20~~ **25**–Sept. ~~25~~**30*** *Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.* *Feb. 1–Feb. 10*
OSM Conclusion	**Support**
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support**
Western Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-66

ISSUE

Proposal WP10-66 was submitted by the Western Interior Subsistence Regional Advisory Council (Council) and requests that the fall moose season dates in Unit 21E be shifted by five days, from Aug. 20–Sept. 25 to Aug. 25–Sept. 30.

DISCUSSION

The proponent believes that moose are moving around later in the season in recent years, and a five day shift would provide greater opportunity to harvest moose. The Council also believes that recent fall temperatures have been warmer, so a change could help reduce spoilage of meat. The proponent also stated that this season shift could help prevent cow moose from being harvested during the winter season since a successful hunter who takes a bull during the fall season would not be eligible to harvest a cow during the winter season. Another added benefit identified by the Council was that this season shift could reduce competition with non-local hunters, who would be hunting under State regulations with different season dates.

Existing Federal Regulation

Unit 21E — Moose

1 moose; however, only bulls may be taken from Aug. 20–Sept. 25.	*Aug. 20–Sept. 25*
Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.	*Feb. 1–Feb. 10*

Proposed Federal Regulation

Unit 21E — Moose

*1 moose; however, only bulls may be taken from Aug. ~~20~~ **25**–Sept. ~~25~~ **30**.*	*Aug. ~~20~~ **25**–Sept. ~~25~~**30**.*
Moose may not be taken within one-half mile of the Innoko or Yukon Rivers during the Feb. season.	*Feb. 1–Feb. 10*

Existing State Regulation

Unit 21E	*Resident: One antlered bull*	*Harvest*	*Sept. 5–Sept. 25*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit	*DM837/839*	*Sept. 5–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 21E and consist of 44% Bureau of Land Management and 11% U.S. Fish and Wildlife Service lands (see **Unit 21 Map**).

Customary and Traditional Use Determinations

Residents of Unit 21E and Russian Mission have a positive customary and traditional use determination for moose in Unit 21E.

Note: If proposal WP10-69 is adopted, or some modification thereof, then one or more of the communities of Lower Kalskag, Kalskag, Aniak, and/or Chuathbaluk may be added to the existing C&T use determination for moose in Unit 21E.

Regulatory History

The regulatory history information for this analysis is the same as that presented in proposal WP10-65. Please refer to that analysis.

Biological Background

The biological background information for this analysis is the same as that presented in proposal WP10-65. Please refer to that analysis.

Harvest History

Please refer to WP10-65 for the harvest history information that also pertains to this analysis.
Additional harvest history information that pertains to this proposal is that residents of the GASH communities harvested an estimated 4% and 5% of their moose during August of 2003 and 2004 respectively (Brown et al. 2004; Brown and Koster 2005). By contrast, they harvested 80% and 81% of their moose during September of 2003 and 2004, respectively (Brown et al. 2004; Brown and Koster 2005).

Effects of the Proposal

Adoption of the proposal would shift the fall moose hunting season dates in Unit 21E five days later into the fall. Moose will likely be moving along river corridors and thus easier to locate later in September than they are in late August. The foliage along the river corridors has usually dropped by late September, making the moose easier to locate. This proposed change would likely lead to increased hunting success during a later fall season.

The fall season only allows for the harvest of bulls and so any increased harvest during the fall season may help to reduce the potential harvest of cows during the winter season since hunters can only harvest one moose per regulatory year. This could be a benefit to the moose population in the long term depending on how harvest patterns change over time.

Temperatures in late September are usually cooler than they are in late August and this could help reduce the potential for meat spoilage.

However, it should be noted that the cumulative effects of adopting all three proposals (WP10-65, WP10-66, and WP10-69) could result in an increase in moose harvests to the degree that restrictions may need to be added in the future. Changes in harvest levels and patterns will need to be closely monitored to evaluate the effects of changes that are adopted.

OSM CONCLUSION

Support proposal WP10-66.

Justification

Adoption of the proposal would provide the residents of Unit 21E and Russian Mission with additional opportunity to hunt moose later into September when the majority of the hunting activity occurs.

Even though moose harvest by residents of the GASH communities would likely increase, the population data from surveys conducted from 2000–2009 indicate that the affected moose population can continue to support these harvests.

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Brown, C.L., R.J. Walker, and S.B. Vanek. 2004. The 2002–2003 harvest of moose, caribou, bear, and wolves in the Lower–Middle Yukon River communities of Grayling, Anvik, Shageluk, and Holly cross. ADF&G, Division of Subsistence Tech. Paper No. 281. Juneau, AK. 38 pages.

REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-66. The bull:cow ratio is completely adequate to support increased harvest. This proposed regulation would help meet subsistence needs.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-66. There is no biological reason not to accommodate this request. This proposal would provide additional opportunity while recognizing recently occurring environmental changes.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-66

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments for WP10-66
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-66: This proposal would delay the federal subsistence fall moose season five days in Unit 21E from August 20 through September 25 to August 25 through September 30.

Introduction: The Western Interior Regional Advisory Council submitted this proposal and indicated delaying the federal subsistence moose hunt five days would increase opportunity to harvest bull moose as they become more active as the breeding season approached. The proponent also indicated delaying the season will also reduce spoilage of meat due to cooler weather and possibly will reduce the number of cow moose harvested in the winter because hunters will have increased success rates of fall bull harvests.

Impact on Subsistence Users: This regulation would have minimal change on subsistence opportunity.

Opportunity Provided by State: The state resident moose hunting season in Unit 21E is September 5 through September 25 with a limit of one antlered bull. The state nonresident moose hunting season in Unit 21E is September 5 through September 25 with a limit of one bull with 50-inch antlers or antlers with four or more brow tines on at least one side.

Conservation Issues: If adopted, the number of bull moose harvested by federal subsistence hunters is unlikely to change during most years. Typically, late seasons result in greater success, but late September is also a time when weather can effectively prevent hunting and lower water levels can limit access.

Recommendation: Support.

WP10-67 Executive Summary	
General Description	Proposal WP10-67 requests changes in harvest seasons and limits for moose in Unit 24B. *Submitted by the Western Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*See analysis for regulatory language.*
OSM Conclusion	**Support** Proposal **WP10-67 with modification** to provide a four-month winter/spring hunt on all Kanuti National Wildlife Refuge and BLM lands in Unit 24B, to specify the Kanuti Controlled Use Area as described in Federal regulation and to specify that the regulation will sunset on 30 June 2014.
Western Interior Regional Council Recommendation	**Support** Proposal WP10-67 **with modification** to provide a four-month winter/spring hunt in the Kanuti Controlled Use Area, to change the harvest limit to 1 antlered bull, with a minimum 5-inch antler (one-half ear length) on one side and to specify that the regulation will sunset on 30 June 2014.
North Slope Regional Council Recommendation	**No action taken**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Adopt** Proposal WP10-67 **as modified** by the Council and OSM.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-67

ISSUE

Proposal WP10-67, submitted by the Western Interior Alaska Subsistence Regional Advisory Council (Council), requests changes in harvest seasons and limits for moose in Unit 24B.

DISCUSSION

The proponent is requesting 1) a change in dates for the winter season to March 15–April 15, 2) a longer "to be announced" season of ten days instead of five during those dates, 3) changes to the description of areas (portions) of Unit 24B, which, in addition to the John River drainage, would be "all Federal land within the Kanuti Controlled Use Area" and "remainder," and 4) changing the harvest limit from "1 moose" to "1 antlered moose" with a six year moratorium on cow moose harvest in the Kanuti Controlled Use Area, with an exception for mortuary purposes. No changes are proposed for the John River drainage portion of Unit 24B.

The proponent states that the current regulations which allow for a March 1–5 "to be announced" season only applies to a portion of Unit 24B, "all drainages to the north of the Koyukuk River, except the John River." Because of an artifact of regulatory history (when Unit 24 was subdivided into four subunits), the area authorized to be opened in the "to be announced" winter season contains only a small portion of the Kanuti National Wildlife Refuge within the Kanuti Controlled Use Area. The proponent also states that the area currently available to be opened in the "to be announced" winter season does not provide enough opportunity for subsistence harvest by residents of Allakaket, Alatna, Evansville, and Bettles in times of hardship due mostly to poor hunting success during the fall season. Opening all Federal public land within the Kanuti Controlled Use Area of Unit 24B would provide more opportunity.

In both 2007 and 2008, the Allakaket Tribal Council requested, through Special Action (WSA06-08 and WSA07-09), a season extension of the March 1–5 hunt because of extremely cold weather conditions during the announced and scheduled March 1–5 season. In 2007, a special 5-day hunt was granted for March 20–24. In 2008, a 3-day extension was granted for March 8–10. Over the past few years, early March has tended to be extremely cold in Unit 24B resulting in conditions which have made hunting difficult. In 2007 and 2008, there were no successful hunters during the March 1–5 "to be announced" season or the extended opportunities through Special Action. In 2009, season dates were changed from March 1–5 to March 27–31 by Special Action to accommodate the desires of the Allakaket Tribal Council. In 2009, one moose hunter was successful in the March 27–31 Federal hunt. The proponent, therefore, believes that the March 1–5 season has provided little meaningful opportunity to meet subsistence needs, especially in hardship years, and that changing the current 5-day, "to be announced" March 1–5 season to the proposed 10-day, "to be announced" season between March 15–April 15, would better accommodate hunting for subsistence users.

The later dates and longer window for the "to be announced" season would assist users in field identification of the sex of the moose, to avoid the inadvertent harvest of a cow. By early April, bull moose are starting to show the first signs of antler growth, thus helping to alleviate the problem encountered in the early March hunt of readily distinguishing bulls from cows. Increased light conditions also aid in identification and provide more hours of harvest opportunity.

The proponent noted that there is precedent for late winter hunts in the area. Up until 2004, there was a March 1–10 State general hunt for antlerless moose (eliminated by Alaska Board of Game action in April 2004). More recently (2008), the Alaska Board of Game has allowed a late-winter bulls-only hunt in a nearby Unit 26B (April 2–16).

The proponent also requests a six-year moratorium (until July 1, 2016) on cow moose harvest (with exception for mortuary purposes) and believes this moratorium is needed because the moose population most likely cannot support a cow harvest at present and in the near future. The proponent wants the regulations to specify "antlered bull" not just "bull" to emphasize the need to avoid the inadvertent harvest of a cow (WIRAC 2009).

The proponent also submitted a similar proposal to the Alaska Board of Game, requesting an antlered bull moose hunt in April in the State's non-remainder portion of Unit 24. The Alaska Board of Game is scheduled to take up the proposal during its February 2010 meeting in Fairbanks. However, the Kanuti Controlled Use Area is closed in Federal regulations to the take of moose by non-Federally qualified users.

Existing Federal Regulations

Unit 24B — Moose

Unit 24B, that portion within the John River Drainage–1 moose	*Aug. 1–Dec.31*
Unit 24B, all drainages to the north of the Koyukuk River, except the John River drainage — 1 moose; however, antlerless moose may be taken only from Sept. 27–Oct. 1 and Mar. 1–5, if authorized jointly by the Kanuti National Wildlife Refuge Manager, the BLM Central Yukon Field Office Manager, and the Gates of the Arctic National Park Superintendent. A Federal registration permit is required for the Sept. 26–Oct. 1 and Mar. 1–5 seasons. Harvest of cows accompanied by calves is prohibited. The announcement will be made after consultation with the ADF&G Area Biologist and Chairs of the Western Interior Alaska Subsistence Regional Advisory Council, the Gates of the Arctic Subsistence Resource Commission, and the Koyukuk River Fish and Game Advisory Committee.	*Aug. 25–Oct. 1* *Mar. 1–Mar. 5 Season to be announced*
Federal public lands in the Kanuti Controlled use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.	
Unit 24B remainder — 1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 season.	*Aug. 25–Oct. 1*
Federal public lands in the Kanuti Controlled Use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena, hunting under these regulations.	

Proposed Federal Regulations

Unit 24B — Moose

Unit 24B, that portion within the John River Drainage — 1 moose	*Aug. 1–Dec. 31*
~~*Unit 24B, all drainages to the north of the Koyukuk River, except the John River drainage — 1 moose; however, antlerless moose may be taken only from Sept. 27–Oct. 1 and Mar. 1–5, if authorized jointly by the Kanuti National Wildlife Refuge Manager, the BLM Central Yukon Field Office Manager, and the Gates of the Arctic National Park Superintendent. A Federal registration permit is required for the Sept. 26–Oct. 1 and Mar. 1–5 seasons. Harvest of cows accompanied by calves is prohibited. The announcement will be made after consultation with the ADF&G Area Biologist and Chairs of the Western Interior Alaska Subsistence Regional Advisory Council, the Gates of the Arctic Subsistence Resource Commission, and the Koyukuk River Fish and Game Advisory Committee.*~~	~~*Aug. 25–Oct. 1*~~ ~~*Mar. 1–Mar. 5*~~ ~~*Season to be announced*~~
Unit 24B Kanuti Controlled Use Area — 1 antlered bull. If a March–April season is authorized jointly by the Kanuti National Wildlife Refuge Manager, the BLM Central Yukon Field Office Manager, and the Gates of the Arctic National Park Superintendent, the 10-day, "to be announced" season and numerical harvest quota of moose will be determined based on biological sustainability of the population, maintaining the bull/cow ratio management objective. The harvest quota would apply to Federal and State concurrent hunts, if applicable. Opening of the "to be announced" season will be decided after consultation with the ADF&G Area Biologist and Chairs of the Western Interior Subsistence Regional Advisory Council, the Gates of the Arctic Subsistence Resource Commission, and the Koyukuk River Fish and Game Advisory Committee. The Kanuti National Wildlife Refuge Manager is authorized to close the season once the quota is reached. A Federal registration permit is required for the Aug 25–Oct. 1 season, and the March 15–April 15 season.	***Aug. 25–Oct. 1*** ***Mar. 15–Apr. 15*** ***Season to be announced***
Federal public lands in the Kanuti Controlled Use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena, hunting under these regulations. ***A moratorium on cow moose harvest is in effect until July 1, 2016, but does not affect harvest for mortuary purposes.***	
Unit 24B remainder — 1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.	*Aug. 25–Oct. 1*
~~*Federal public lands in the Kanuti Controlled use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*~~	

Existing State Regulations

Unit 24B all drainages of the Koyukuk River upstream from the Henshaw Creek drainage, excluding the North Fork of the Koyukuk River drainage	*Resident: One bull*	*Sept. 1–Sept. 25*
	Nonresident: One bull with 50-inch antlers or 4 or more brow tines on at least one side.	*Sept. 5–Sept. 25*
Unit 24B remainder	*Resident: One bull*	*Sept. 1–Sept. 25 or Dec. 1–Dec. 10*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one	*Sept. 5–Sept. 25*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 24 (22% National Park Service, 21% Bureau of Land Management, and 21% Fish and Wildlife Service lands) (See **Unit Map 24**).

Customary and Traditional Use Determinations

Residents of Unit 24, Anaktuvuk Pass, Koyukuk, and Galena have a positive customary and traditional use determination for moose in Unit 24.

Regulatory History

An extension of the winter hunt season and a similar modification of the winter hunt area was accomplished by Special Action requests WSA06-08 (decision dated March 15, 2007), and WSA07-09 (decision dated February 26, 2008). In both years, the Allakaket Tribal Council requested a season extension of the March 1–5 hunt because of extremely cold weather conditions during the March 1–5 season. In 2007, a special 5-day additional hunt was granted for March 20–24. In 2008, a 3-day extension was granted for March 8–10. In 2009, season dates were changed from March 1–5 to March 27–31 by Special Action request to accommodate the desires of the Allakaket Tribal Council. The season for the remainder of Unit 24B outside the Kanuti Controlled Use Area remained unchanged.

Biological Background

The Koyukuk River Moose Management Plan 2000–2005 (Management Plan) (ADF&G 2001) set the management goals/objectives for the Koyukuk River moose population. For the portion of Unit 24 where the Kanuti Controlled Use Area is located, the management intent is to maintain or increase moose populations while providing for continuation of a moderate hunter participation and moderate level of harvest. Bull:cow ratios of up to 30–40 bulls:100 cows for this low density population may be necessary to allow for adequate breeding where cows are sparsely distributed. Calf:cow ratios of 30–40 calves:100 cows were prescribed by the Management Plan to support population growth (ADF&G 2001). Overall, an increase in population is desired before additional harvest can be considered. While indications suggest this population may be growing, the population's size and density remain low.

Population surveys have been conducted on Kanuti National Wildlife Refuge (Refuge) since 1989. However, the surveys in 1989 and 1993 used the Gasaway method, and are not easily compared to the more recent surveys. The surveys conducted from 1999 to 2008 (**Table 1**) employed the GeoSpatial Population Estimator technique (Kellie and Delong 2006) and can be compared more readily (Gasaway et al. 1986).

The moose population on the Refuge has been relatively stable but at low levels since 1999 (**Figure 1**). The population estimate for 2008 was 872 moose compared to an estimated 588 moose in 2007, resulting in population densities of 0.32 and 0.22 moose per square mile, respectively (**Table 1)** (FWS 2008). The 2007 density estimate was the lowest recorded for the Refuge and was significantly lower than the 1999 estimate. However, because of variability of the surveys, it is difficult to definitively determine a population trend (**Figure 1**). It should also be noted that the 90% confidence intervals for most of the population estimates overlap, indicating that there is no significant change.

Since 1999, the calf:cow ratios have been higher than the objective in the Management Plan which may be an indication that this population could be growing (**Table 1**).

A moose survey was scheduled to take place in November 2009, but was canceled by Refuge staff due to extreme cold (< - 40° F) weather conditions (Spindler 2009b).

Harvest History

Harvest data compiled by the ADF&G for Unit 24B, between 1989 and 2007, revealed that both the number of moose harvested and hunter success have declined **(Table 2**).

The reported Federal subsistence harvest has been low for registration hunts RM892, RM893, and RM895 in 2006 and 2007 (**Table 3**).

The long-term annual harvest estimates for the communities of Alatna and Allakaket averaged 44.8 moose (ADF&G household surveys, Brown et al. 2004). It should be noted that the permit data reported above is specific to Unit 24B, whereas household survey data are not. In the period 1997–2003, annual moose harvest averaged 33.7 bulls and 3.4 cows in Allakaket, while Alatna harvested an annual average of 5.4 bulls and 2.3 cows in the same period (Brown et al. 2004). Most (87.5%) of these moose were taken in September, and only a few (12.5%) were taken in March.

The combination of a telephone survey, ADF&G harvest tickets and Federal permits provided a total estimated harvest of 14 moose by Allakaket/Alatna in the fall 2008 hunt (**Table 4**). No one harvested a moose during the State's general winter hunt December 1–10, despite several days of effort by five hunters in 2008. It is estimated that the villages of Allakaket and Alatna harvested about 30% of their recent historic number of moose (as indicated by the 1997–2003 ADF&G Division of Subsistence surveys, Brown et al. 2004) in 2008. Similar harvest shortfalls were observed in the fall harvests of 2006 and 2007. For that reason, Federal agencies agreed to provide a five day bulls-only additional hunting opportunity, March 1–5, in both 2007 and 2008 in Unit 24B (Spindler 2008).

The March 2007 and 2008 hunts were limited to "bulls only" because of the low moose population. Hunting effort declined from March 2007 to March 2008, because of low temperatures, the difficulty of approaching a bull within shooting range at low temperatures. As a result, no one was successful in harvesting moose in either of the initial five-day seasons. In both 2007 and 2008, the March 1–5 hunt dates were extended by Special Action Request because of the extreme cold weather. The observed effort was less during the requested extension periods than during the originally authorized periods in

Table 1. Summary of moose population survey data for Kanuti NWR, 1999–2008 (FWS 2008).

	1999	2004	2005	2007	2008
Survey Area (miles^2)[1]	2,715	2,710	2,710	2,714	2,715
Units Surveyed	108	103	82	150	80
Population Estimate	1,003	842	1,025	588	872
Standard Error	127	146	270	76	124
Range of Estimate[2]	794–1,211	602–1,083	581–1,470	463–714	669–1,075
Moose Density (moose/mile^2)	0.37	0.31	0.38	0.22	0.32
Estimated Cows	542	403	471	276	432
Estimated Bulls	320	252	331	167	199
Bulls:100 Cows	59	62	70	60	46
Yearling Bulls:100 Cows	4	9	20	13	14
Calves:100 Cows	30	46	43	53	58

[1] Survey areas vary slightly among years depending on how survey units were delineated and how units intersected the refuge boundary. Units extending beyond the boundary were considered "in" the refuge, even if much of the unit was outside the boundary.
[2] 90% confidence interval.

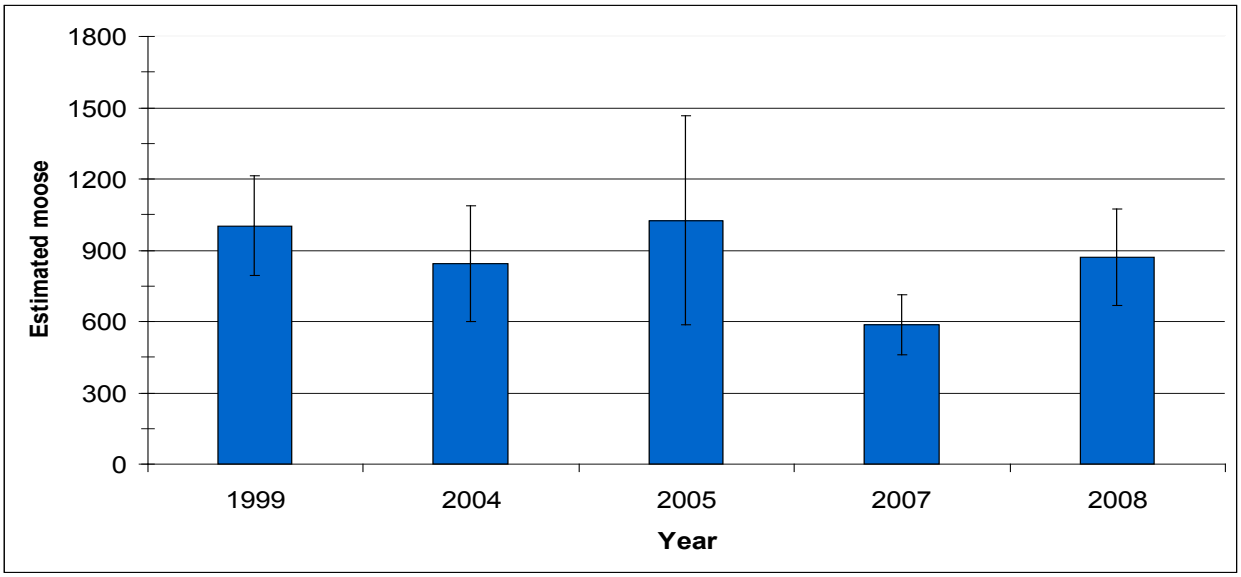


Figure 1. Graphic results of moose population surveys conducted in the Kanuti NWR, 1999–2008 (FWS 2008).

Table 2. Harvest by residency and success rates from ADF&G reported harvest returns for fall hunts (ADF&G 2008).

Period	Total Moose Harvest	Total 24B Res. Harvest	Total Other AK Res. Harvest	Total Nonres. Harvest	24B Res. Success Rate	Other AK Res, Success Rate	Nonres. Success Rate
1989 –1999	61	12	39	10	58%	47%	49%
2000–2007	43	8	26	9	48%	35%	34%

Table 3. Reported harvest for Federal Registration Permits in Unit 24B for 2006–2008 (OSM 2009).

Year	Number of moose harvested (RM892)	Number of moose harvested (RM893)	Number of moose harvested (RM895)
2006	0	2 bulls	0
2007	0	4 bulls	0
2008	0	3 bulls	1 bull

Notes:

RM892 — Federal Registration Permit for Unit 24B all drainages to the north of the Koyukuk River, except the John River Drainage (Sept. 27–Oct. 1)

RM893 — Federal Registration Permit for Unit 24B remainder (Aug. 25–Oct. 1)

RM895 — Federal Registration Permit for Unit 24B all drainages to the north of the Koyukuk River, except the John River Drainage (Mar.1–Mar. 5 season to be announced)

Table 4. Reported moose hunting activity by Allakaket and Alatna residents according to State harvest ticket records during the September and December general hunts (Spindler 2009a).

Year	2001	2002	2003	2004	2005	2006	2007	2008
Moose harvested	6	5	5	6	12	12	18	14

Note: Reporting compliance in 2001–2004 likely low. Better and more accurate reports in 2005–2008 based on telephone polls made by a contracted local resident.

Table 5. Reported moose hunting activity during Federal subsistence hunts, March 2007 and March 2008, based on permit returns and telephone interviews (Spindler 2009a).

	2007	2008
Season dates	March 1–5, 20–24	March 1–5, 8–10
Total of number Federal permits issued	27	13
Hunters that did not report	0	0
Hunters that actually hunted	10	9
Range in hunting days	1–10	1–5
Average days hunted per hunter that went afield	3.8	2.6
Number of moose harvested	0	0

both years, even though temperatures were somewhat milder but still no moose were harvested (**Table 5**). Hunters did report seeing some bulls on Doyon or Koyitlotsina Corp. lands, but apparently had no opportunities to shoot bulls on Federal lands. Hunters also reported seeing a few cows and cow/calf pairs (Spindler 2009a).

Current Events

After the October 2009 Council meeting, the merits of replacing the floating date range of the proposed "to be announced" season with a set date range of March 27–April 5, was recognized in discussions between the Kanuti National Wildlife Refuge Manager and the Council Chair. This would address concerns of the ADF&G Area Biologist (also expressed after the Council meeting) that snow and ice travel conditions become less reliable April 10–15. The Refuge Manager also noted that there is usually a local spring carnival dog race the first weekend in April and villagers prefer that the spring hunt dates not overlap with the carnival. The March 27–April 5 dates would therefore be as late as practicable to have a better chance of mild weather and allowing for some antler growth to occur, making it easier to discern bulls. The Refuge Manager also pointed out that both Federal and State managers and hunters prefer a consistent set 10-day hunting season over a floating time period (Spindler 2009b), should a season be authorized.

During its 24-25 February 2010 meeting, the Council thoroughly discussed Proposal WP10-67 (WIRAC 2010b). The ADF&G Area Biologist in Galena offered and spoke to State Proposal 90A as an alternative for consideration. Proposal 90A requested a four-month winter/spring season (December 15-April 15) and a limit of one antlered bull with a minimum 5-inch antler on one side, in portions of Units 24B and 24C, with a four-year sunset clause (effective through June 30, 2014). The biologist pointed out that in the upper Koyukuk River drainage, there is a low density moose population and a low number of people, which translates to low encounter rates with moose and, therefore, low harvest. The low encounter rates would be offset by the longer, four month season and take pressure off hunters to find moose during a short 5- or 10-day season, as has been the case in the past (WIRAC 2010a).

The Council was in agreement with the rationale for Proposal 90A, and made its recommendation on WP10-67 utilizing the parameters of Proposal 90A for Federal public lands within the Kanuti Controlled Use Area, contingent on Proposal 90A being adopted by the Alaska Board of Game the following week. The Council's intent was to align Federal and State regulations in the affected area (WIRAC 2010b). The Council made a second recommendation (option 2) in case the Board of Game did not adopt Proposal 90A. The Board of Game adopted Proposal 90A with a limit of one antlered bull, but did not adopt the minimum 5-inch antler restriction, due to the reported difficulty with accurately determining the size of an antler in the field. OSM staff concurred with the Council's recommendation and intent and changed its preliminary conclusion to match the Council's recommendation, but without the antler size restriction, so as to be consistent with State regulatory action subsequent to the Council meeting. The Council is scheduled to discuss and reevaluate its recommendation on this proposal, in light of the March 2010 Board of Game action, during its teleconference on 14 May 2010. The outcome of the discussion will be reported at the Federal Subsistence Board 18-21 May 2010 meeting.

Related to this proposal is State Proposal 94, which requested the boundary of the Kanuti Controlled Use Area be modified; a reduction in the size of the Controlled Use Area by removing a triangular shaped portion south of Bettles. The Council's recommendation on Proposal 94 was "oppose" (WIRAC 2010a). However, at its March 2010 meeting, the Alaska Board of Game adopted Proposal 94. Federal public lands in the Kanuti Controlled Use Area have been, and are, closed to the taking of moose, except by Federally-qualified subsistence users of Unit 24, Koyukuk, and Galena, which includes approximately

half of the area removed by the Board of Game. There are now two descriptions of the Kanuti Controlled Use Area, one in State regulations and one in Federal regulations. For this proposal, the affected area is the Kanuti Controlled Use Area described in Federal regulations.

Effects of the Proposal

If the proposal were adopted, a few more bulls may be harvested from the Unit 24B moose population during the winter season. Federal land managers would set a quota during the winter season on the number of moose that could be harvested, which would address conservation concerns. The proposed regulatory language would apply a quota set by the Federal manager to any concurrent applicable State hunt, but that would not be within the authority of the Federal manager. The hunt would be allowed on all Federal public lands in Unit 24B within the Kanuti Controlled Use Area, thus providing more subsistence opportunity to local Federally qualified subsistence users, while spreading the harvest over a larger area. Expanding the "to be announced season" from 5 to 10 days, and moving the dates of the "to be announced" hunt from early March to a mid-March to mid-April time frame, should improve the chance of success for Federally qualified subsistence users. **Map 1** illustrates the geographic areas of differing moose harvest limit and season applicability in Unit 24B under current Federal regulations, and **Map 2** illustrates proposed changes.

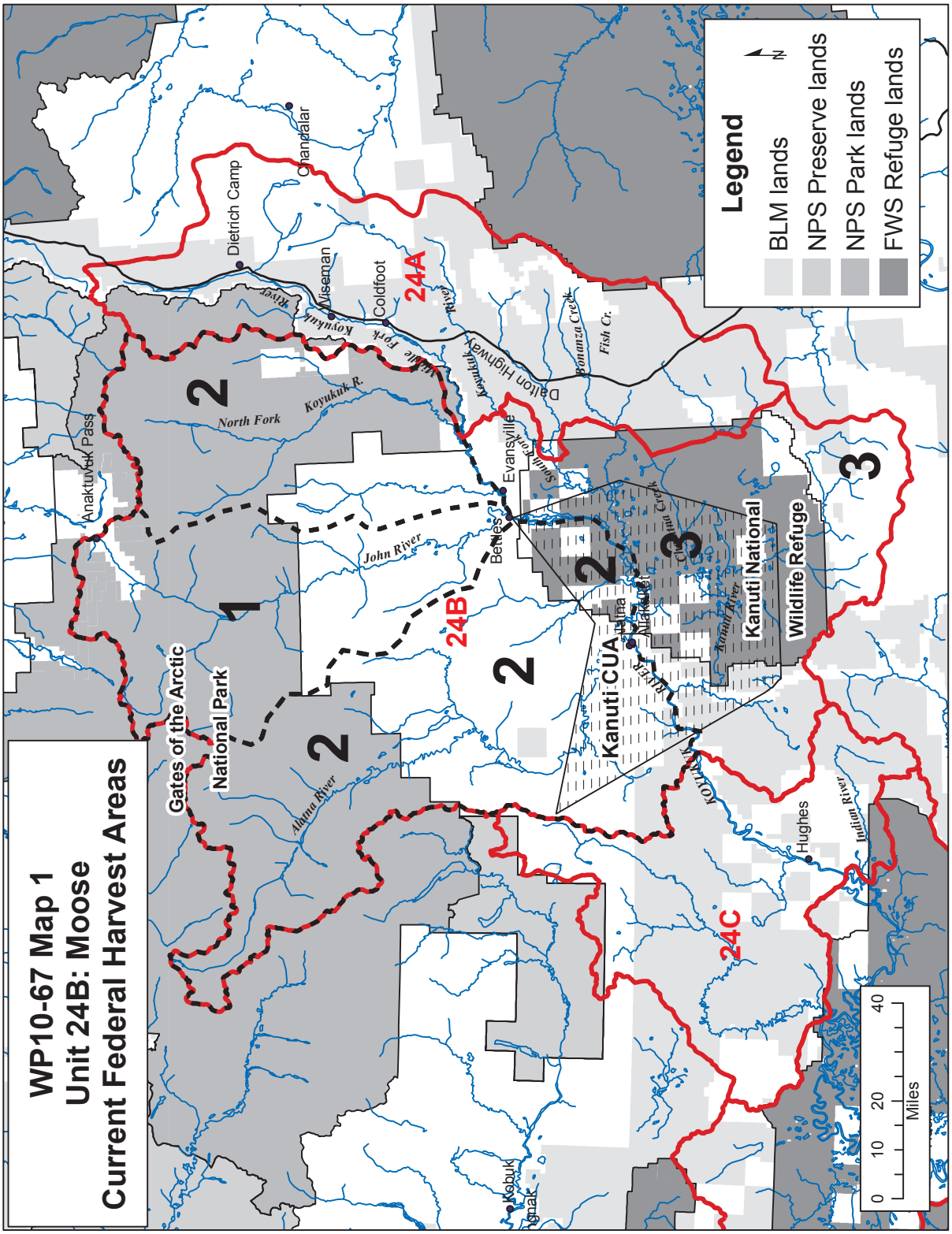
Non-subsistence users would not be affected because Federal public lands within the Kanuti Controlled Use Area in Unit 24B are currently closed to non-Federally qualified moose hunters. Currently, the moose population, although at a low density, exhibits a healthy bull/cow ratio, good productivity and recruitment. The population should be able to support the additional subsistence harvest of a few bull moose by Federally qualified users without causing any conservation concerns.

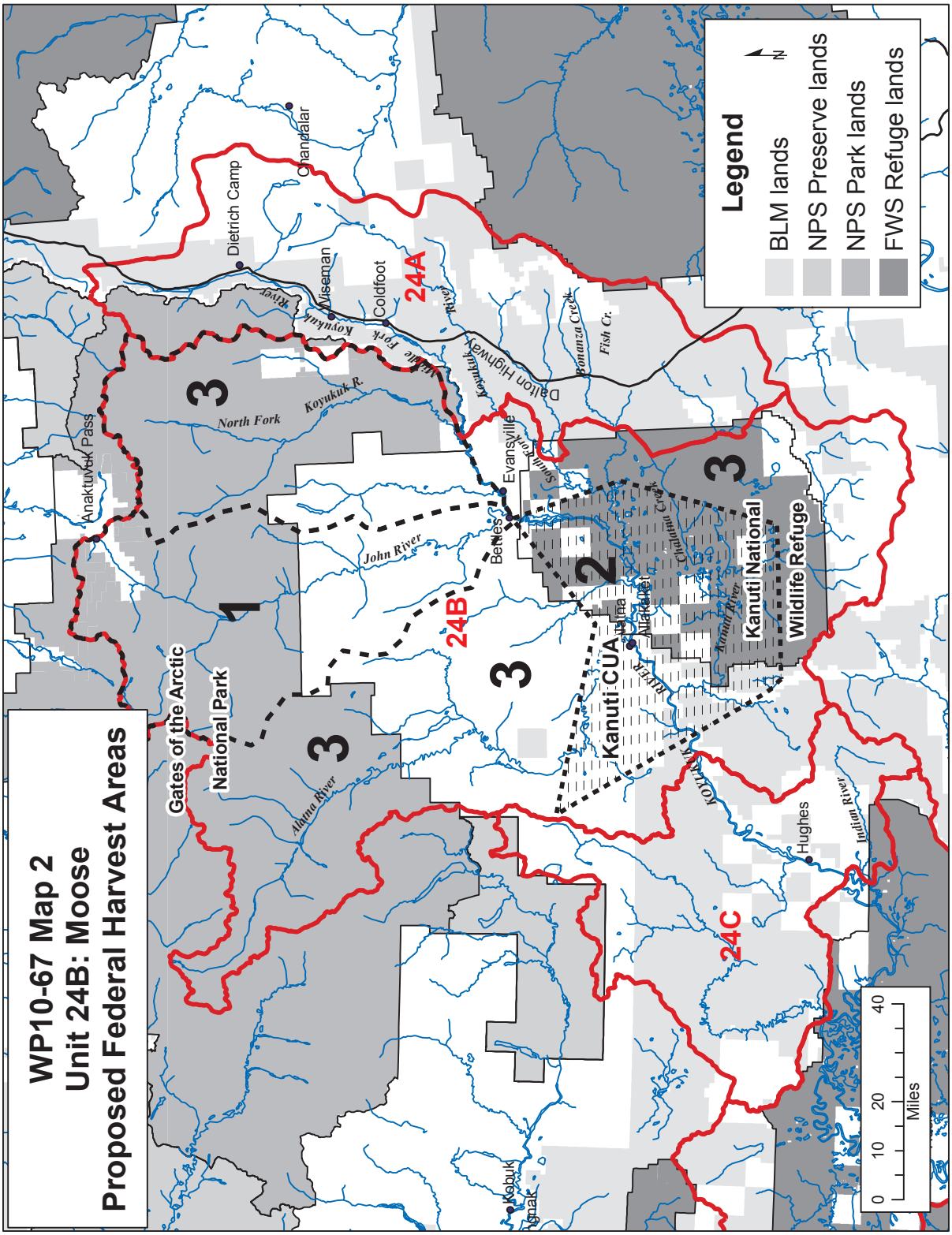
Other than the John River drainage, the hunt area descriptions of Unit 24B — the "Kanuti Controlled Use Area" and "remainder" would be different than current descriptions if this proposal were adopted. These differences would take active outreach (by Refuge staff) to inform hunters of this change to prevent inadvertent violations. The hunt areas would continue to differ from State hunt areas in Unit 24B.

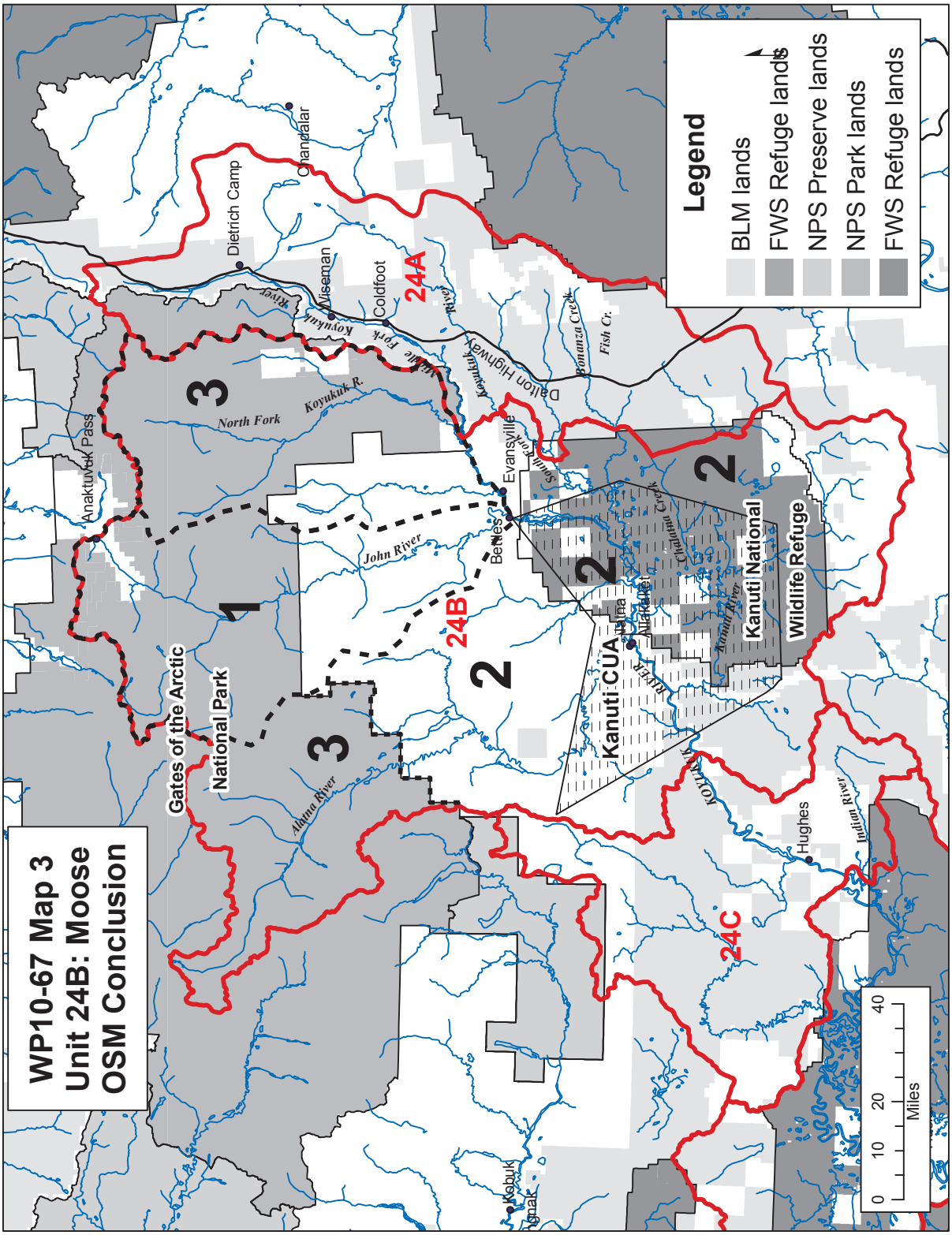
Portions of the Kanuti National Wildlife Refuge and BLM lands in Unit 24B would fall into both the "Kanuti Controlled Use Area" and "remainder" hunt areas. In discussions with the Refuge manager and BLM staff, it is their preference that all of the Refuge and BLM lands in Unit 24B be included in the "to be announced" hunt, along with the Kanuti Controlled Use Area (**Map 3**). This would provide additional opportunity to Federally qualified subsistence users. There is a small part of the eastern side of the Refuge in Unit 24A that would not be affected by this proposal.

A six year moratorium on cow moose harvest would be specified in regulation. However, this is unnecessary, as the proposed harvest limit is "1 antlered bull," which would prohibit the harvest of a cow. In order to harvest cows in the future in the portion of Unit 24B affected by this proposal, a Special Action request or proposal would need to be submitted, whether or not the moratorium language is adopted. The remainder area retains the current harvest limit of one antlered bull, and no cow moose moratorium has been proposed.

Much of the area north of the Koyukuk River (excluding the John River drainage), which had formerly been described as a separate hunt area, would be encompassed within the remainder area if this proposal were adopted as submitted. The current one moose limit in Unit 24B north of the Koyukuk, except the John River, with allowance for antlerless take when authorized would be supplanted by the one antlered bull limit applicable to Unit 24B remainder. No changes are proposed for the John River drainage. Federally qualified users who hunt in Gates of the Arctic National Park lands to the west and east of the


WP10-67 Map 1
Unit 24B: Moose
Current Federal Harvest Areas
Legend
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
N
0 10 20 40
Miles
Gates of the Arctic
National Park
Kanuti National
Wildlife Refuge
Kanuti CUA
24A
24B
24C
1
2
3
Anaktuvuk Pass
Dietrich Camp
Chandalar
Wiseman
Coldfoot
Evansville
Bettles
Allakaket
Alatna
Hughes
Kobuk
Ignik
North Fork
Koyukuk R.
John River
Alatna River
Koyukuk River
Dalton Highway
Bonanza Creek
Fish Cr.
Indian River
Kanuti River
Kanuti Lake
Chalatna Creek


WP10-67 Map 2
Unit 24B: Moose
Proposed Federal Harvest Areas
Legend
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
N
Gates of the Arctic
National Park
Kanuti National
Wildlife Refuge
Kanuti CUA
24A
24B
24C
1
2
3
Dietrich Camp
Chandalar
Wiseman
Coldfoot
Evansville
Bettles
Allakaket
Alatna
Hughes
Kobuk
Ignik
Anaktuvuk Pass
North Fork
Koyukuk R.
Alatna River
John River
Dalton Highway
Bonanza Creek
Fish Cr.
Indian River
Koyukuk River
Kanuti River
Chalatna Creek
0
10
20
40
Miles


WP10-67 Map 3
Unit 24B: Moose
OSM Conclusion
Legend
BLM lands
FWS Refuge lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
Gates of the Arctic
National Park
Kanuti National
Wildlife Refuge
Kanuti CUA
24A
24B
24C
1
2
3
Anaktuvuk Pass
Dietrich Camp
Chandalar
Wiseman
Coldfoot
Evansville
Bettles
Alatna
Allakaket
Hughes
Kobuk
Ignal
North Fork
Koyukuk R.
Middle Fork
Koyukuk River
John River
Alatna River
Dalton Highway
South Fork
Bonanza Creek
Fish Cr.
Chalatna Creek
Kanuti River
Indian River
0
10
20
40
Miles

John River drainage (**Map 2**) would, if this proposal were adopted, find that the season and harvest limit would change, taking on the regulations applicable to the current remainder area.

OSM CONCLUSION

Support Proposal **WP10-67 with modification** to provide a four-month winter/spring hunt on all Kanuti National Wildlife Refuge and BLM lands in Unit 24B (**Map 3**), to specify the Kanuti Controlled Use Area as described in Federal regulation and to specify that the regulation will sunset on 30 June 2014.

The modified proposed regulations would read:

Unit 24B — Moose

Unit 24B, that portion within the John River Drainage — 1 moose	*Aug. 1–Dec. 31*
~~*Unit 24B, all drainages to the north of the Koyukuk River, except the John River drainage — 1 moose; however, antlerless moose may be taken only from Sept. 27–Oct. 1 and Mar. 1–5, if authorized jointly by the Kanuti National Wildlife Refuge Manager, the BLM Central Yukon Field Office Manager, and the Gates of the Arctic National Park Superintendent. A Federal registration permit is required for the Sept. 26–Oct. 1 and Mar. 1–5 seasons. Harvest of cows accompanied by calves is prohibited. The announcement will be made after consultation with the ADF&G Area Biologist and Chairs of the Western Interior Alaska Subsistence Regional Advisory Council, the Gates of the Arctic Subsistence Resource Commission, and the Koyukuk River Fish and Game Advisory Committee*~~.	~~*Aug. 25–Oct. 1*~~ ~~*Mar. 1–Mar. 5*~~ ~~*Season to be announced*~~
Unit 24B Kanuti National Wildlife Refuge and BLM lands—1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.	***Aug. 25–Oct. 1*** ***Dec. 15–Apr. 15 (until June 30, 2014)***
Federal public lands in the Kanuti Controlled Use Area, ***as described in Federal regulation****, are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena, hunting under these regulations.*	
Unit 24B remainder 1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.	*Aug. 25–Oct. 1*
~~*Federal public lands in the Kanuti Controlled Use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena, hunting under these regulations.*~~	

Justification

The four-month winter/spring season will provide Federally-qualified users more opportunity to harvest moose in an area of low moose density and low encounter rates, which have translated to low harvest, and will align with recent State Board of Game regulatory action. The harvest limit of "1 antlered bull", with

no antler size restriction, is less restrictive than the Council's recommendation, and also aligns with the Board of Game action.

The addition of the Refuge and BLM lands outside the Kanuti Controlled Use Area in Unit 24B, which were not included in the Council's recommendation, will provide more subsistence harvest opportunity for residents of local communities who have been experiencing hardships in recent years, and preclude the need to establish another portion description for the subunit. The Council is scheduled to discuss and reevaluate its recommendation on this proposal, in light of the March 2010 Board of Game action, during its teleconference on 14 May 2010. The outcome of the meeting will be reported at the Federal Subsistence Board 18-21 May 2010 meeting.

The cow moose moratorium language is unnecessary, as the proposed harvest limit of "1 antlered bull" prohibits the harvest of a cow.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

NORTH SLOPE REGIONAL ADVISORY COUNCIL

No action taken on WP10-67. The Council deferred to the Western Interior Regional Advisory Council. The North Slope and Anaktuvuk Pass are not affected to any extent by this proposal. The Council felt that this proposal would be best addressed by the Western Interior Regional Advisory Council.

WESTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-67 **with modification** to provide a four-month winter/spring hunt in the Kanuti Controlled Use Area, to change the harvest limit to 1 antlered bull, with a minimum 5-inch antler (one-half ear length) on one side and to specify that the regulation will sunset on 30 June 2014.

The modified proposed regulations would read:

Unit 24B, that portion within the John River Drainage—1 moose	*Aug. 1–Dec. 31*
~~*Unit 24B, all drainages to the north of the Koyukuk River, except the John River drainage – 1 moose; however, antlerless moose may be taken only from Sept. 27 – Oct. 1 and Mar. 1 – 5, if authorized jointly by the Kanuti National Wildlife Refuge Manager, the BLM Central Yukon Field Office Manager, and the Gates of the Arctic National Park Superintendent. A Federal registration permit is required for the Sept. 26 – Oct. 1 and Mar. 1 – 5 seasons. Harvest of cows accompanied by calves is prohibited. The announcement will be made after consultation with the ADF&G Area Biologist and Chairs of the Western Interior Alaska Subsistence Regional Advisory Council, the Gates of the Arctic Subsistence Resource Commission, and the Koyukuk River Fish and Game Advisory Committee.*~~	~~*Aug. 25–Oct. 1*~~ ~~*Mar. 1–Mar. 5 Season to be announced*~~
Unit 24B Kanuti Controlled Use Area—1 antlered bull, with a minimum 5-inch antler on one side. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1* ***Dec. 15–Apr. 15 (until June 30, 2014)***
Federal public lands in the Kanuti Controlled Use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena, hunting under these regulations.	
Unit 24B remainder 1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*
~~*Federal public lands in the Kanuti Controlled use Area are closed to the taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*~~	

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-67

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-67: The Western Interior Regional Advisory Council submitted WP10-67 with five changes proposed for moose hunting in Unit 24B. The Council subsequently adopted recommendations to modify their own proposal to mirror the state regulation adopted by the Board of Game March 2010. Office of Subsistence Management agreed with those changes and also recommends their adoption.

Impact on Subsistence Users: If adopted with the modified Council and OSM recommendations, federally qualified subsistence users would be able to hunt moose under consistent state and federal regulations during a relaxed 4-month winter season when bull moose are most likely to be available and traveling conditions are good.

The proposal requests elimination of the antlerless moose hunt. No antlerless federal subsistence moose hunts were authorized in the last 4 years by federal land managers, thus this proposed change will not restrict or provide additional opportunity for federal subsistence uses.

Removal of the closure of federal public lands in the Kanuti Refuge to non-federally qualified hunters would have no effect on hunting pressure. This is a very remote area, so non-federally qualified hunters are essentially limited to travel by boat on navigable waters and would be in the same general areas as local federal subsistence users. There may be some increase in hunting on non-federally qualified users on federal lands, but the Kanuti Controlled Use Area aircraft access restrictions will limit that increase.

Opportunity Provided by State: In Unit 24B, the state season is currently one bull from September 1 through 25 upstream of the Henshaw Creek drainage; from (and including) the Henshaw Creek drainage downstream, the seasons are September 1 through 25. Downstream from the Henshaw Creek drainage, the season now includes a winter registration permit hunt during December 15 through April 15 with a bag limit of 1 antlered bull. This season will sunset after 4 years if not reapproved. The Board of Game also adopted this same winter season with a sunset for all of Unit 24C.

Conservation Issues: The moose population in Unit 24B has declined by as much as 50% since 1999 although bull:cow ratios remain high. The management objective for the moose population is for growth and a return of the population to levels of the late 1990s. The Alaska Board of Game has endorsed this strategy and closed antlerless moose harvest in the fall and closed spring hunts in order to protect that productive component (cows) of the population. Unreported harvest of cows occurs annually, which is a conservation concern. The State season of December 15 through April 15 with a bag limit of 1 antlered bull will be sustainable as long as residents are careful to not shoot cows. Because this season is experimental, the Alaska Board of Game established the four year sunset to make the management program is carefully evaluated before it is allowed to continue.

The Alaska Department of Fish and Game's management responsibilities for sustainable populations and scientific role in the process of determining the hunting "season and numerical harvest quota" need to be clarified in the proposed "consultation" process.

Enforcement Issues: Federal subsistence hunters would be at risk of taking a cow in the late winter bull-only season when bulls have shed their hard antlers and are growing new velvet antlers. A legal definition for what qualifies as an antlered bull would benefit both federal subsistence users and enforcement officers.

Other Comments: The Alaska Board of Game approved population management objectives for the Upper Koyukuk River Drainage, detailed in the Koyukuk River Moose Management Plan and the Unit 24 Moose Management Report.

Recommendations: (1) Adopt as modified by the Council and OSM. (2) The Department continues to request that the Federal Subsistence Board lift the closure within the Kanuti Controlled Use Area to non-federally qualified users. The closure complicates management, unnecessarily reduces some opportunity for nonfederally qualified users in remote areas away from hunting areas used by local residents, and no longer provides protection of subsistence hunting opportunity because it is redundant with the Controlled Use Area.

WP10-69 Executive Summary	
General Description	Proposal WP10-69 requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18. *Submitted by Kuskokwim Native Association*
Proposed Regulation	**Unit 21E—Moose** *Rural residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
OSM Preliminary Conclusion	**Support** Proposal WP10-69 **with modification** to include only the Paimiut Slough area of Unit 21E and to exclude Chuathbaluk (see **Map 3**). The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
OSM Conclusion	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*

continued on next page

WP10-69 Executive Summary *(continued)*	
Western Interior Regional Council Recommendation	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The modified regulation would read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—*** *Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
Yukon-Kuskokwim Delta Regional Council	**Support** Proposal WP10-69 **with modification** described in the OSM Preliminary Conclusion (to include only the Paimiut Slough area of Unit 21E; see **Map 3**) with an additional modification to keep Chuathbaluk on the list of communities with a positive customary and traditional use determination. The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	Although the Department **supports** this proposal in general, it is conditional. *See full comments following the analysis.*
Written Public Comments	**None**

STAFF ANALYSIS
WP10-69

ISSUES

Proposal WP10-69, submitted by Kuskokwim Native Association (KNA), requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag,[1] Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18.

DISCUSSION

The proposal is being submitted for all of Unit 21E; however, the proponent states that it is the Paimiut Slough area that is customarily and traditionally used by Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk (see **Map 1**), and it encourages the Western Interior Subsistence Regional Advisory Council to consider modifying the proposal to include that area only. The proponent further states that this proposal reflects comments received from residents of the communities named in the request, and that historically these communities depended on moose from Unit 21E to feed their families.

In part, this request is being made because of the growing scarcity of moose in Unit 19A and the Kuskokwim River drainage portion of Unit 18 and regulatory restrictions that resulted beginning in 2003. The impetus for KNA to request a modification to the existing customary and traditional use determination for moose in Unit 21E is the closure and then removal of the State-managed winter moose hunt in Unit 21E in 2003/04. Only the Federal winter moose season has remained open, and as a consequence, the winter moose season has been closed to all but the Federally qualified communities of Grayling, Anvik, Shageluk and Holy Cross (collectively known as GASH) and Russian Mission. The GASH communities are in Unit 21E, and Russian Mission is located in Unit 18.

While caribou can be harvested in Unit 21E under Federal subsistence regulations by residents of some communities in Unit 19A—Aniak, Chuathbaluk, and Crooked Creek—currently no community in Unit 19A is included in the customary and traditional use determination for moose in Unit 21E.

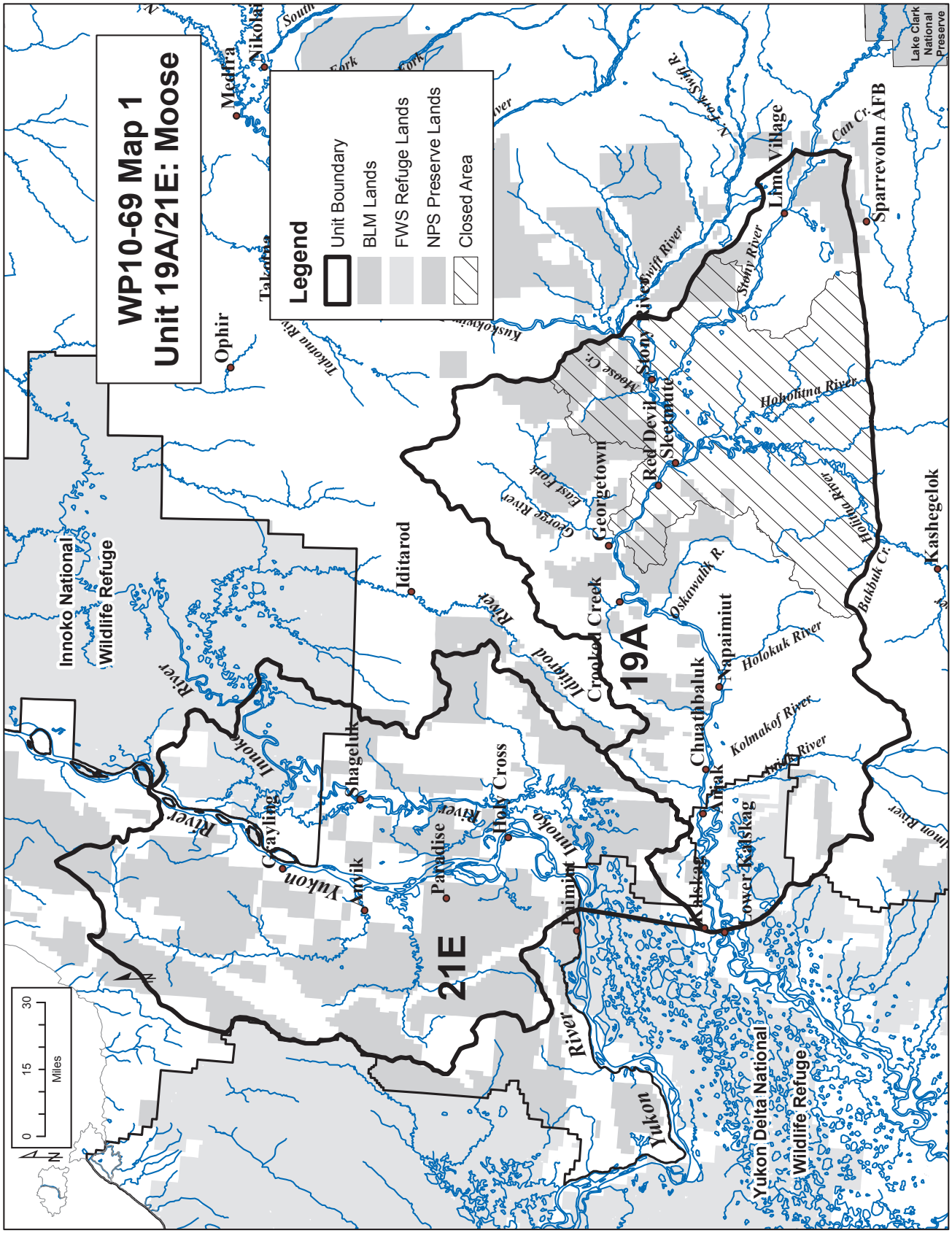
Existing Federal Regulation

Customary and Traditional Use Determination

Unit 21E—Moose

Rural residents of Unit 21E and Russian Mission.

[1] For the purposes of this analysis, Upper Kalskag is designated as "Upper" to clarify the difference between Upper Kalskag and Lower Kalskag.


WP10-69 Map 1
Unit 19A/21E: Moose
Legend
Unit Boundary
BLM Lands
FWS Refuge Lands
NPS Preserve Lands
Closed Area
Medfra
Nikolai
Ophir
Takotna
Takotna River
Kuskokwim
South Fork
N. Fork Swift R.
Swift River
Stony River
Lime Village
Sparrevohn AFB
Can Cr.
Lake Clark National Preserve
Stony
Red Devil
Sleetmute
Moose Cr.
Hoholitna River
Hoholitna River
Georgetown
East Fork
George River
Iditarod
Iditarod River
Crooked Creek
19A
Oskawalik R.
Napaimiut
Holokuk River
Bakbuk Cr.
Kashegelok
Chuathbaluk
Kolmakof River
Twin River
Aniak
Kalskag
Lower Kalskag
Kwethluk
Tuntutuliak
Tuntutuliak River
Holy Cross
Paradise
Shageluk
Anvik
Yukon River
Innoko River
Gayline
Innoko National Wildlife Refuge
21E
Yukon Delta National Wildlife Refuge
Yukon River
N
0 15 30
Miles

Proposed Federal Regulation

Customary and Traditional Use Determination

Unit 21E—Moose

Rural residents of Unit 21E, ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 21E and consist of 79% Bureau of Land Management and 21% U.S. Fish and Wildlife Service lands (**Map 1**).

Background

A similar request was submitted by KNA to the Federal Subsistence Board (Board) in February 2008 in the form of a special action request (WSA08-01). The Board rejected the request in part because of the differences in the Yukon Kuskokwim Delta and Western Interior Councils' recommendations suggesting that additional public participation and discussion was necessary. The Board encouraged KNA to submit a regular-cycle proposal. That regular cycle proposal is the topic of this analysis.

As noted, this request was made in part because of the growing scarcity of moose in Unit 19A. In March 2006, ADF&G and the Board closed the eastern portion of Unit 19A to all moose hunting due to conservation concerns. Subsequently, in September 2006, hunting opportunity in the western portion of Unit 19A was reduced through Tier II and ANILCA Section 804. Initially, this occurred through a special action and emergency order but these restrictions were subsequently passed into regulation in May 2007. This situation has resulted in reduced opportunity and harvest of moose in all of Unit 19A, the primary area used by the proponents for hunting moose. Since the 2006/07 season, a State Tier II permit or a Federal permit has been required to hunt moose in Unit 19A. The Central Kuskokwim Moose Management Plan, published in June 2004, guides moose management in Units 19A and 19B (ADF&G 2004).

For the Kuskokwim River drainage portion of Unit 18, in the fall of 2004 a five-year moratorium on moose hunting, intended to increase moose numbers, went into effect (ADF&G 2006:4). In September 2009, State-managed lands in this area opened for moose hunting with a quota of 75 moose. The hunting season was 10 days.

For Unit 21E, the GASH Fish and Game Advisory Committee and State of Alaska Board of Game did not support the State winter season for antlerless moose in 2003/04 due to concerns about the possibility of a decline in the moose population (ADF&G 2006:3). The winter season has not opened since that time. State antlerless moose seasons require approval by a majority of the active advisory committees located in, or the majority of members reside in, the affected unit or subunit (see 5 AAC 98.005 and AS 16.05.780). The Federal winter moose season has remained open. Regulatory changes in units to the south of Unit 21E have caused increased concern about displaced hunters causing increased hunting pressure in Unit 21E (ADF&G 2006:4). However, in recent years the moose population has grown in the lower Yukon River area in Unit 18, which has resulted in fewer hunters traveling upriver (ADF&G 2006:1; WIRAC 2010:187).

The Yukon-Innoko Moose Management Plan, published in December 2006, guides management actions in Units 21A and 21E (ADF&G 2006). An Adaptive Plan for Intensive Management of Moose in Unit 21E was completed by ADF&G in 2008 (2008a). The Working Group that drafted the Yukon-Innoko Moose Management Plan did not identify requests to expand the customary and traditional use determination for moose in Unit 21E as a major issue to be considered in the plan; however, it recommended that "if the federal customary and traditional subsistence use determination (C&T) for Unit 21E is revised to make a large number of additional communities eligible, the federal winter season should be eliminated" (ADF&G 2006:22). The Working Group deferred further comment of customary and traditional use determinations to the Federal subsistence regional advisory councils representing the area (ADF&G 2006:23).

Regulatory History

This proposal is the first to request the expansion of the customary and traditional use determination for moose in Unit 21E to include Unit 19A communities. However, the Board has dealt with a number of proposals requesting the expansion of the customary and traditional use determination for moose in Unit 21E to include communities in Unit 18. The Board deferred those proposals until local users could work out a compromise, which has not been achieved.

The current customary and traditional use determination for moose in Unit 21E, adopted from the State at the inception of the Federal Subsistence Management Program in 1990, is for rural residents of Unit 21E and Russian Mission.

Aniak and Chuathbaluk are included in the customary and traditional use determination for moose in Unit 19 only. Upper Kalskag is included in the customary and traditional use determination for moose in Unit 18 and Unit 19 only. Lower Kalskag is included in the customary and traditional use determination for Unit 18, Unit 19A, and Unit 19B only. These customary and traditional use determinations were adopted from the State in 1990.

Community Characteristics

The communities of Upper Kalskag, Aniak, and Chuathbaluk are located along the middle Kuskokwim River in Unit 19A, and Lower Kalskag is located in Unit 18 downriver from the Unit 19A boundary and adjacent to Upper Kalskag. The unit boundary goes between the two villages that are otherwise connected. With the exception of a State-maintained 4.2-mile gravel road connecting Upper and Lower Kalskag, no road connections exist between the other communities (ADCCED 2008). However, boats are used to travel between villages, and trails and the frozen river are used by people on snow machines and ATVs during winter. A trail runs from the Paimiut Portage, linking Upper Kalskag to the now-abandoned village of Paimiut on the Yukon River (see **Map 1**; Burch 1976:1–10).

Before 1900, in the area of the above named communities, people lived in semi-permanent villages, often in semi-subterranean dwellings. Most people moved seasonally to harvest various species of fish and wildlife at sites within 30 miles of each other in a relatively fixed range (Fienup-Riordan 1984:68). Before 1900 many seasonal dwelling places and semi-permanent villages existed between present-day Lower Kalskag and Napaimute, such as Kolmakovski Redoubt, Crow Village, and Ohagamute. Several more permanent communities were established after an epidemic of influenza in 1900 when villages experiencing high death rates re-grouped into fewer villages—Kalskag,[2] Ohagamute, Napaimute, and Crooked Creek. The migration to permanent communities continued to the 1950s at which time most

[2] Before the village divided into two villages, Kalskag and Lower Kalskag.

residents were living in permanent communities, traveling seasonally to temporary camps to harvest wild resources (Fienup-Riordan 1984:82–85).

Between 1950 and 1960, another population shift occurred, prompted by the requirement to send children to school imposed by the territorial government (Nick 1984). Some Paimiut residents initially moved to Upper and Lower Kalskag along the Kuskokwim River, and then some of those people again relocated to Russian Mission in the 1960s (Pete 1991:18-19). Descendents of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDRAC 2008:79, 81–82). Mining and trading enterprises also contributed to the movement of people.

Crow Village, an abandoned village that was located near present-day Chuathbaluk, and Paimiut were the farthest inland settlements whose residents spoke only Central Yup'ik (Oswalt and VanStone 1967:1). According to Charnley (1984), in 1983 Upper and Lower Kalskag, and Chuathbaluk were composed primarily of Yup'ik Eskimos. Sleetmute, Stony River, and Crooked Creek included individuals of both Yup'ik and Athabascan descent. Aniak, the regional center, was composed of both non-Native and Yup'ik people. Aniak is located approximately 26 miles upriver from Lower Kalskag, and 11 miles downriver from Chuathbaluk.

In 2000 these four communities consisted of an estimated 1,200 people in 335 households (U.S. Census 2000; **Table 1**).

Table 1. Community population 1950 - 2000 and and number of households 2000 (Rollins 1978, U.S. Census 2000).

Community	1950	1960	1970	1980	1990	2000	Number of Households in 2000
Lower Kalskag	88	122	183	246	297	267	66
Upper Kalskag	139	147	122	129	172	230	62
Aniak	142	308	205	341	540	572	174
Chuathbaluk			94	105	97	119	33
Total	369	577	604	821	1,106	1,188	335

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

A holistic evaluation of eight factors for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk is described below.

In the late 19th century, moose were not numerous in the Middle Kuskokwim Area, an area generally encompassing the Kuskokwim River drainage from Lower Kalskag to Stony River in Units 18 and 19 (Seavoy 2008); however, caribou were more common (Charnley 1983:5). For example, according to John Kilbuck, a missionary for the Moravian Church who arrived in Bethel in 1885, during a trip upriver, Kilbuck wrote that a man near Napaimute shot four deer [caribou] with five bullets that were all he had. "To get home with the meat, he made a flat boat with two skins, and in this he descended a small creek, up/into the river and then on down" (Fienup-Riordan 1988:187). Additionally, Kilbuck wrote of the people of the Middle Kuskokwim Area:

> *The Upper River people were the first to use firearms—from the blunder-buss with its flint and flash pan, whose chief value as a weapon of defense was the deafening report it could make, when fired. —A few of the old people still carry powder marks on their faces from the use of this ancient arm. The blunder-buss was replaced by the musket, and the musket was replaced by the Kentucky rifle. Now the latest improved repeating rifle is the equipment of the modern hunter* (Fienup-Riordan 1988:7).

Moose began entering this area in larger numbers in the early 1900s and populations have increased in size and distribution throughout the area since that time (Charnley 1983:5).

The primary sources of information on resource use by residents of these communities contain observations made over 30 years ago: Brelsford et al.'s research in Aniak (Brelsford et al. 1987), Charnley's work in Chuathbaluk (Charnley 1983, 1984), and Stickney's central Kuskokwim food survey (Stickney 1981). All indicate that land mammals and salmon and nonsalmon fish were critical resources for these communities. An attempt to update these observations has been made through Krauthoefer and Koster's (2006) research; however, the findings focus on the results of household harvest surveys almost entirely and offer little insight into possible changes in moose use patterns of the residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

Harvest and Use Levels

In the area of these communities, as in much of rural Alaska, household surveys tend to provide a more accurate accounting of harvests than do returned harvest tickets (Andersen and Alexander 1992). Consequently, in 2003, 2004, and 2005, three 12-month household surveys were conducted to provide

an accurate estimate of the number of moose taken by residents of these communities (Krauthoefer and Koster 2006) (**Table 2).** With the exception of a household survey at Chuathbaluk in 1983 (Charnley 1983), no other household surveys have been conducted for moose at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

Table 2. Summary of household participation in harvest surveys that included moose, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

Community	Study Year	Type of Sample	Total Identified Households	Surveyed Households	Percentage of Total	Estimated Human Population
Aniak	2003	Census	163	82	50%	509
	2004	Census	155	92	59%	492
	2005	Census	168	124	74%	545
Chuathbaluk	1983	Census	29	29	100%	132
	2003	Census	30	17	57%	125
	2004	Census	23	17	74%	108
	2005	Census	42	21	50%	124
Lower Kalskag	2003	Census	72	34	47%	303
	2004	Census	73	59	81%	303
	2005	Census	84	30	36%	336
Upper Kalskag	2003	Census	59	34	58%	243
	2004	Census	52	50	96%	243
	2005	Census	68	34	50%	266

The estimated harvest (from all areas) and use of moose during the four study years—1983, 2003, 2004, and 2005—at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are reported in **Table 3** and **Table 4.** The estimated moose harvest ranged from an annual high of 46 moose by Aniak residents in 2005, to a low of one moose by a Chuathbaluk resident in 2004 (**Table 3**). This difference between these two harvest numbers is in part because Aniak's human population was much larger than Chuathbaluk's population of people in the study years (**Table 1**; U.S. Census 2000).

Krauthoefer and Koster (2006) determined that in 2003, 2004, and 2005 moose were taken from Units 18, 19, and 21 by residents of the communities in the request (**Table 5**). No household from any of the four communities reported taking a moose in Unit 21E in 2003. In 2004 an estimated 6 moose total were taken in Unit 21E by residents of the four communities; and in 2005, an estimated 5 moose total were taken in Unit 21E by residents of the four communities. This is 0%, 9%, and 8%, respectively, of the total moose harvest of all four communities combined in 2003, 2004, and 2005. However, Lower Kalskag and Chuathbaluk had no reported moose harvest in Unit 21E in any of the three survey years. It is important to note that residents of these communities were no longer eligible to participate in the winter hunt in Unit 21E beginning in 2003/2004.

Another source of information is the ADF&G harvest ticket database. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (cf. Andersen and Alexander 1992). Because of the potential for under reporting, conventional ADF&G harvest reporting systems do not always reflect the true level of harvest. From 1983 to 2006 a cumulative total of 80 returned permits reported hunting in Unit 21E by residents of the four communities, and a cumulative total of 47 moose

Table 3. The use and harvest of moose based on household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

		Percentage of Households					Moose Harvest				
Community	Study Year	Using Moose (%)	Hunt-ing Moose (%)	Harvest-ing Moose (%)	Giving Moose (%)	Receiv-ing Moose (%)	Reported (Number)	Expanded to House-holds Not Surveyed (Number)	Lower Estimate (Number)	Higher Estimate (Number)	95% Con-fidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	12	24	12	37	53
	2004	80	71	23	24	65	23	38	25	51	33
	2005	80	62	25	22	60	34	46	31	55	19
Chuathbaluk	1983	NA	72	24	NA	NA	16	16	16	16	0
	2003	29	35	18	18	24	3	5	3	10	103
	2004	59	35	6	12	53	1	1	1	1	0
	2005	29	29	10	0	24	2	4	2	10	147
Kalskag	2003	74	62	24	24	62	14	30	14	53	75
	2004	36	41	17	8	24	10	12	10	15	29
	2005	40	30	3	3	37	1	2	1	8	279
Upper Kalskag	2003	74	59	29	26	59	12	21	12	32	51
	2004	72	76	16	14	64	9	9	9	10	14
	2005	59	50	18	15	44	6	12	6	21	78

NA=not asked.

Table 4. The harvest of moose by weight per household and per person from harvest surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

		Percentage of Households					Moose Harvest Levels in Pounds Usable Weight[a]		
Community	Study Year	Using Moose (%)	Hunting Moose (%)	Harvesting Moose (%)	Giving Moose (%)	Receiving Moose (%)	Per Household (Pounds)	Per Person (Pounds)	Confidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	79	25	53
	2004	80	71	23	24	65	80	42.5	33
	2005	80	62	25	22	60	109	46	19
Chuathbaluk	1983	NA	72	24	NA	NA	394	87	0
	2003	29	35	18	18	24	95	23	103
	2004	59	35	6	12	53	24	9	0
	2005	29	29	10	0	24	26	17	147
Lower Kalskag	2003	74	62	24	24	62	222	53	75
	2004	36	41	17	8	24	74	25	29
	2005	40	30	3	3	37	6	5	279
Upper Kalskag	2003	74	59	29	26	59	191	46	51
	2004	72	76	16	14	64	94	26	14
	2005	59	50	18	15	44	48	24	78

NA=not asked.

[a] Conversion factor is 540 lb per moose.

Table 5. Estimated harvest of moose by unit from household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, 2003/04, 2004/05, and 2005/06 (Krauthoefer and Koster 2006).[a]

Unit	Lower Kalskag	Upper Kalskag	Aniak	Chuathbaluk	Total	Percentage
2003/04						
18	13	2	0	0	14	18%
19A	15	10	14	5	44	56%
19B	0	0	2	0	2	3%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	0	0	0	0	0%
Unknown	2	9	8	0	19	24%
Subtotal	30	21	24	5	80	100%
2004/05						
18	1	3	0	0	4	7%
19A	11	4	29	1	45	73%
19B	0	0	0	0	0	0%
19D	0	0	2	0	2	3%
21A	0	0	3	0	3	5%
21E	0	2	3	0	6	9%
Unknown	0	0	2	0	2	3%
Subtotal	12	9	39	1	62	100%
2005/06						
18	0	0	0	0	0	0%
19A	3	8	34	2	47	82%
19B	0	0	1	0	1	2%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	2	3	0	5	8%
Unknown	0	2	0	2	4	7%
Subtotal	3	12	38	4	57	100%

[a] Residents of the four communities were not Federally qualified to participate in the Federal winter hunt in Unit 21E.

Table 6. The moose harvest in Unit 1E 1983 - 2006 (ADF&G 2008c and 2008d).

	1983-2006 Cumulative Reported Moose Harvest	
Community	Number of Hunters	Number Harvested
Aniak	50	29
Chuathbulak	0	0
Lower Kalskag	11	9
Upper Kalskag	19	9
TOTAL	80	47

harvests were reported in Unit 21E (**Table 6**). Only Chuathbaluk did not report hunting moose in Unit 21E during this period.

For 2003, 2004, and 2005, survey results document that many households in the communities used moose, ranging from a high of 85% at Aniak in 2003, to a low of 29% at Chuathbaluk in 2003 and 2005 (**Table 3**). Many households attempted to harvest moose (ranging from 76% at Upper Kalskag in 2004, to 29% at Chuathbaluk in 2005), but few (16% and 0%, respectively) were successful.

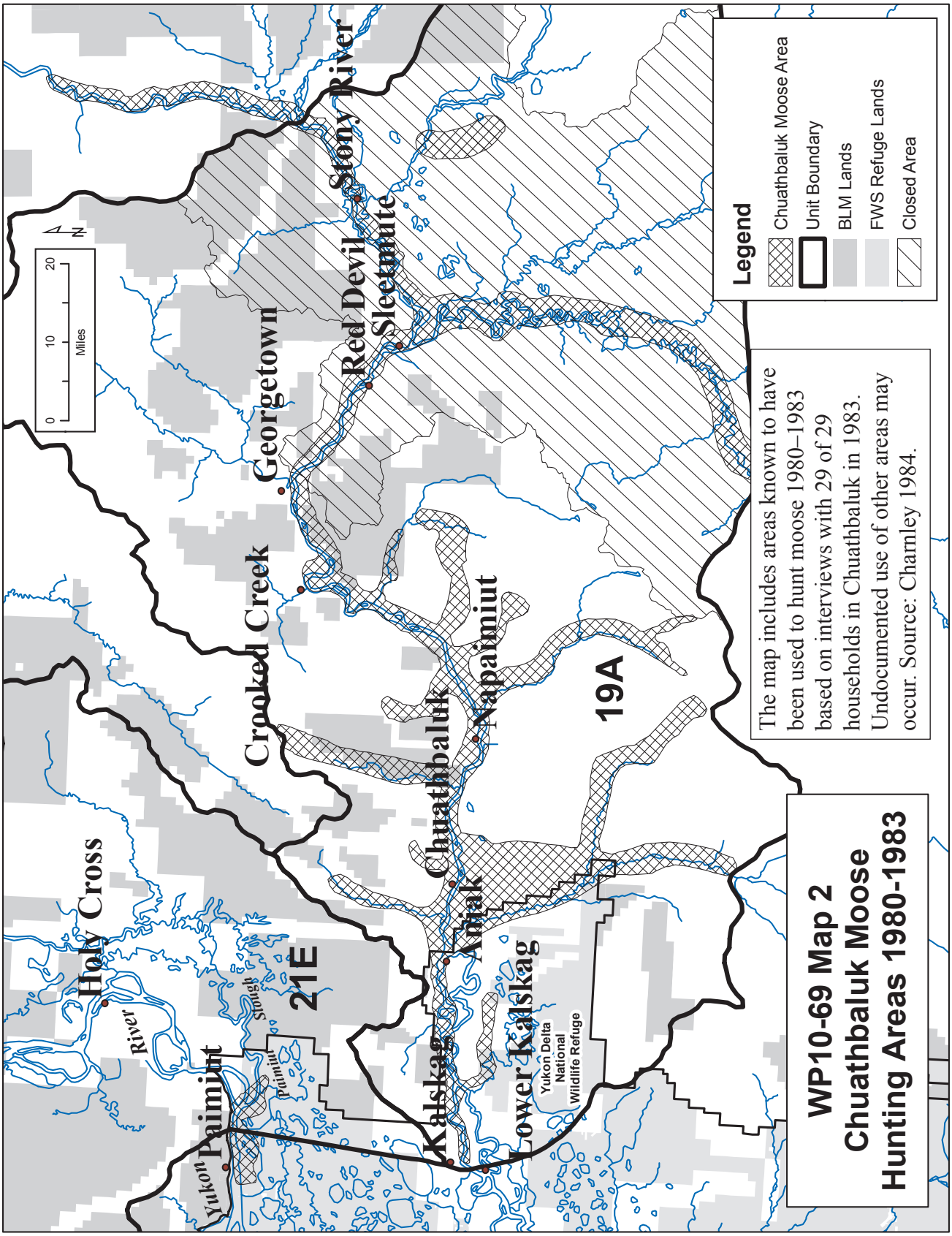
The harvests of moose by residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are shared extensively with other households having kinship and other ties to hunters (Charnley 1983:35; Krauthoefer and Koster 2006). Sharing was documented in 2003, 2004, and 2005, at Lower Kalskag, Upper Kalskag, Aniak and Chuathbaluk. For example, for the three study years in each community, between 24% and 74% of households reported receiving moose from other households (Table 3).

Chuathbaluk

Charnley's (1983) research offers an in-depth view of the harvest and use of moose in Chuathbaluk. Although over 30 years old, the general use pattern she documented (including seasonality of harvests, work groups, and preferences) is probably being followed today. Some findings of her research, however, are probably less applicable, such as the lack of refrigeration for preserving moose meat. According to Charnley (1983), Chuathbaluk residents hunted moose year-round, however, the intensity of harvest effort was influenced by weather conditions and regulations. Moose were available to hunters July, August, and September in habitats such as willows bordering rivers, creeks, and lakes. Bulls and cows were especially fat during these months (Charnley 1983:9). Bulls entered the rut in late September. In October the better-tasting meat of cows was preferred. In fall, access to moose habitat was possible if and when rivers and creeks were swollen from heavy rain. However, moose were more sedentary in rainy weather and harder to find, and gravel bars, where moose could sometimes be found feeding, became submerged (Charnley 1983:10). Freeze-up along the middle Kuskokwim River usually occurred in November, and it was often unsafe for travel. Warm spells in winter could return rivers and creeks to dangerous conditions for travel by hunters. Deep snow aided hunting by allowing travel by snow machine, and by hampering moose mobility (Charnley 1983:11).

At Chuathbaluk moose hunting was almost always engaged in by the adult and adolescent men (Charnley 1983:17). During September an extended family group that often included the wife, sisters, mother, and daughters of the hunters camped together for up to a week. At this time, generally, women and children gathered berries while men hunted moose and black bear. Sometimes two or three households camped together in one area. The November and February hunts usually involved the male members of a household only, and hunting occurred while checking trap lines and during day or overnight trips from the village. In February, camping was limited by cold weather (Charnley 1983:17).

During house to house interviews residents of Chuathbaluk reported hunting moose in Unit 21E in the area of Paimiut, located in Unit 21E, in 1980–1983 (see **Map 2**, ADF&G 1986:Plate 3) . It is important to note that Chuathbaluk was re-established as a village in 1954 for religious purposes by people from other villages, including Aniak, Crooked Creek, Sleetmute, Upper Kalskag, Napaimute, and Crow Village (Charnley 1983:21–22). As a result, and perhaps not surprisingly, moose hunting areas documented by Charnley in 1983 reflected individuals' affiliations to their original villages. These use areas, located in Unit 19, were described as follows, beginning with former community of residence: Upper Kalskag—the Whitefish Lake area; Crow Village—Discovery and Swift creeks, and the Aniak River; Aniak—the Aniak River; Napaimute—the Holokuk River; Crooked Creek—the Oskawalik and George rivers; and Sleetmute—the Holitna and Hoholitna rivers.


Holy Cross
Yukon
River
Paimiut
Paimiut Slough
21E
Crooked Creek
Georgetown
Red Devil
Sleetmute
Stony River
Chuathbaluk
Napaimiut
Kalskag
Aniak
Lower Kalskag
Yukon Delta National Wildlife Refuge
19A
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Miles
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Legend
Chuathbaluk Moose Area
Unit Boundary
BLM Lands
FWS Refuge Lands
Closed Area
The map includes areas known to have been used to hunt moose 1980–1983 based on interviews with 29 of 29 households in Chuathbaluk in 1983. Undocumented use of other areas may occur. Source: Charnley 1984.
WP10-69 Map 2
Chuathbaluk Moose
Hunting Areas 1980-1983

Chuathbaluk is not located in immediate proximity to a major Kuskokwim tributary that has high natural resource potential (Charnley 1983:22). However, Charnley (1983) noted that since living in Chuathbaluk, residents had begun to utilize smaller tributaries in the vicinity of the village, all located in Unit 19A, including Veahna Creek, the Kolmakof River, and the Owhat River. During the 1982/83 hunting season hunters traveled as far as McGrath, located in Unit 19D, to hunt moose, as competition increased in their traditional hunting areas (Charnley 1983:26).

Aircraft were seldom used in moose hunting by residents of Chuathbaluk, and moose were typically hunted from boats in the fall. Motors were shut off and boats were allowed to drift downstream, guided by oars. Most moose hunting took place within one mile of either side of the waterway that was being hunted (Charnley 1983:13–15). Snow machines also were used to travel to areas where moose were likely to be found. Fresh tracks were followed on snow machine or foot. Moose were sometimes tracked with snowshoes to beds where they were resting for the day (Charnley 1983:15).

Generally, moose were butchered at the kill site by members of hunting parties, taken back to the village, and further processed (Charnley 1983:18). According to Chuathbaluk residents, in their lifetimes meat was dried and smoked at fall hunting camps. When enough animals had been taken, skin boats were constructed using the animal hides, and the hunters drifted back downstream (Charnley 1983:13).

According to Charnley (1983:13), dry meat was a staple food eaten throughout the summer when families were at fish camp. In 1982 electricity became available in Chuathbaluk, and at that time most residents did not own freezers and did not plan on acquiring one immediately due to the expense (Charnley 1983:31). Most villagers depended on the weather to prevent their meat from spoiling. For this reason, hunting seasons that occurred during months when temperatures had already fallen below freezing were preferred. The hind and front quarters and rump were commonly hung in a salmon smokehouse, or suspended from a rack, wrapped with material such as burlap to protect them from animals (Charnley 1983:32).

During warm months, meat was placed in garbage bags and submerged in creeks to be kept cool. If meat was hung it was also brushed with a brine solution to discourage flies from laying eggs. The large, butchered parts of the animal such as legs, rump, and ribs were smoked to create a hardened outer layer over the meat. This protective layer kept flies off of the meat (Charnley 1983:32).

Preparing moose meat for meals commonly meant boiling it, and less often frying, roasting, and barbequing. Marrow from the leg bone was considered a delicacy. Moose head soup was a favorite dish, the nose, tongue, cheek meat, and brains being the most desirable parts. The liver, heart, kidneys, part of the stomach muscle, and one of the four stomachs were all eaten. Moose fat was highly valued and was cooked and eaten or rendered into oil (Charnley 1983:34).

Aniak

At Aniak, Brelsford et al. (1987) studied the period 1964–1986 and reported that:

> *Harvest areas employed by the people of Aniak are particularly extensive, ranging along the Kuskokwim River from near Tuluksak to McGrath, and from the Iditarod Flats southward to the Aniak-Chikuminuk Lake complex* [including areas located in Unit 21E]. *The large number of households at Aniak contributes to make the community pattern especially widespread. This also is influenced by the distinctive pattern of a small number of Aniak households who employ aircraft extensively in their hunting and trapping activities (Brelsford et al. 1987:21; bracketed text inserted by analysis author).*

The focus of harvest was the lowlands between the Kuskokwim River and the Kilbuck Mountains, on the Aniak River, in an area north of Aniak, in the George River Basin, and throughout the Holitna Basin. However, other areas also were used (Brelsford et al. 1987:21–22, cf. FWS 1996:Western Interior 27). Brelsford et al. (1987:21) observed that at Aniak in the mid-1980s households used aircraft in their hunting and trapping activities.

Upper and Lower Kalskag

According to the Yukon Delta National Wildlife Refuge comprehensive conservation plan (FWS 1988), for Upper and Lower Kalskag,

> *Moose hunting occurs in a large area extending up the Kuskokwim River to the refuge boundary and beyond and north of the communities to the Yukon River, particularly in the Paimiut Slough area* [located in Unit 21E] *during the winter. The Aniak drainage including the Whitefish Lake area is hunted as well (FWS 1988:183; bracketed text inserted by analysis author).*

Additional Use Area Information from March 2010 Regional Advisory Council Meetings

The Western Interior Subsistence Regional Advisory Council discussed this proposal at its February 24 and 25, 2010, meeting in Fairbanks. Several Council members said that the Unit 19A residents living near the boundary of Unit 21E hunt moose in a part of Unit 21E primarily in winter (WIRAC 2010:190, 200). One Council member described the use in Unit 21E by Unit 19A residents as coming primarily from families that are descended from residents of Paimiut, located in southwestern Unit 21E (WIRAC 2010:204). One Council member described that in his lifetime the area south of the mouth of Paimiut Slough to the last or upper high bank on the slough was used by Unit 19A residents for hunting and berry picking (WIRAC 2010:226–227). The member of the Council from Aniak was absent from this discussion (WIRAC 2010:226). The Chair referred Council members to the Aniak member's testimony at the October 28 and 29, 2008, meeting in McGrath when it reviewed the Special Action Request for the customary and traditional use determination encompassed by this proposal. At that time the Aniak Council member stated that he had participated in the State moose hunt in Unit 21E almost every winter, as did others; this demonstrated a history of use in the area even though it may be by only a few people (WIRAC 2008:101).

The Yukon Kuskokwim Delta Subsistence Regional Advsory Council met on March 2 and 3, 2010 and discussed this proposal. One Council member described former residents of Paimiut and their descendents hunting in Unit 21E (YKDRAC 2010:258). Specifically mentioned was a family from Paimiut living in Old Crow Village hunting in Unit 21E. Later the family moved to Chuathbaluk. The Council member from Upper Kalskag said that he did not think that there is a history of residents of Chuathbaluk coming from the Yukon River area, and he knew of no hunter from Chuathbaluk hunting in Unit 21E, even in winter (YKDRAC 2010:259). Public testimony included that there were additional communities, located on the lower Kuskokwim River drainage, that went to Unit 21E to hunt moose (YKDRAC 2010:260).

Summary

In summary, the communities of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk use only a part of Unit 21E, primarily the area that was used by former residents of Paimiut, the Paimiut Slough area, in winter (ADF&G 1986:Plate 3; Brelsford et al. 1987:21; FWS 1988:183). Descendents of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDRAC 2008:79, 81–82). The hunting pattern demonstrated by these

individuals differs from that of residents of communities in Unit 21E, Grayling, Anvik, Shaguluk, and Huslia, who are known to hunt moose in areas of the entire 21E subunit (Brown et al. 2004; Brown and Koster 2005; Wheeler 1998).

Additionally, access to Unit 21E by Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk is overland in winter, typically on snow machines or snowshoes. Several factors have been identified that influence the decision to travel to Paimiut Slough to hunt moose (Charnley 1983:44–47). One is a low success rate in the fall season, and second is if favorable travel conditions occur in February. If favorable travel conditions do not exist, hunters are unlikely to travel to the area.

Effects of the Proposal

If this proposal is adopted, residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk would be eligible to harvest moose in Unit 21E under Federal regulations. Conservation concerns are addressed through implementation of seasons and harvest limits and are not part of the consideration in making customary and traditional use determinations. No effects on non-Federally qualified users are anticipated as the February season in the area is currently closed to nonsubsistence uses. If the proposal is not adopted, the communities of Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag would continue to not be able to harvest moose under Federal regulations on Federal public lands in Unit 21E.

OSM PRELIMINARY CONCLUSION

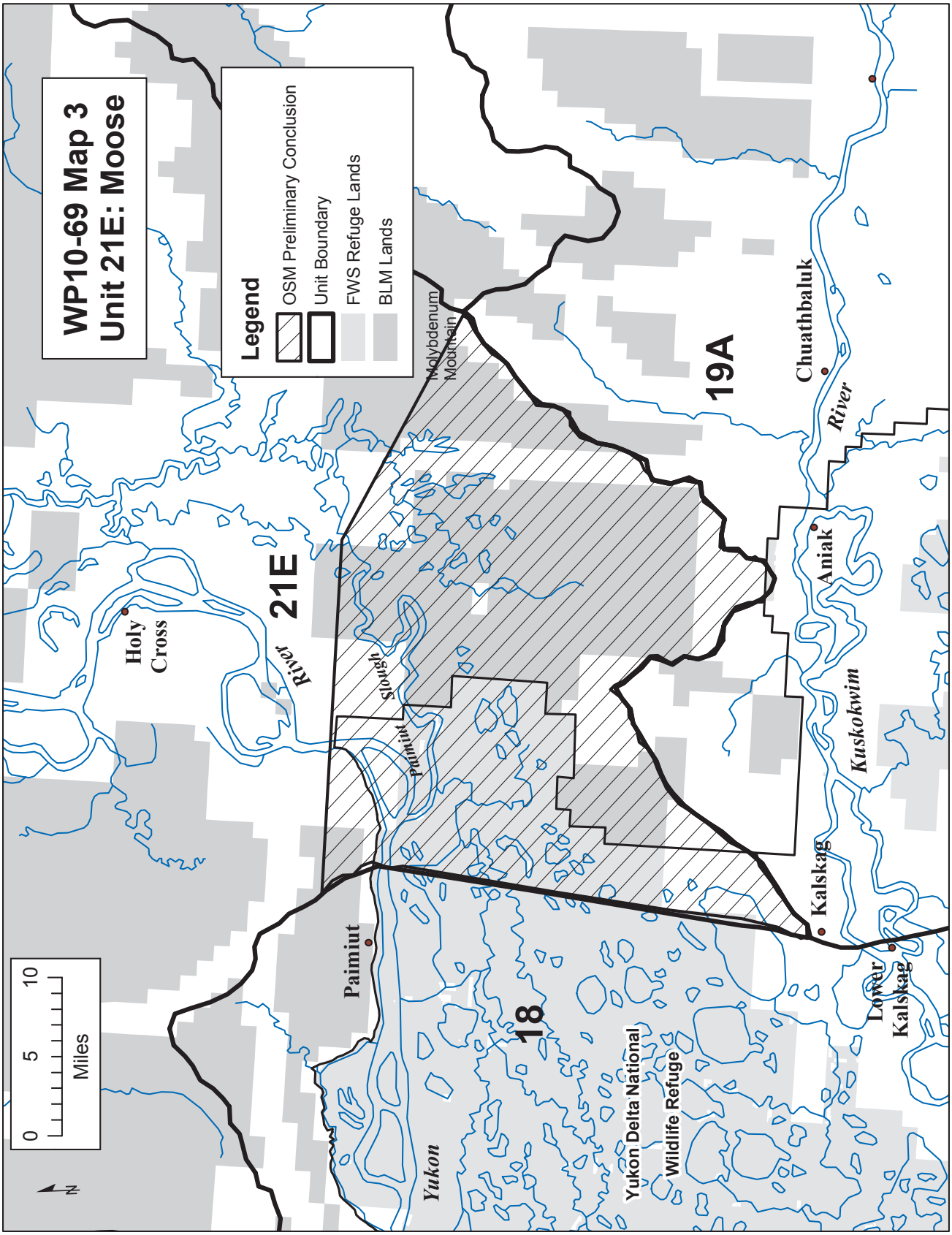
Support Proposal WP10-69 **with modification** to include only the Paimiut Slough area of Unit 21E and to exclude Chuathbaluk (see **Map 3**).

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

Justification

Based on a review of the eight factors, residents of Lower Kalskag, Upper Kalskag, and Aniak have demonstrated customary and traditional uses of moose in a wide area accessible to them by boat and snow machine, including the Paimiut Slough area of Unit 21E; however, information to support a recommendation for Chuathbaluk is very sparse. This is based on the data collected during three annual household surveys and reported on harvest tickets to ADF&G since 1983, and the findings of ethnographic studies describing areas used by the communities to harvest moose.


WP10-69 Map 3
Unit 21E: Moose
Legend
OSM Preliminary Conclusion
Unit Boundary
FWS Refuge Lands
BLM Lands
0
5
10
Miles
N
Holy Cross
River
21E
Slough
Paimiut
Paimiut
Yukon
18
Yukon Delta National
Wildlife Refuge
Molybdenum
Mountain
19A
Chuathbaluk
River
Aniak
Kuskokwim
Kalskag
Lower
Kalskag

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**).

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

Justification

Based on a review of the eight factors and testimony at the winter 2010 Council meetings, residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk have demonstrated customary and traditional uses of moose in a wide area accessible to them by snow machine, snowshoes, and foot including the southwestern portion of Unit 21E. Available information supporting this customary and traditional use determination included the results of annual household harvest surveys and data reported on harvest tickets returned to ADF&G since 1983, and the findings of ethnographic studies describing areas used by the communities to harvest moose. The former residents and their descendents of Paimiut (located in the southwestern corner of Unit 25E) reside in Aniak, Chuathbaluk, Kalskag, and Lower Kalskag. These communities are within a couple of miles of the Unit 21E boundary. There is evidence that residents of these four communities have been harvesting moose from Unit 21E recently and in the past based on household harvest surveys and harvest ticket returns. Travelling off the river and creek corridors is difficult until winter when residents of these communities are able to access the southern part of Unit 21E by snowshoe, and snowmachine. Former residents of communities including Aniak and Upper Kalskag came together in the 1950s to form the community of Chuathbaluk, located approximately 11 miles up the Kuskokwim River from Aniak and 10 miles from the Unit 21E boundary. Moose hunting area information for Chuathbaluk presented in Map 2 and testimony at the Council meetings indicated that residents of Chuathbaluk have also travelled to the southwestern part of Unit 21E to harvest moose. The available information indicates that the portion of Unit 21E south of Paimiut Slough is the only area of Unit 21E that has been customarily and traditionally used by the communities in the request.

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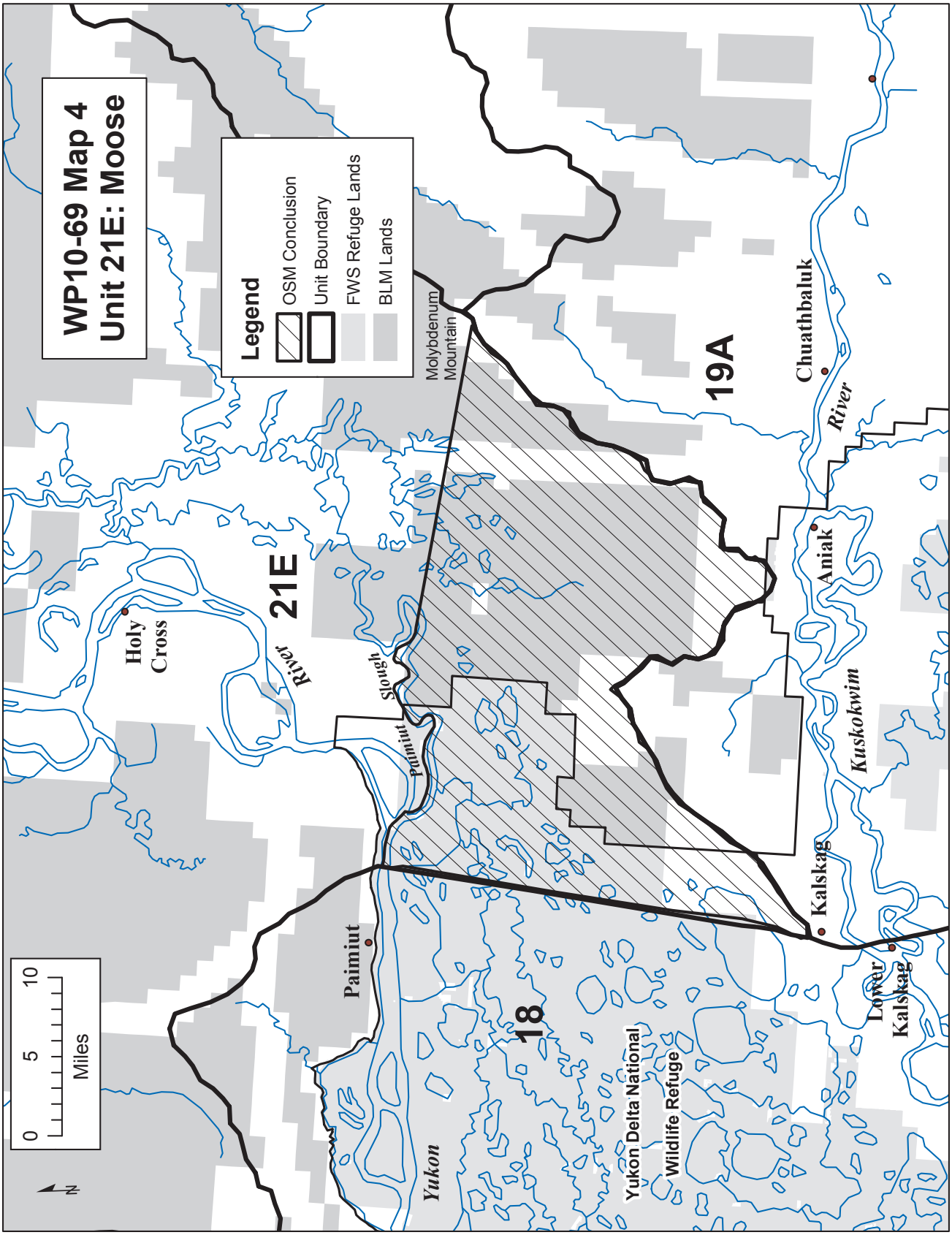
WP10-69 Map 4
Unit 21E: Moose
Legend
OSM Conclusion
Unit Boundary
FWS Refuge Lands
BLM Lands
Molybdenum Mountain
21E
19A
18
Holy Cross
River
Slough
Paimiut
Paimiut
Chuathbaluk
River
Aniak
Kuskokwim
Kalskag
Lower Kalskag
Yukon
Yukon Delta National Wildlife Refuge
0 5 10
Miles
N

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The recommended boundary has natural identifiers known to local residents. The two zones [the area north of Paimiut Slough and south of Paimiut Slough] will ensure that harvest is allocated throughout the entire unit.

The modified regulation would read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-69 **with modification** described in the OSM Preliminary Conclusion (to include only the Paimiut Slough area of Unit 21E; see **Map 3**) with an additional modification to keep Chuathbaluk on the list of communities with a positive customary and traditional use determination. Residents of Kalskag, Lower Kalskag, Aniak, and Chuathbaluk were proposed to have customary and traditional use determinations in Unit 21E by the Kuskokwim Native Association. These communities are all in the same area and likely to have similar harvest use patterns. Chuathbaluk was excluded from some hunting opportunity in Unit 21E. Historic harvest information record is limited. The Central Kuskokwim Fish and Game Advisory Committee supports the Kuskokwim Native Association's original proposal.

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-69

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-69
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-69: Submitted by Kuskokwim Native Association, this proposal requests a positive finding of customary and traditional use of moose in Game Management Unit 21E by residents of Lower Kalskag, located in Unit 18, and by residents of Upper Kalskag, Aniak, and Chuathbaluk, located in Unit 19A.

Customary and Traditional Determination: For the most part, the analysis appears to be complete and accurate, although the Department did not attempt to check the specific data presented in the tables or qualitative data. Recent information from Division of Subsistence was used, which was applicable to the issues. The information presents the kind of documentation that is relevant to evaluate the eight federal regulatory factors for making a customary and traditional use determination of a specific wildlife population by specific communities.

However, more specific information is needed to clarify the differences in the boundaries of the proposed area encompassed by the customary and traditional determination and to discuss why Chuathbaluk should not be included. The community clearly has had a pattern of customary and traditional use before residents set up the new community for religious reasons and still exhibits family patterns of harvest and sharing according to some discussion in the federal staff analysis.

The Western Interior Regional Advisory Council, which represents Central Kuskokwim (where the proponents are from) and the GASH (area most affected by the proposal), made a recommendation that parallels the recommendation by the Office of Subsistence Management (OSM), but retains the community of Chuathbaluk that OSM proposes to delete and proposes a different boundary. The Yukon-Kuskokwim Regional Advisory Council supports modification in the boundary proposed by OSM but retains the community of Chuathbaluk as well.

Recommendation: Although the Department supports this proposal in general, it is conditional upon necessary clarification as discussed above.

WP10-70/71 Executive Summary	
General Description	Proposals WP10-70 and -71 seek to shorten the Units 19B and 19C wolf trapping and hunting seasons. *Submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance*
Proposed Regulation	Proposal WP10-70 Trapping *No limit* *Nov. 1–* ***Mar. 31*** *~~April 30~~* Proposal WP10-71 Hunting *5 Wolves* *~~Aug. 10-April 30~~* ***Nov. 1–Mar. 31***
OSM Conclusion	**Oppose**
Western Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-70 AND -71

ISSUES

Proposals WP10-70 and -71, submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance, seek to shorten the Units 19B and 19C wolf trapping and hunting seasons.

DISCUSSION

WP10-70 requests that wolf trapping not be allowed in Units 19B and 19C in the month of April. WP10-71 requests that wolf hunting not be allowed in Units 19B and 19C in the months of August, September, October, and April. The proponents note in WP10-70 and WP10-71 that in late April, hides are rubbed and that pregnant females are approaching full term. The proponents note in WP10-71 that wolf pups are only half grown at the start of the current hunting season and that hides are not suitable for commercial sale or trophies.

Existing Federal Regulation

Units 19B and 19C—Wolf

Trapping
No limit — *Nov. 1–April 30*

Hunting
5 Wolves — *Aug. 10–April 30*

Proposed Federal Regulation

Units 19B and 19C—Wolf

Proposal WP10-70
Trapping
No limit — *Nov. 1–* ***Mar. 31*** *~~April 30~~*

Proposal WP10-71
Hunting
5 Wolves — *~~Aug. 10–April 30~~* ***Nov. 1–Mar. 31***

Existing State Regulation

Units 19B and 19C—Wolf

Trapping	
No limit	*Nov. 1–April 30*
Hunting	
10 Wolves	*Aug. 1–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 12% of Unit 19B and consist of 85% National Park Service (NPS), 15% Bureau of Land Management (BLM) and <0.2% U.S. Fish and Wildlife Service (FWS) lands. Federal public lands comprise approximately 13% of Unit 19C and consist of 65% NPS and 35% BLM lands (see **Unit 19 Map).**

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 19B and 19C.

Regulatory History

The Federal Subsistence Management Program wolf trapping season Units 19B and 19C extended from November 1–March 31 for regulatory years 1990/91 to 1997/98. Action taken on a proposal (Proposal 82) from the Western Interior Alaska Subsistence Regional Advisory Council (Council), changed the trapping season to November 1–April 30 in regulatory year 1998/99. Since then the Unit 19B and 19C wolf trapping season has been November 1–April 30. There has been no harvest limit for wolf trapping in Units 19B and 19C since the start of the Federal Subsistence Management Program.

The Federal Subsistence Management Program wolf hunting season in Units 19B and 19C has been from August 10–April 30 since regulatory year 1990/91. There was no harvest limit for wolf hunting from regulatory years 1990/01 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2), and supported by the Council, changed the limit to 5 wolves in regulatory year 1994/95. The Unit 19B and 19C harvest limit for wolf hunting has remained at that level since then.

On BLM and FWS lands trappers may shoot a free ranging wolf during trapping season. Hunters and trappers may harvest wolves under State regulations on BLM, FWS, Lake Clark National Preserve and Denali National Preserve public lands in Units 19B and 19C.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 not be open until September 15. The Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In March 2005 the Council noted that pelts from yearling wolves are highly prized and sought after in the fall time to provide for winter clothing and that subsistence users should have an opportunity to harvest wolves in the fall time and noted that wolves sometimes have good pelts in the fall (FSB 2005). At its March 2005 meeting in Fairbanks, Eastern Interior Alaska Subsistence Regional Advisory Council member

Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

Biological Background

Murie (1944) observed that the wolves (*Canis lupus)* have been part of Alaska fauna for hundreds of years and have probably been present since the Pleistocene glaciation. Wolves are found throughout Units 19B and 19C. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Meier et al. (2006) reported that 28% of the wolves they studied in Denali National Park and Preserve left their packs each year, and that most offspring eventually left the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles.

The size of the home range is believed to depend on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) reported that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). While information is very limited, Seavoy (2006) estimated that there are 217–289 wolves in Units 19B and 19C at a density of approximately 15–20 wolves/1000 mi^2. He estimated that there were a total of 30–45 packs in Units 19B and 19C. ADF&G (2010a) estimates that the wolf population in Unit 19B is 116–154 wolves and the Unit 19C wolf population is 101–135 wolves. Meier et al. (2006) reported a minimum density for wolves studied in Denali National Park and Preserve of approximately 12 wolves/1000 mi^2, and that the mean pack size was 4.4 wolves. Seavoy (2006) felt that the Unit 19B and 19C wolf population was stable and that population would decline as the prey populations decline. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Seavoy (2006) observed that the Mulchatna caribou herd in Unit 19B was in decline. He noted that the harvest of wolves in Unit 19B would likely decline as other hunting opportunities and the number of hunters decline.

Harvest History

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Harvest data are summarized by regulatory year.

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Units 19B and 19C ranged from 14 to 85 wolves/year (**Table 1**). Of this harvest, 6 to 29 wolves/year (**Table 1**) were

taken during August, September, October and April. Hunters occasionally take wolves opportunistically in the fall when they are hunting caribou, moose, bear, or sheep. During much of the fall and early winter period, conditions are inadequate for travel. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines. Because of limited day-length from November through January, little effort is expended hunting wolves though some are taken opportunistically in conjunction with trapping-related activities. Travel conditions begin improving in February with increasing day-length. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. In most years, about half of the wolves harvested in Units 19B and 19C are shot and about half are taken with traps and snares (**Table 1**).

Table 1. Reported wolf harvest and method of take for Units 19B & C (ADF&G 2009, 2010b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of Take				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	51	21	26	51	25	49	0
2000/01	54	26	27	50	27	50	0
2001/02	85	28	52	61	32	38	1
2002/03	56	29	22	39	32	57	2
2003/04	37	23	12	32	25	68	0
2004/05	20	11	9	45	10	50	1
2005/06	44	27	19	43	25	57	0
2006/07	14	6	7	50	7	50	0
2007/08	17	7	8	47	7	41	2
2008/09	20	11	7	35	13	65	0

Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, Adams et al. concluded that the risks of reducing wolf populations through regulated harvest are quite low. ADF&G's management objectives for Units 19B and 19C include providing a sustained annual harvest rate of up to 30% of the wolf population (Seavoy 2006). Based on the estimated Unit 19B and 19C wolf population size of 217 to 289 wolves (Seavoy 2006), the harvest of 14 to 84 wolves/year (**Table 1**) is within this management objective.

Effects of the Proposal

The proponents state that wolf pups are still totally dependent on adults for food and protection from predators in early fall and that if the adults are shot the pups would die an inhumane death due to starvation. The proponents feel that harvesting late-term pregnant females is not an acceptable wildlife management practice. ADF&G (2010a) observed that adult wolves learn to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable to harvest. They conclude that wolf populations can sustain a small reduction in pups born by taking of a few pregnant females and that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. ADF&G (2010a) reported that it is the

mature adults, including pregnant and lactating females that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

If Proposal WP10-70 is adopted, the Federal wolf trapping season in Units 19C and 19B would be closed in April, thereby shortening the season by 30 days. If Proposal WP10-71 is adopted, the Federal wolf hunting season in Units 19C and 19B would be closed in August, September, October and April, thereby shortening the season by 113 days. The proposed changes would make the Federal subsistence wolf hunting and trapping seasons shorter than the State seasons.

These proposals would significantly decrease the opportunity to harvest wolves under Federal subsistence regulations in Unit 19B and 19C. Between regulatory year 1999/2000 and 2007/08, 47% of the reported Units 19B and 19C wolf harvest occurred in August, September, October, and April (**Table 1)**.

WP10-70 would eliminate the opportunity for subsistence users to trap wolves during April when there are more hours of daylight and adequate conditions for snowmachine travel. WP10-71 would eliminate the opportunity for subsistence users to harvest wolves during the fall and spring when they are hunting other species of wildlife.

OSM CONCLUSION

Oppose Proposals WP10-70 and -71

Justification

The wolf population in Units 19B and 19C is thought to be healthy. The current harvest rate for Unit 19B and 19C wolves is thought to be within sustainable levels. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and two-year-olds. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are an important subsistence resource in Units 19B and 19C. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. Over the past decade, nearly half of the reported wolf harvest in Units 19B and 19C has occurred in the months of August, September, October, and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use to make clothing and handicrafts. Wolves are an important subsistence resource.

Even if these proposals were adopted by the Federal Subsistence Board, hunters and trappers would still be able to take wolves on FWS, BLM, Denali National Preserve, and Lake Clark National Preserve public lands during August, September, October, and April under State regulations. Adoption of Proposals WP10-70 and -71 would not have the effect sought by the proponent unless these Federal public lands were also closed to wolf hunting and trapping by non-Federally qualified user during August, September, October, and April.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposals WP10-70 and WP10-71. There is no biological reason to reduce the season. A reduction would deny opportunity to subsistence users.

INTERAGENCY STAFF COMMITTEE COMMENTS WP10-70/71

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-70 and WP10-71
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-70 and WP10-71: These proposals would shorten federal subsistence wolf trapping and hunting seasons in Units 19B and 19C. WP10-70 would shorten the federal subsistence trapping season to November 1 through March 31; the current season is November 1 through April 30. WP10-71 would shorten the federal subsistence wolf hunting season in Units 19B and 19C from August 10 through April 30 to November 1 through March 31.

Introduction: These proposals incorrectly assume federal subsistence wolf trapping and hunting seasons are solely for predator control. In fact April trapping seasons are traditional, allowing federal subsistence trappers the opportunity to take a wolf when weather conditions allow travel along traplines. August wolf hunting openings are traditional, allowing federal subsistence hunters the opportunity to take a wolf while hunting for other big game. Spring wolf hunting seasons allow taking of wolves when mild weather conditions allow travel. Hide value depends on what the wolf will be used for. Hides of wolves taken in early fall and late spring are suitable for making warm items for personal use, consistent with subsistence uses.

Impact on Subsistence Users: Federal subsistence user opportunity to trap wolves would be reduced by 31 days. This reduction would restrict the federal subsidence user opportunity to take a wolf while trapping other species. Federal subsistence user opportunity would be reduced by 113 days. If adopted, federal subsistence hunters would lose the about 40% of the current hunting season to take a wolf while hunting and trapping other species during the fall and spring.

Opportunity Provided by State: The state trapping season in Units 19B and 19C is November 1 through April 30 with no harvest limit. State hunting seasons in Units 19B and 19C (August 1 through May 31) are longer than federal subsistence seasons (August 10 through April 30).

Conservation Issues: The current federal subsistence season and bag limits for wolf trapping and hunting in Units 19B and 19C have virtually no impact on wolf populations in these units. Furthermore, wolf control in adjacent Units 19A and eastern 19D have little or no effect on wolf populations in Units 19B and 19C. The wolf population in Unit 19B estimated to be 116–154 wolves and the Unit 19C wolf population is estimated to be 101–135 wolves with a density of 5.8–7.7 wolves/1,000 km^2 in both units.

Annual state harvest of wolves in Units 19B and 19C averages 29 wolves per year since 1999 across both units and is less than 13% of the population. This harvest rate is well within the range of sustainability regardless of the long hunting and trapping seasons. April harvest makes up only 9% (average of less than 3 wolves annually) of this harvest, although it is unknown what part of this number is taken under federal instead of state regulations. Eliminating early fall and late spring harvest would not benefit the wolf population.

The proposer suggests that adjacent Units 19A and 19D have very low wolf densities due to active predator management. While wolves have been reduced in these units in recent years, it was not by 80%, or complete removal, as the proposer suggests. The February 2008 wolf population in Unit 19A was estimated to be at least 74 wolves (a 51% reduction across the entire unit) and the eastern Unit 19D population was estimated to be 85–105 wolves (no more than a

57% reduction throughout eastern Unit 19D) in fall 2009. Wolf populations remain at or above the population objectives stated in 5AAC 92.125 in Units 19A and 19D, as required by state regulations. Shortening the wolf trapping and hunting seasons in Units 19B and 19C at this time would have no effect on the conservation of wolves.

Enforcement Issues: Shorter federal subsistence seasons resulting from adoption of this proposal will create enforcement issues in areas with mixed land ownership and will cause confusion among the public.

Other Comments: Adults have learned to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable pack members. These populations can sustain the small reduction in pups born by the taking of a few pregnant females. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the mature adults, including pregnant and lactating females, that do the killing of large prey, thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-70/71. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

WP10-72 Executive Summary	
General Description	WP10-72 requests that the closure to harvest coyotes on Federal public lands be rescinded. *Submitted by the Seward Peninsula Regional Advisory Council*
Proposed Regulation	**Unit 22 — Coyote Hunting** ~~*Federal public lands are closed to the taking of coyotes*~~ *No Federal open season* **Unit 22 — Coyote Trapping** *Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes* *No Federal open season*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee notes the existing hunting regulation appears to meet the intent of ANILCA Title VIII for maintaining healthy and viable populations of coyotes prior to allowing for subsistence uses. The existing trapping regulation also provides for incidentally trapped coyotes to be used for subsistence purposes. The level of subsistence use should be consistent with the management of healthy populations. If the Board supports the intent of this proposal, we would suggest considering establishing a Federal subsistence hunting season that aligns with the State's (2 coyotes, Sept. 1 – Apr. 30).
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-72

ISSUES

WP10-72, submitted by the Seward Peninsula Regional Advisory Council, requests that the closure to harvest coyotes on Federal public lands be rescinded.

DISCUSSION

The proponent is requesting the Federal harvest season for coyotes be reopened to allow harvest of coyotes on Federal public lands under State regulations. The proponent states that the closure is not needed due to the limited amount of coyotes within Unit 22 and subsequently there not being a Federal harvest season. The proponent states rescinding the closure of Federal public lands to harvesting coyotes will allow individuals to harvest coyotes on Federal public lands under State regulations.

Existing Federal Regulations

Unit 22 — Coyote Hunting	
Federal public lands are closed to the taking of coyotes	*No Federal open season*
Unit 22 — Coyote Trapping	
Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes	*No Federal open season*

Proposed Federal Regulations

Unit 22 — Coyote Hunting	
~~*Federal public lands are closed to the taking of coyotes*~~	*No Federal open season*
Unit 22 — Coyote Trapping	
Coyote, incidentally taken with a trap or snare intended for red fox or wolf, may be used for subsistence purposes	*No Federal open season*

Existing State Regulations

Unit 22 — Coyote Hunting	
2 coyotes.	*Sept. 1 – Apr. 30*
Unit 22 — Coyote Trapping	
No limit	*Nov. 1 – Apr. 15*

Extent of Federal Public Lands

Federal public lands comprise 32% of Unit 22 and consist of 18% Bureau of Land Management, 12% National Park Service (NPS), and 2% Fish and Wildlife Service (FWS) lands. The NPS managed lands are part of the Bering Land Bridge National Preserve. The FWS lands are managed as a small portion of the Yukon Delta National Wildlife Refuge in Unit 22A (see **Unit 22 Map**).

Customary and Traditional Use Determinations

All rural residents of Unit 22 have a positive customary and traditional use determination for coyote in Unit 22.

Regulatory History

In 1995, Proposal 45 requested the closure of Federal public lands to hunting and trapping coyote in Unit 22 and was subsequently adopted by the Federal Subsistence Board. The Seward Peninsula Regional Council at the time felt that there should not be an open season for a resource that does not exist in the region and that regulations should reflect the reality of the animals that exist in the region (SPSRAC 1995). The Council provided a modification to close Federal public lands to all taking, except incidental take by trapping (FWS 1995).

Biological Background

There is a lack of information regarding coyote in most parts of Alaska and specifically for Unit 22. In 1999, the Alaska Department of Fish and Game (ADF&G) received the first report of coyotes in Unit 22 from a trapper harvesting two coyotes in the Unalakleet River drainage in Unit 22A (Persons, K. 2001). Previously, ADF&G had no recorded account of coyote in Unit 22.

Coyotes have expanded their range in Alaska over the past 50 years and are most prominent in the Kenai Peninsula, Matanuska-Susitna valleys, and Copper River Valley. Populations were first reported in Southeast Alaska and have expanded north into the Tanana Valley (Thurber and Peterson 1991). Potential immigration from areas surrounding Unit 22 contain few records of coyote north of the Yukon River but small populations do occur (ADFG 2009) and occasional coyotes have been harvested in the Goodnews River drainage, the Kwethluk River and the Andreafsky River drainages in Unit 18 (Seavoy 2001). Coyotes also are reported as being rare in Unit 21 and only three coyotes were reported harvested between 1989–2000 from fur acquisition reports and fur export permits (Stout 2001). No coyote harvest has been reported in Unit 23 and trapping questionnaires list coyotes as being not present (Blejwas 2006).

Available food is the major factor in regulating coyote abundance, especially in the winter and influences broad aspects of coyote populations including survival, reproduction, and spatial-use patterns and density (Gese et al. 1996 and Knowlton 1999). Potential prey sources within Unit 22 would determine successful immigration of coyotes from other areas. Coyotes are typically classified as generalist predators, however, research in the Central Alaska Range (CAR) in Unit 20A showed coyotes functioned more as prey selection specialists focusing primarily on snowshoe hares, with alternative prey varying between carrion in the CAR (Prugh 2005), voles in the southwest Yukon (O'Donoghue et al. 1998) and on Dall sheep lambs during periods of deep snow drifts in the winter or during the spring lambing season in the CAR (Arthur 2003). However, the distribution of snowshoe hares is primarily in Interior Alaska as they typically inhabit boreal and mixed spruce forests and brushy areas (Prugh 2005) and therefore would not be a possible prey source for coyotes in the Seward Peninsula except possibly in areas west of Koyuk. Arctic or tundra hares inhabit western coastal Alaska and can be found in upland tundra and rocky slopes

and would potentially be the prey source for immigrating coyotes in Unit 22 (ADFG 2009, Murray 2003) as hare numbers have been high for a number of years (Bente 2008). The population status of tundra voles in Unit 22 is unknown, but may be a possible additional prey source for coyotes seeking to expand their range into Unit 22. Dall sheep inhabit mountain ranges in Alaska and therefore, do not occur in Unit 22 (ADFG 2009). Carrion of large ungulates (caribou and muskoxen) in Unit 22 would be the most likely prey source and would potentially increase coyote populations in Unit 22 if coyote immigration occurred. In northern climates, coyote litter size has been shown to increase with a prevalence of ungulate carcasses from winter mortality because large meat sources are available to ovulating female coyotes (Gese 1996, O'Donahue 1998).

Management Direction

The current ADF&G management objectives for the coyote population in Unit 22 are undefined. ADF&G lists several furbearers, excluding coyote, in Unit 22 and has a management goal to maintain viable numbers of furbearers and monitor harvest through the fur sealing program, annual hunter/trapper questionnaires, and Community-based Harvest Assessments conducted annually in selected Unit 22 villages.

Harvest History

Only 4 species of the 15 defined as furbearers by the Alaska Department Fish and Game are required to be sealed throughout Alaska. Coyote is not required to be sealed and consequently, information on numbers and distribution throughout the state is extremely limited. ADF&G relies upon trapping reports to determine the population status of coyotes within Alaska. However, the most recent furbearer management report by ADF&G (Persons and Gorn 2007) does not list coyote as one of the furbearers found in Unit 22. In the 2007 Furbearer Management Report, trappers listed coyote as the ninth (of 13) most valuable species to trap and listed it as the tenth most valuable in the arctic and western regions of Alaska. Most of the furbearer harvest in Unit 22 is by subsistence and recreational users or is done opportunistically by local residents while engaged in other activities (Persons and Gorn 2007).

Since 1999, limited harvest information has been collected through sporadic household surveys in some communities in Unit 22, however, these surveys focus primarily on big game harvest and the only furbearer data collected in these surveys is on wolves and wolverines (Persons and Gorn 2007). Trapper surveys provide additional information for most furbearers; however coyote has not been included in Unit 22 (Persons and Gorn 2007). The most recently available trapping report (2004–2005) generated by ADF&G lists coyotes as being scarce within Unit 22 with no change in the population trend for the previous four years and recorded eleven coyotes harvested for Unit 22 for this time period (Blejwas 2006).

There is no specific harvest data available for coyotes on Federal lands in any part of Alaska. The Federal database only has trapping records for beaver, lynx, otter, wolf and wolverine.

Fur acquisition and fur export reports are another index to coyote harvest within Alaska. Despite inherent difficulties in this data due to significant under-reporting by trappers keeping coyote furs for self-use or exaggerated harvest for a specific year if trappers eventually sell furs from previous years, it does provide a very broad indicator of coyote harvest over longer periods of time. However, this information is statewide and individual units are not reported.

Effects of the Proposal

By rescinding the closure and not establishing a Federal season of hunting coyotes on Federal lands, individuals would be able to hunt or trap a coyote opportunistically under State regulations.

OSM CONCLUSION

Support Proposal WP-72

Justification

Most of the furbearer harvest in Unit 22 is by subsistence and recreational users or is done opportunistically by local residents while engaged in other activities (Persons and Gorn 2007). Specifically for coyote, there is a lack of information for most parts of Alaska and specifically for Unit 22 with the only known report of coyote in Unit 22 being from a trapper harvesting two coyote in the Unalakleet drainage in Unit 22A in 1999 (Persons, K. 2001). Potential immigration from areas surrounding Unit 22 contains few records of coyotes in Unit 18, 21, or 23. Coyotes are not required to be sealed and consequently, information on numbers and distribution throughout the state is extremely limited. By rescinding the closure and not establishing a Federal season of hunting coyotes on Federal lands, individuals would be able to hunt or trap a coyote opportunistically under State regulations.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-72. Closure is not needed due to the limited number of coyotes within Unit 22. Rescinding the hunting and trapping closures for taking coyote in Unit 22 would allow Unit 22 residents to hunt or trap a coyote opportunistically under State regulations.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP-10-72

The ISC notes the existing hunting regulation appears to meet the intent of ANILCA Title VIII for maintaining healthy and viable populations of coyotes prior to allowing for subsistence uses. The existing trapping regulation also provides for incidentally trapped coyotes to be used for subsistence purposes. The level of expected subsistence use should be consistent with the management of healthy populations.

If the Board supports the intent of this proposal, we would suggest considering establishing a federal subsistence hunting season which aligns with the State's (2 coyotes, Sept. 1 – Apr. 30).

Comments WP10-72
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-72: This proposal allows for federal subsistence use of incidental catch of coyotes taken by federally qualified subsistence users under federal regulations during the federal subsistence trapping season for red fox and wolf in Unit 22.

Introduction: Coyotes are expanding their range and abundance throughout much of western Alaska. This proposal allows for federal subsistence use of coyotes accidently trapped as non-target species in Unit 22. The state allows hunting and trapping of coyotes in Unit 22; however, federal subsistence regulations do not have open seasons for either hunting or trapping.

Impact on Subsistence Users: None. Subsistence users can already harvest coyote under state regulations on federal and nonfederal lands. Allowing the use of incidental catch under federal subsistence trapping regulations is not likely to impact the take or subsistence use of coyotes.

Opportunity Provided by State: In Unit 22, regulations for coyote are:

Hunting: (Coyotes are classed as 'Fur Animal'; take requires a state hunting license) the season in September 1 through April 30 with a bag limit of 2 coyotes.

Trapping: (Coyotes are classed as 'Furbearer'; take requires a state trapping license) the season is November 1 through April 15 with no bag limit.

Conservation Issues: Coyotes are expanding their range, and trapping or hunting take is not considered an impediment or conservation concern.

Recommendation: Support; hunting and trapping of coyotes for subsistence use are already provided on federal public lands under state regulations.

WP10-73 Executive Summary	
General Description	Proposal WP10-73 requests expansion of the customary and traditional use determination for muskoxen in all of Unit 22D to add residents of Units 22B west, 22C, and 22E to the current customary and traditional use determination that only includes residents of Unit 22D. *Submitted by the Seward Peninsula Subsistence Regional Advisory Council*
Proposed Regulation	*See the analysis for regulation language.*
OSM Conclusion	**Support** Proposal WP10-73 **with modification** to add all residents of Unit 22B (with no distinction between east and west) to the customary and traditional use determination for Unit 22D, in addition to the residents of Units 22C, 22D, and 22E. **Unit 22D—Muskox** / **Customary and traditional use determination** *Unit 22D~~, that portion within the Kougarok, Kuzitrin, and Pilgrim river drainages~~* / *Rural residents of Units **22B**, **22C**, 22D (excluding St. Lawrence Island) ~~and White Mountain,~~ **and 22E.*** ~~*Unit 22D—remainder*~~ / ~~*Rural residents of Unit 22D excluding St. Lawrence Island*~~
Seward Peninsula Regional Council Recommendation	**Support** Proposal WP10-73 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-73 **with modification** if the Federal staff analysis is modified to address the Federal regulatory factors and patterns of hunting this muskoxen population by residents of communities and area, instead of using game management units and subunits for convenience.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-73

ISSUES

Proposal WP10-73, submitted by the Seward Peninsula Subsistence Regional Advisory Council, requests expansion of the customary and traditional use determination for muskoxen in all of Unit 22D to add residents of Units 22B west, 22C, and 22E to the current customary and traditional use determination which only includes residents of Unit 22D.

DISCUSSION

The proponent submitted Proposal WP10-73 to expand the existing customary and traditional use determination for muskox so that all rural residents of Unit 22B west, 22C, 22D (excluding residents of St. Lawrence Island), and 22E (see **Map 1)** would be able to harvest muskoxen anywhere in Unit 22D. This proposal also would eliminate the division of Unit 22D into the Kougarok, Kuzitrin, and Pilgrim River drainages and Unit 22D—remainder.

White Mountain residents in Unit 22B west, and residents of Unit 22C and 22D, already have a customary and traditional use determination for the Kougarok, Kuzitrin, and Pilgrim River drainages. The Federal Subsistence Board (Board) recognizes the customary and traditional uses of muskox of all residents in Units 22B, 22C, 22D, and 22E. This analysis focuses on the question of "where;" specifically whether or not Wales and Shishmaref in Unit 22E, Nome and Solomon in Unit 22C, and White Mountain and Golovin in Unit 22B west have customarily and traditionally used all of Unit 22D for harvesting muskoxen. The Board has already recognized the customary and traditional uses of muskoxen in Unit 22D by residents of Teller and Brevig Mission (the only communities in Unit 22D), thus this discussion does not include Teller and Brevig Mission.

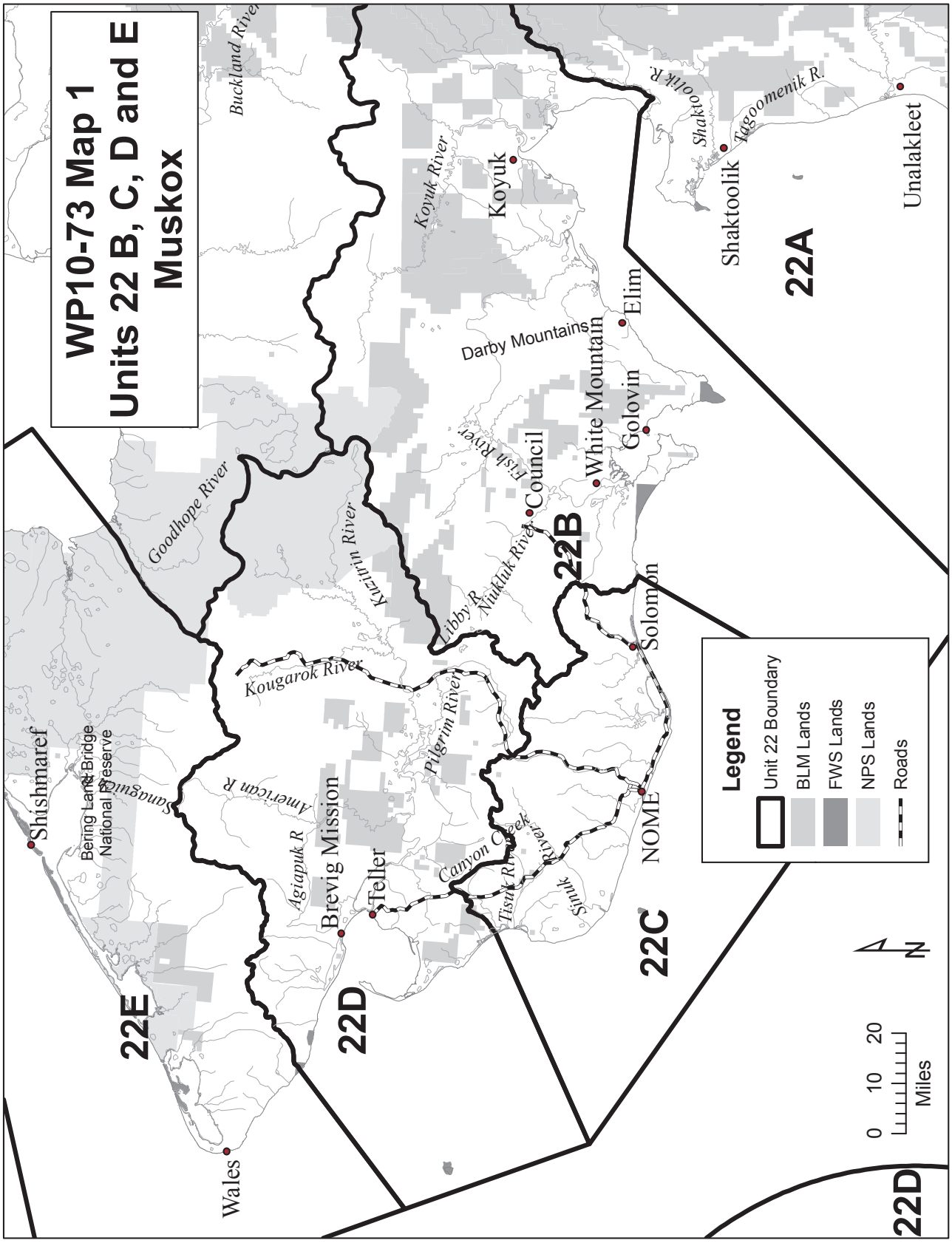
During discussions of Proposal WP10-73, the Seward Peninsula Subsistence Regional Advisory Council (Council) noted that subsistence users would travel long distances to harvest muskox when there is a shortage, consequently the Council believes the customary and traditional use determination should be expanded to the residents of subunits surrounding Unit 22D (SPRAC 2009:37).

Existing Federal Regulation

Unit 22D—Muskox	Customary and traditional use determination
Unit 22D, that portion within the Kougarok, Kuzitrin, and Pilgrim river drainages	*Rural residents of Units 22C, 22D, (excluding St. Lawrence Island) and White Mountain*
Unit 22D—remainder	*Rural residents of Unit 22D excluding St. Lawrence Island*

Proposed Federal Regulation—as presented in the Proposal Book

Unit 22D—Muskox	Customary and traditional use determination


WP10-73 Map 1
Units 22 B, C, D and E
Muskox
Buckland River
Koyuk River
Koyuk
Shaktoolik R.
Tagoomenik R.
Shaktoolik
Unalakleet
22A
Elim
Darby Mountains
White Mountain
Golovin
Fish River
Council
Goodhope River
Kuzitrin River
Niukluk River
Libby R.
22B
Solomon
Kougarok River
Pilgrim River
Shishmaref
Bering Land Bridge National Preserve
Sanaguich
American R.
Agiapuk R.
Brevig Mission
Teller
Canyon Creek
Tisuk River
Sinuk
NOME
22C
22E
22D
Wales
Legend
Unit 22 Boundary
BLM Lands
FWS Lands
NPS Lands
Roads
0 10 20
Miles
N
22D

Unit 22D, that portion west of the Tisuk river drainage and Canyon Creek—Rural residents of Unit 22D excluding St. Lawrence Island	*Rural residents of Unit 22D (excluding St. Lawrence Island)*
Unit 22D—remainder	*Rural residents of Unit **22C**, 22D, excluding St. Lawrence Island, **and White Mountain***

Proposed Federal Regulation—Based on Council's Discussion in September 2009

Unit 22D—Muskox	**Customary and traditional use determination**
Unit 22D~~, that portion within the Kougarok, Kuzitrin, and Pilgrim river drainages~~	*Rural residents of Units **22B west**, **22C**, 22D, **and 22E** (excluding St. Lawrence Island) ~~and White Mountain~~*
~~Unit 22D—remainder~~	*~~Rural residents of Unit 22D excluding St. Lawrence Island~~*

Extent of Federal Public Lands

Federal public lands in Unit 22D are managed by the National Park Service (11%) and the Bureau of Land Management (5%). All of the Federal public land in Unit 22D—remainder is managed by the Bureau of Land Management. No estimations are available on how much of the Federal public land in Unit 22D—remainder is managed by the Bureau of Land Management (see **Map 1).**

Regulatory History

The muskox population on the Seward Peninsula was established from a transplant of 36 animals in 1970. A supplemental transplant of 31 animals occurred in 1981. The herd has been growing since 1981 and has expanded its range on the Seward Peninsula. Until 1995, there was no Federal or State muskox hunt in Unit 22. The initial Federal customary and traditional use determinations were made in 1995 (Proposal 43) and based on traditional tribal use territories (SPRAC 1995:115). The 1995 customary and traditional use determinations were specific to each subunit[1]. After the Board recognized customary and traditional uses of muskoxen in Unit 22, a subsequent Federal hunt was established in Units 22D, E, and 23sw, and in Unit 22B in 2001. State muskox seasons and harvest limits have been established in Units 22B, 22C, 22D, 22E, and 23sw.

In 2004, through review of Proposal WP04-71, the Board adopted the customary and traditional use determinations that were recommended with modification by the Council (FSB2004:366; this was a consensus agenda item, thus the Board adopted the Council's recommendation through adoption of the consensus agenda). Proposal WP04-71 requested that the existing customary and traditional use determination for muskoxen for Units 22B and 22D be expanded to include all residents of Unit 22, excluding the residents of St. Lawrence Island. The Board added residents of Unit 22C to the customary and traditional use determination for muskox in Unit 22B west of the Darby Mountains and added

[1]*The 1995 customary and traditional use determinations for muskoxen were:*
Unit 22(A)—No determination (All rural residents)
Unit 22B—Rural residents of Unit 22B
Unit 22C—Rural residents of Unit 22C
Unit 22D—Rural residents of Unit 22D excluding St. Lawrence Island
Unit 22(E)—Rural residents of Unit 22(E) excluding Little Diomede Island

residents of Unit 22C and White Mountain to Unit 22D in the Kougarok, Kuzitrin, and Pilgrim River drainages. However, the Board did not adopt that portion of Proposal WP04-71 that would have made residents of Unit 22C (Nome) and Unit 22B eligible to harvest muskoxen on Federal public lands in all of Unit 22D. The Board's decision in 2004 was consistent with the recommendation of the Council. At that time, the Council noted that residents of Unit 22C (residents of Nome and Solomon) and White Mountain had not demonstrated customary and traditional use of muskoxen in Unit 22D outside of the Kougarok, Kuzitrin, and Pilgrim River drainages. At the winter 2004 Council meeting, the Council noted that other communities in Unit 22 have not demonstrated customary and traditional use of muskoxen in all of Unit 22D and the customary and traditional use determination for Unit 22D—remainder should remain as it was for residents of Unit 22D.

The customary and traditional use determinations currently in place were adopted by the Board's decision in 2004.

Community Characteristics

The communities currently under consideration for a positive customary and traditional use determination in the proposed regulation include all communities in Unit 22B west, 22C, 22D except Gambell and Savoonga on St. Lawrence Island, and 22E (see **Unit 22 Map and Table 1).** Nome is the largest community with a population of 3,505 in the 2000 census; the total population of the eight villages affected by this proposal was 1,755 in 2000 (US Census 2000).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use finding.

Specific information on each of the eight factors is not necessary because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR

Table 1. Population of Unit 22B west, 22C, 22D (with the exception of St. Lawrence Island), and 22E (US Census 2000).

Community	2000 Census Population
Unit 22B west Communities	
Golovin	144
White Mountain	203
Council	0
Unit 22C Communities	
Nome	3,505
Solomon	4
Unit 22D Communities	
Teller	268
Brevig Mission	276
Unit 22E Communities	
Shishmaref	562
Wales	152
Little Diomede	146

100.16(b) and 36 CFR 242.16(b)). The information included in this analysis for the discussion of the eight factors herein, applies to all of the proposal communities in Unit 22B, 22C, and 22E.

Muskoxen are known to have inhabited the Seward Peninsula in earlier times prior to their reintroduction in 1970. In the 1950's a recently killed muskox skull was found in a cave near Kivalina (Giddings and Anderson 1986:11). Muskox skulls and bones from Koyuk and Nome also have been found. Beechey collected a "very modern" complete skull at Elephant Point in 1826 (Buckland 1831:595). Beechey also found that local Natives could identify pictures of muskox. The word oomingak in Inupiaq means "bearded one" or muskox (Beechey 1831:295).

It is not known definitively why the muskox population disappeared by the early19th century from the Seward Peninsula nor is it known when muskoxen were last available on the Seward Peninsula. It is known that, by the time the Yankee whalers reached the Bering Strait, muskoxen were extinct on the Seward Peninsula. By the 1800s the elders remembered their elders talking about muskoxen, indicating that the extinction probably occurred somewhere at the end of the 18th century to the early part of the 19th century. Presumably people used muskoxen for food, utensils, and for clothing much as they did

for caribou and sheep as well as incorporated muskox into the seasonal round of subsistence activities (Angnaboogok 1994).

There was no legal muskox hunting on the Seward Peninsula in the 20th century prior to 1995 because muskoxen were not available until their re-introduction in 1970. Consequently, there are no official accounts of customary and traditional uses of muskoxen on the Seward Peninsula prior to 1995.

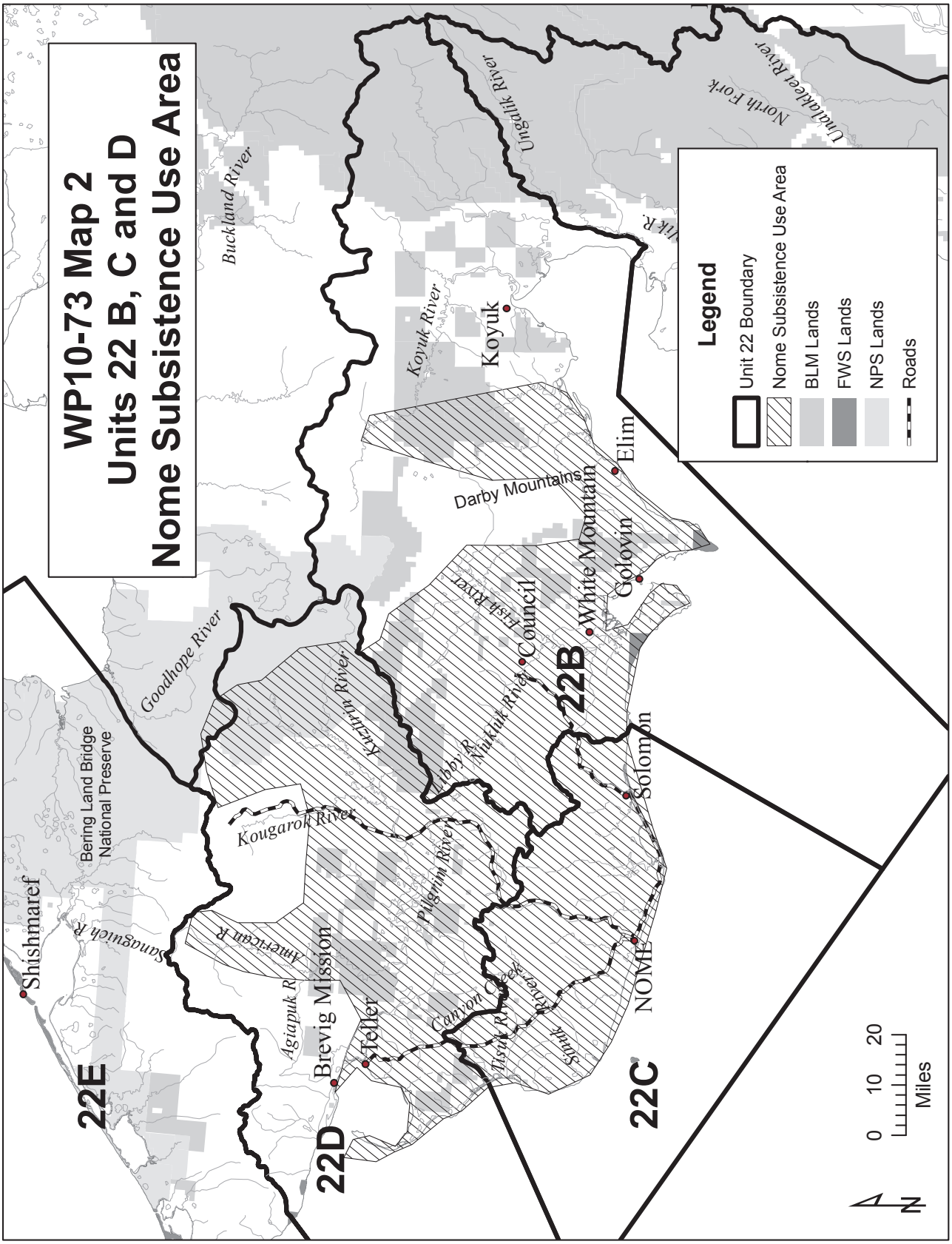
Since 1995, muskox hunting has taken on the customary and traditional use patterns similar to harvesting other large land mammal resources in the Seward Peninsula such as moose and caribou. A primary characteristic of subsistence hunting is that it is opportunistic and people hunt what is available and accessible in their area. Seward Peninsula residents have harvested muskoxen for almost fifteen years, incorporating this resource into their seasonal round and into their subsistence culture and way of life.

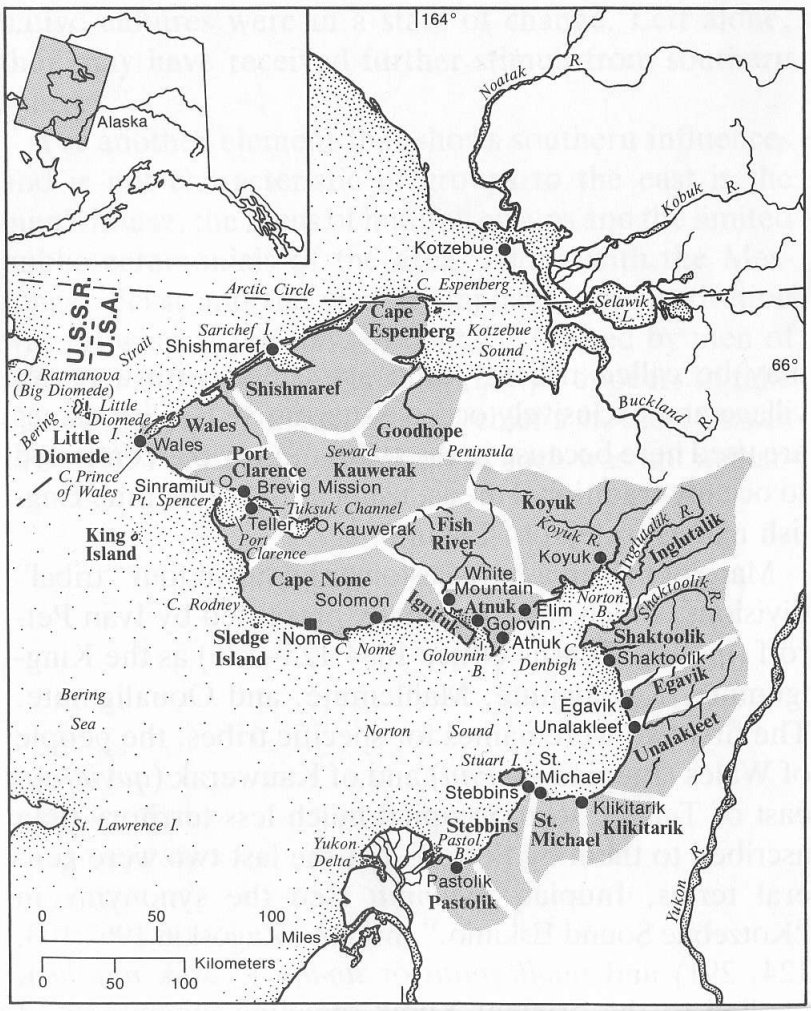
The muskox season in all of Unit 22 has been limited by regulations since 1995. It is unknown what the "customary and traditional" season of muskoxen was prior to extinction. Regulations have determined the harvest season, which have varied somewhat since 1995. State and Federal regulations have been in the fall (August/September) through late-winter (mid-March). Muskoxen have been incorporated into the seasonal round of subsistence activities. Nome residents have primarily hunted muskoxen in the fall, as this is the time-period when access is easiest via the road system and rivers, while hunters from other villages in Unit 22 have hunted primarily in late March. The villagers prefer taking muskoxen in March, when access by snowmachine is best due to better snow cover, better weather, longer days, and good quality of the meat. The majority of hunters travel to the area in winter months by snowmachine. In summer months, they use boats and/or four-wheelers. Nome residents primarily use four-wheelers, followed by highway vehicles along the road system. Once a herd is seen, they are usually approached on foot. Hunters use large caliber rifles (Magdanz 1995:2-3).

Of all large mammals, muskox hunting is one of the most efficient and economical. When threatened, muskoxen often cluster and stand their ground. Hunters can easily approach and take the animal preferred (Burch 1977). Muskox hunting is done by individuals or small groups of hunters. Hunters have to travel by boat in the fall or by snowmachine in the winter, with the exception of Nome residents who can travel by motor vehicle on the road system.

As with the harvest of all large terrestrial mammals, the muskox is quartered in the field and brought back to the community for final processing and distribution. Muskox meat is preferred fresh, but is also frozen and occasionally processed into dried meat. Muskox is considered a highly desired meat by most people. Seward Peninsula hunters have particular hunting skills and knowledge regarding hunting and processing muskoxen. These include handling the meat and principles of resource conservation such as avoiding over-harvest and waste, similar to other large mammal resources.

Muskoxen are accessible in Unit 22D either by road, boat, or snowmachine. In Proposal WP04-71, Nome's subsistence land use map was provided (see **Map 2).** Ray (1984:286) provided information on traditional subsistence use areas in the Seward Peninsula in the 19th century. The Kawerak hunted and fished in an area that generally covered Unit 22D, with the exception of the area used by the Sinramiut, the people of Brevig Mission and Teller (see **Map 3).** The traditional use area referred to as "Cape Nome" by Ray (see Map 3) utilized the area that is now Unit 22C. Today, there are no people living permanently in what Ray termed the "Kawerak territory" in Unit 22D **(see Map 3).** Magdanz and Olanna (1986) documented Nome's subsistence land use in an ADF&G report (**Map 2**). A comparison of Map 2 and Map 3 show that Nome's subsistence land use area in the 1980s in Unit 22D included the use areas of the people living in the Cape Nome area and the Kawerak area (plus some areas outside of Unit 22D).


WP10-73 Map 2
Units 22 B, C and D
Nome Subsistence Use Area
Legend
Unit 22 Boundary
Nome Subsistence Use Area
BLM Lands
FWS Lands
NPS Lands
Roads
22E
22D
22C
22B
Shishmaref
Bering Land Bridge National Preserve
Sanaguich R
Goodhope River
Buckland River
Kougarok River
Kuzitrin River
Agiapuk R
Brevig Mission
Teller
Pilgrim River
Canyon Creek
Nukluk River
Libby R
Council
Fish River
Darby Mountains
Koyuk River
Koyuk
Unalakleet River
North Fork
Elim
White Mountain
Golovin
Solomon
NOME
Snake River
0 10 20
Miles
N



Map 3. Tribal territories in the Seward Peninsula in the 19th Century (Ray 1984:286).

When Magdanz and Olanna mapped the Nome subsistence use area in 1986 there was not a State or Federal muskox hunt. A look at the moose hunting area mapped by Magdanz and Olanna (1986) found that Nome moose hunters ranged from the Upper Fish River in the east in Unit 22B to the American River in the west in Unit 22D (Unit 22D—remainder in muskox regulations), with hunting concentrated along the Kougarok Road in Unit 22C and D, the Teller Road in Unit 22C and D, and the Council Road in Unit 22C and B. In addition, there was significant moose hunting along the Kuzitrin River in Unit 22D, accessed by the Kougarok Road. The Niukluk River, in Unit 22B, accessed via the Council Road, was also used. Roads are the most convenient access routes, particularly since the river ice is too thin with too much open water for travel by snowmachine. Minimal snow cover can make snowmachine access difficult. Nome residents also used aircraft for hunting moose in the Agiapuk and American river areas, but there is no Federal land in this area (Magdanz and Olanna 1986:31–35).

Nome's primary use area for subsistence muskox hunting, similar to moose hunting, is in the Kuzitrin, Kougarok, and Pilgrim River drainages in the eastern portion of Unit 22D. Of Nome's total muskox harvest from 1998–2009, 81% (126) have been harvested in the Kuzitrin, Kougarok, and Pilgrim River drainages, and 18% (28) in Unit 22D—remainder (see **Table 2).** Since the Board addressed the customary

and traditional use determination for muskox in Unit 22D in 2004, Nome residents have increased their usage of Unit 22D—remainder. Prior to 2004, only 3 muskoxen had been harvested by Nome residents in Unit 22D—remainder; from 2004 through 2009, 25 muskoxen have been taken in Unit 22D—remainder. (Other muskox harvests by Nome residents occur in Unit 22C, but aren't under consideration in this proposal for Unit 22D). All of Nome's harvest in Unit 22D has been on State lands. Under the direction of the Muskox Cooperators Group, 2009 was the first year that a Federal muskox permit was given to a Nome resident to harvest a muskox on Federal public lands in Unit 22D (Adkisson 2009, pers. comm.).

In addition to Nome, the only other community in Unit 22C is Solomon, which in the 2000 census had only four residents, all of whom were over 65. Solomon residents have never harvested muskoxen in Unit 22D.

Table 2. Total muskox harvests by community[1] in Unit 22D 1998-2009 (ADF&G 2009).

COMMUNITY	22D REMAINDER[2]	KOUGAROK, KUZITRIN, & PILGRIM RIVER DRAINAGES[3]	UKNOWN	% of Total Harvest on State Lands
Unit 22B West Communities:				
White Mountain	0	35	0	100%
Golovin	0	1	0	100%
Unit 22B East Communities:				
Elim	1	1	0	100%
Koyuk	0	0	0	NA
Unit 22C Communities:				
Nome	28	126	2	100%
Council	1	0	0	100%
Unit 22D Communities:				
Brevig Mission	43	2	4	76%
Teller	30	2	1	72%
Unit 22E Communities:				
Wales	1	0	0	100%
Shishmaref	0	0	0	NA

[1] Only includes the harvests of residents in the units under consideration for Proposal WP10-73.
[2] Harvests in Unified Coding Units in the 100s and 200s.
[3] Harvests Unified Coding Units in the 300s.

The communities in Unit 22B west are White Mountain and Golovin. From 1998 through 2007, only one muskox has been harvested in Unit 22D by a Golovin resident; the muskox was harvested on State lands within the Kuzitrin, Kougarok, and Pilgrim River drainages. White Mountain residents have harvested 35 muskoxen from 1998 through 2009, all of them have been harvested on State lands within the Kuzitrin, Kougarok, and Pilgrim River drainages. Elim, which is in Unit 22B East, also has harvested muskoxen

in Unit 22D, one in Unit 22D remainder and one in the Kougarok, Kuzitrin, and Pilgrim River drainages, and all on State lands (**Table 2**).

At the fall 2009 Council meeting, a Council member noted that:

> *Well, you know, as I sit here and think about this, I would be supportive of this proposal including White Mountain. . . .White Mountain has a history of leaving White Mountain, going outside of its local area and traveling a long ways to get to muskox. And if we had to travel to Wales, we would have went to Wales to get muskox. . . we went after that resource in that other area. So with that said, I think they should be included* (SPRAC 2009:37).

Wales and Shishmaref are the only communities in Unit 22E. Shishmaref residents have never harvested a muskox in Unit 22D, and only one resident of Wales harvested a muskox in Unit 22D—remainder in 2003. Currently there is no reason for Wales and Shishmaref residents to travel outside of Unit 22E to harvest muskoxen because there are muskoxen locally available within Unit 22E.

Although Seward Peninsula residents traditionally did not hunt in another tribe's area, hunting could and did occur in other tribes' areas if there were marriage or kinship ties (Ray 1984:284). Generally, the nature of subsistence hunting is that subsistence hunters choose to hunt close to their communities, unless they are visiting their relatives in another community. In recent years the high price of gas has contributed to villagers hunting even closer to home.

On the Seward Peninsula, large terrestrial mammals are usually taken in the fall when meat is more easily preserved. Meat dries well and if taken late enough can be stored fresh frozen in caches. Most people also have adopted newer technologies such as freezers. Even when freezers are available, people will often use cold storage pits dug in well drained ground to cut down on the cost of electricity and to save space in the freezer. A proper cold storage pit can freeze meat throughout the summer. People in Brevig Mission, Wales, and Shishmaref still use such cold storage pits. Traditional processing and storage techniques are used because of the special and traditionally appealing flavors in foods, which cannot be attained by freezing and canning. Typically families use a combination of traditional and modern food storage methods (Magdanz 1995:4)

Local residents are interested in muskoxen and talk with family and friends about their behavior and location. In spite of disruptions or postponements caused by the demands of today's educational process, knowledge and skills related to subsistence uses remain largely passed down from generation to generation. Children in the area's villages, and from some subcommunities in Nome, grow up immersed in a web of extended families and surrounded by relatives. For the child, subsistence knowledge and skills begin to be acquired in the household from close relatives, and expand outward (often relatives) as the child grows older and becomes more mobile and capable. The process itself is still largely one of observing, listening, and emulating the older relatives, supplemented by stories and accounts of oral traditions told by elders and punctuated sometimes by pointed "how to" demonstrations (Adkisson unpublished). Learning commonly occurs experientially, when children follow their parents hunting, fishing, gathering, and to camp. For muskoxen, hunters are aware of and frequently discuss their locations, habits, and behaviors. Sobleman (1985) points out the relationship in Inupiaq society between economic production in subsistence activities and the household and family as producers. Magdanz (1995:5) points out that teenage boys in villages look forward to accompanying their fathers or older brothers on hunting trips, that children at home watch the butchering and preparation of meat and skins, and children listen as adults discuss hunting, travelling conditions, and animal behavior.

Sharing meat has been a long-standing tradition in Inupiaq culture. In traditional Inupiaq culture, hunters harvest only what they need and what they can properly care for, and then share the harvest with the community. If the hunter does not properly handle the meat or does not share the meat with the community, then the Inupiaq believe that it will hurt the hunter. In particular, the elders, widows, disabled, and homes without hunters have needed to be cared for, and often the less successful hunters would also ask for a share of the hunt. Community solidarity depended on cooperative hunting as well as cooperative sharing of the meat (Spencer 1959; Spencer 1984).

Today these customs continue, but there have been some shifts. Where traditionally all able-bodied males hunted, today not everyone can hunt when necessary. There may be times when a hunter is unable to hunt because of job constraints. Their jobs may require them to be out of town or they may be too busy to hunt. As a result, today there are other reasons besides being sick, elderly, or disabled in determining why one might want or need someone else to hunt under a designated hunter provision. Often someone might provide money for gas and supplies to their designated hunter. The institution of harvest limits and seasons have caused traditional hunting practices to shift (Armstrong 2005, pers. comm., Adkisson 2006, pers. comm.).

The muskox meat harvested in Unit 22 is shared throughout the community and occasionally shared with extended family in the region. It also is shared at community feasts such as Thanksgiving and Christmas or at a celebration of a child's first harvest. Unusual or significant harvests are often widely shared. In smaller communities, when a young hunter first harvests an animal, the meat is typically distributed to every house in the community. The first moose of the season is sometimes similarly distributed (this also distributes the burden or preservation of meat in warm weather). Muskox, an unusual and a significant harvest, is shared in a similar way. Today, sharing wild resources continues as a central feature to the life and culture on the Seward Peninsula (Magdanz 1995:5-6).

Subsistence hunters on the Seward Peninsula harvest a wide diversity of resources including caribou, moose, bear, seals, walrus, birds, furbearers, small game, and fishes, relying upon virtually all of the edible fish and wildlife resources in the area. In most communities, over 90 percent of households harvested at least some subsistence resources and harvested some type of large mammal. Almost all households used subsistence resources. In all communities in the region, some resources may not provide a large percentage of the total pounds of meat consumed; however, they do provide variety to the diet (ADF&G 2009). As examples of some of this research, in 1986, in Brevig Mission, 50% of the households surveyed used more than 20 different species of wild resources (Magdanz 1995). In a 1989 survey, (Conger and Magdanz 1990), respondents in Shishmaref reported harvesting 45 different categories of resources. A 1982-83 study (Sobleman 1985) in Shishmaref found the 72% of the households surveyed reported that most of the meat and fish in their householddiet came from subsistence harvests. In the same study, an additional 195 reported that at least half to more than half came from subsistence harvests.

Effects of the Proposal

If this proposal is adopted, Federally qualified subsistence users from Units 22B west, 22C, and 22E would to be added to the customary and traditional use determination to harvest muskoxen anywhere in Unit 22D on Federal public lands. Residents of these communities are already eligible to harvest muskoxen on State lands. In 2004 there was concern that expanding the pool of eligible users had the possibility of affecting Teller and Brevig's harvests of muskoxen because it overlaps with their customary and traditional use areas, however, this is already occurring with muskox harvests on State lands in Unit 22D—remainder. Federal public land in Unit 22D—remainder are all managed by the Bureau of Land

Management and are scattered in a patchwork of lands within lands managed by the State. Additionally, if this proposal is adopted, the common pattern of hunting with relatives in neighboring subunits would be able to be continued.

If this proposal is adopted, it would not affect the State muskoxen hunt as the harvests in Unit 22 are managed by a quota system as recommended by the Muskox Cooperators Group.

Expanding the customary and traditional use determination for muskoxen in Unit 22D would not affect the muskox population. If a conservation concern exists, it would be addressed by the Board through changes to harvest limitations or season restrictions.

If this proposal is not adopted, residents of Units 22B west, 22C, and 22E would not be able to harvest muskoxen throughout Unit 22D under Federal regulations. Nome residents would continue to harvest muskox on State lands, as they have in the past.

The difficulty for subsistence users only being able to harvest muskox on State lands and not on Federal public lands in Unit 22D—remainder is that the Federal public lands, which are all managed by the Bureau of Land Management, are scattered and do not have easily identifiable landmarks. Adopting this proposal also would reduce regulation complexity for subsistence users and eliminate the possibility of accidental harvest on Federal lands.

OSM CONCLUSION

Support Proposal WP10-73 **with modification** to add all residents of Unit 22B (with no distinction between east and west) to the customary and traditional use determination for Unit 22D, in addition to the residents of Units 22C, 22D, and 22E.

The modified regulation should read:

Unit 22D—Muskox	**Customary and traditional use determination**
Unit 22D~~, that portion within the Kougarok, Kuzitrin, and Pilgrim river drainages~~	*Rural residents of Units **22B**, **22C**, 22D (excluding St. Lawrence Island) ~~and White Mountain,~~ **and 22E.***
~~Unit 22D—remainder~~	*~~Rural residents of Unit 22D excluding St. Lawrence Island~~*

Justification

The residents of Units 22B, 22C, and 22E generally exhibit the eight factors describing customary and traditional uses of muskoxen in Unit 22D. Adopting Proposal WP10-73 would recognize the customary and traditional uses by the residents of Unit 22B, 22C, and 22E for harvesting muskoxen in all of Unit 22D. Residents of Nome harvested 18% of their muskoxen from 1998 to 2009 on State lands in Unit 22D—remainder. While the use of Unit 22D—remainder is low by residents of Unit 22B and 22E, there is history of use in Unit 22 since the hunt began in 1995. The Unit 22D muskox hunt has been evolving since its inception in 1995. Providing a broader customary and traditional use determination allows flexibility to Federally qualified subsistence users to harvest muskoxen anywhere in Unit 22D.

Bureau of Land Management lands are scattered in Unit 22D—remainder and do not have easily identifiable landmarks. As a result, subsistence users harvesting muskoxen on State lands in Unit 22D

—remainder whose customary and traditional uses are not recognized in Unit 22D—remainder could accidentally harvest muskoxen on Federal public lands. Adopting this proposal would eliminate this possibility and reduce regulation complexity for subsistence users.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-73 **with modification** as described in the OSM Conclusion. Adopting this proposal with the OSM recommended modifications would recognize the customary and traditional uses of the residents of Unit 22B, 22C, and 22E for muskoxen in all of Unit 22D. It also would eliminate the division in customary and traditional use determination areas. The Council recognized the importance of allowing others to come into traditional use areas to hunt muskoxen.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-73

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-73
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-73: Submitted by the Seward Peninsula Subsistence Regional Advisory Council, this proposal requests the existing positive customary and traditional determination for subsistence use of muskoxen in Game Management Unit 22D by residents in 22D be expanded to add residents of Units 22B west, 22C, and 22E.

Customary and Traditional Determination: WP 10-73 would make a positive finding of customary and traditional use of muskoxen in Unit 22D by residents of 22B west, 22C, and 22E. In the federal staff analysis, Table 2 and the accompanying narrative present convincing evidence that residents of these subunits, with the exception of 22E, have been harvesting muskoxen in 22D. That evidence supports the preliminary conclusion to adopt this proposal for residents of 22B west and 22C but not for residents of 22E and 22B east. This conclusion can only be preliminary, however, because one important factor that is not sufficiently considered is that Seward Peninsula residents traditionally did not hunt in another tribe's area unless there were marriage or kinship ties. Subsistence hunters tend to hunt closer to their communities so recommendations based on large units or subunits is not necessarily reflective of traditional hunting patterns.

The federal staff analysis was revised after the Interagency Staff Committee meeting so at the time of this writing, the department was unable to determine if it presented evidence of use of the specific muskoxen population by residents of the communities or areas to ascertain whether they meet, even "holistically" or by "generally exhibiting" the eight federal regulatory factors. While Appendix A is helpful, it is not specific to this proposal.

Recommendation: Support with modification if the federal staff analysis is modified to address the federal regulatory factors and patterns of hunting this muskoxen population by residents of communities and area, instead of using game management units and subunits for convenience.

WP10-74 Executive Summary	
General Description	WP10-74 requests that the closure of Federal public lands to the harvest of muskoxen in Unit 22E be rescinded. *Submitted by the Seward Peninsula Regional Advisory Council*
Proposed Regulation	**Unit 22—Muskox** *1 muskox by Federal permit or State permit; however, cows may only be taken during the period Jan. 1 – Mar. 15 ~~Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations.~~ Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.* — *Aug. 1–Mar. 15*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-74

ISSUES

WP10-74, submitted by the Seward Peninsula Regional Advisory Council, requests that the closure of Federal public lands to the harvest of muskoxen in Unit 22E be rescinded.

DISCUSSION

The proponent is requesting the current closure of Federal public lands to the take of muskoxen except by Federally qualified subsistence users be rescinded to allow harvest of muskoxen under Federal and State regulations on Federal public lands in Unit 22E. The proponent states there will be minimal impact to the population due to current harvest quotas, while allowing for more harvest opportunity.

Existing Federal Regulation

Unit 22E—Muskox	
1 muskox by Federal permit or State permit; however, cows may only be taken during the period Jan. 1–Mar. 15 Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Aug. 1–Mar. 15*

Proposed Federal Regulation

Unit 22—Muskox	
1 muskox by Federal permit or State permit; however, cows may only be taken during the period Jan. 1–Mar. 15 ~~Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations.~~ Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Aug. 1–Mar. 15*

Existing State Regulation

Unit 22E—Muskox	
One bull by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskox are taken (including up to 31 cows).	*Aug. 1–Mar. 15*
OR	

One muskox by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskox are taken (including up to 31 cows)	*Jan. 1–Mar. 15*
One bull 4 years old or older by drawing permit for both residents and non-residents	*Aug. 1–Mar. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 49% of Unit 22E and are primarily by the National Park Service as part of the Bering Land Bridge National Preserve and the Bureau of Land Management manages approximately 2.6% of the lands (See **Unit 22 Map**).

Customary and Traditional Use Determinations

The rural residents of Unit 22E excluding Little Diomede Island, have a positive customary and traditional use determination for muskoxen in Unit 22E.

Regulatory History

The Seward Peninsula Cooperative Muskox Management Plan (1994) established the guiding management goals for muskoxen in this region.

In 1995, WP95-44 was adopted by the Federal Subsistence Board (Board) to establish the first Federal muskoxen hunt on the Seward Peninsula and recognized a Federal subsistence priority for Alaskan residents with a positive customary and traditional determination for muskoxen in Unit 22. The Board established a season of Sept. 1–Jan. 31 for Units 22D, 22E, and 23 west of and including the Buckland River drainage, and limited the harvest to bulls with a quota of 3% of the population from the most recent census (FWS 1995).

In 1998, the Seward Peninsula Subsistence Regional Advisory Council submitted Proposal 89 to extend the season (Sept 1–Jan 31) two and a half months to August 1–March 31 for Units 22D, 22E, and Unit 23 SW. However, Proposal 89 was adopted with modification by the Board to extend the season to Aug. 1 to Mar. 15 in Units 22D and 22E and that portion of Unit 23.

In 1999, Proposal 46 extended the Special Action (SA 97-14) that combined the State/Federal harvest quota system. Due to the long traveling distances needed to reach Federal public lands and the poor travel/snow conditions during that time, the six affected villages supported the combination of the State and Federal harvest systems to create more harvest opportunities due to declining hunter success rates under the Federal subsistence harvest. The combined Federal and State harvest was adopted into permanent regulations by both the Alaska Board of Game (1998) and the Federal Subsistence Board (1999). The consensus was to manage on a subunit basis within Unit 22 and Unit 23SW to allow for continued growth of the muskoxen population in this region and to increase harvest opportunities. Sharing the harvest quota between Federal and State systems helped meet the subsistence needs of the local users that may not have been met under only the Federal or State system separately. The cooperative management dispersed hunting pressure over an entire area regardless of land ownership to create a more biologically sound management approach (FWS 2001).

In 2001, WP01-35 was adopted and added a cow harvest to several units, including 22E, and changed the overall harvest quotas for all subunits.

In 2005, the Alaska State Board of Game (BOG) established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Seward Peninsula Muskox Cooperators Group. In addition, the State season for the muskox drawing hunt in Unit 22E was lengthened to Aug. 1–Mar. 15, established a nonresident season, and allocated 10% of the drawing permits to nonresidents.

In 2006, WP06-41 established the use of a designated hunter permit for muskoxen in Unit 22 by Federally qualified subsistence users. The designated hunter may hunt for any number of recipients in the course of a season, but have no more than two harvest limits in their possession at any one time; except in Unit 22E where a resident of Wales or Shismaref acting as a designated hunter may hunt for any number of recipients, but have no more than four harvest limits in their possession at any one time. The special provision was differentiated between Unit 22E and the rest of Unit 22 because the muskoxen population continued to grow in Unit 22E whereas muskoxen numbers have stabilized in the remainder of Unit 22.

Biological Background

The entire current range of muskoxen in Alaska comprises many of the locations where Nunivak Island muskoxen were originally transplanted (**Figure 1**). Muskoxen have dispersed and extended their range east throughout Seward Peninsula (**Figure 2 and 3**) and now occupy suitable habitat in Units 22C, 22D, 22E, 22B-West, and 23-SW. Individuals and small groups are found in Units 22B-East, 22A-North, Unit 23 along the Tagagawik River and in the Purcell Mountain, Unit 21 along the Yukon River near Ruby, and in Unit 24 near Huslia (Joly 2007). Muskoxen observations are increasingly common in the summer months for these expansion areas, but few muskoxen are found in these areas in the winter (Gorn 2007).

Muskoxen censuses are scheduled every three years (2007, 2010, 2013, etc) to determine population size, distribution and percentage yearlings in the population. In 2007, the Seward Peninsula muskoxen census found 2688 muskoxen in Unit 22 and Unit 23SW which is a 12.6% increase from the 2005 census count of 2,387 muskoxen and a 16.4% increase in population size since 2002 when 2050 muskoxen were counted (**Table 1**). Specifically for Unit 22E, the Seward Peninsula muskoxen census results for 1992–2007 have showed an increasing population trend since 1998 (**Table 1**). In 2005, the Seward Peninsula census data showed group locations per subunits within Unit 22E (**Figure 3**) where there were a total of 58 groups located for a total of 863 muskoxen.

Muskoxen are more limited by snow than caribou due to their greater foot loading, low chest height, and smaller hooves making it more difficult to travel through deep or wind-hardened snow (Klein 1992) and therefore, tend towards coastal areas potentially due to the higher winds which reduce the snow depth during winter (Dau 2005). However, muskoxen in Unit 22 tend towards higher windblown slopes in the winter on the Seward Peninsula to avoid the deep snow drifts (Adkisson pers comm. 2009) and are much more widely distributed throughout the region through the year. Muskoxen tend to be more sedentary during periods of heavy snow cover, however, adult bulls generally tend to be less conservative than the general population and will enter previously unused winter habitats due to distant movements during the fall in search of harems (Smith 1989). Bulls may tend to be undercounted in composition surveys due to their proclivity for being solitary and therefore, more difficult to spot during census. Despite the difficulty in counting lone bulls, bull:cow ratio is important to track to determine if a declining bull:cow trend is beginning.

The most recent available information for composition surveys for Unit 22E were completed in 2008 and classified 99% of the animals (198 of 199 muskoxen) by sex and age. In 2008, the population

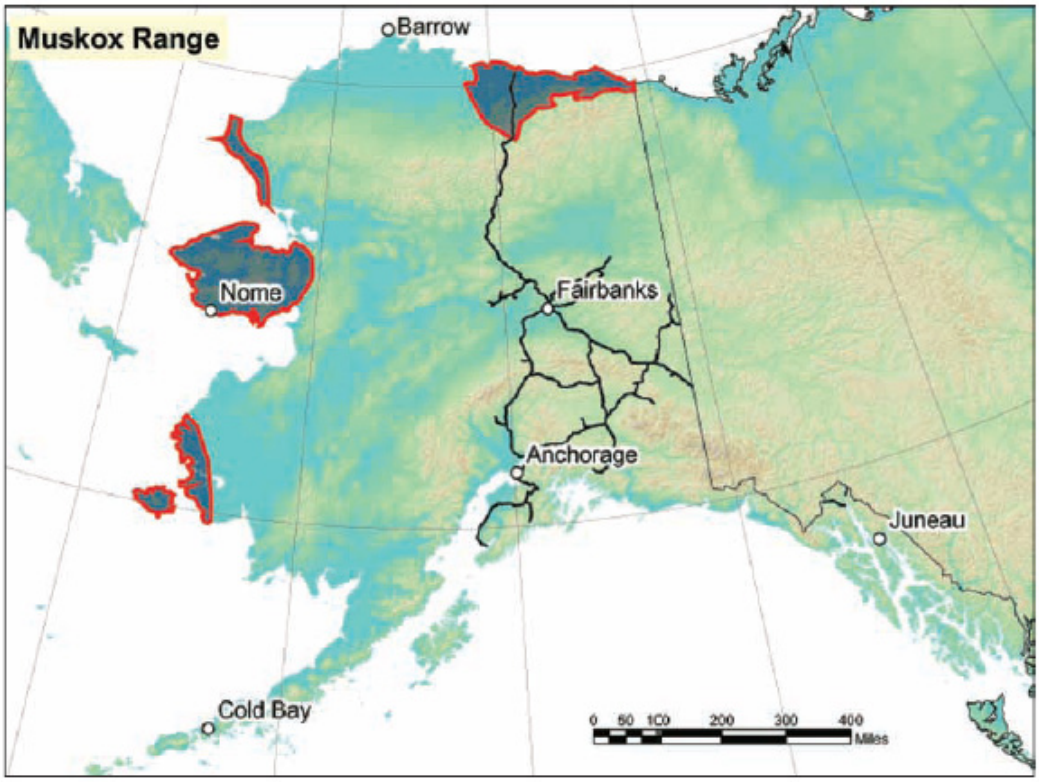

Figure 1. Current range of muskoxen in Alaska (ADF&G).

composition for Unit 22E comprised 19% (37 of 199) of mature bulls (≥4 years), 37% (73 of 199) of mature cows (≥3 years), and 10% (19 of 199) yearlings (**Table 2**). The proportion of yearling, 2-year old, and 3-year old animals surveyed in 2008 is similar to results in 2005 (**Table 2**). The 2008 composition survey categorized 35 calves (18%) of the sampled population which suggests good calf survival during this time. The percentage of cows (37%) shows a moderately high reproductive potential within the 22E muskoxen population (**Table 2**). Muskoxen in Arctic National Wildlife Refuge showed the age of first reproduction ranged between two to five years with 60% (9 of 15) successfully reproducing at three years of age. Older female muskoxen (≥ 10 years) reproduced successfully 76% (13 of 17) within this population (Reynolds 2001).

Management Direction

The Seward Peninsula Muskox Cooperators Group (SPMCG) provides recommendations regarding muskox management on the Seward Peninsula. The SPMCG is comprised of staff from Alaska Department of Fish and Game (ADF&G), National Park Service (NPS), U.S. Fish and Wildlife Service (FWS), U.S. Bureau of Land Management (BLM), Bering Straits Native Corporation, Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association, residents of Seward Peninsula communities, and representatives from other interested groups or organizations.

Management goals for muskoxen in Unit 22 are to allow for continued growth and range expansion while providing for a limited harvest of muskoxen in accordance with State and Federal laws. Muskoxen along the Nome road systems of subunits 22B and 22C are managed for viewing, education, and other nonconsumptive uses.

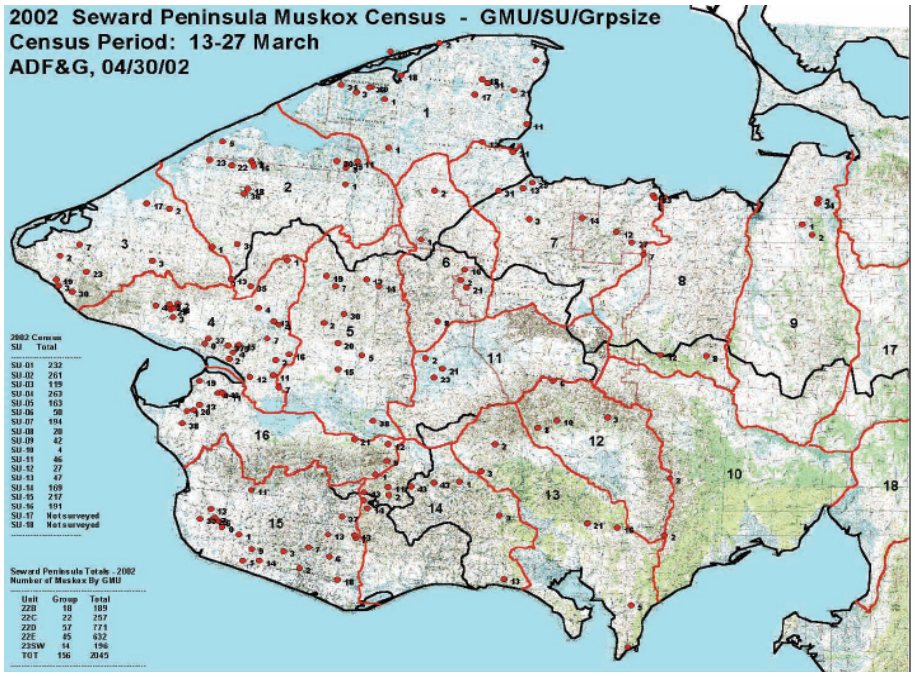

Figure 2. Seward Peninsula muskox census results, 2002 (Joly 2007, courtesy of ADF&G). Black lines are GMU (game management unit) boundaries; red lines are SU (survey unit) boundaries.

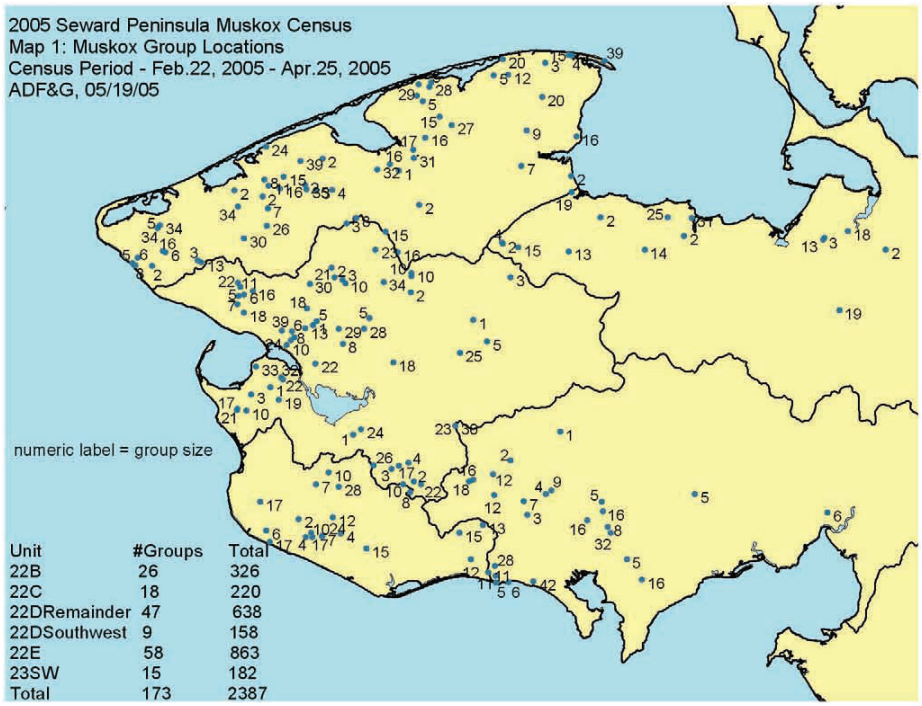

Figure 3. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G)

Table 1. Seward Peninsula muskox census results, Units 22 and 23 Southwest, 1992–2007 (ADF&G 2008 and Gorn 2007).

Year	Unit					Total Muskoxen in Unit 22 and Unit 23SW	Total % increase from previous census	Total % change from previous census in Unit 22E only	% Average Annual rate of increase in Unit 22E
	22B	22C	22D	22E	23SW				
1992	3	49	340	180	134	706	n/a	n/a	
1994	11	79	405	184	246	925	31.0%	+2.2%	+1.1%
1996	51	87	308	327	178	951	0.03%	+78%	+39%
1998	27	124	714	362	205	1432	50.5%	+10.7%	+5.4%
2000	159	148	774	461	255	1797	25.4%	+27.3%	+13.7%
2002	189	257	771	632	201	2050	14.1%	+37.1%	+18.6%
2005	326	220	796	863	182	2387	16.4%	+36.5%	+12.2%
2007	329	445	746	949	219	2688	12.6%	+9.9%	+4.9%

Current management objectives for muskoxen in Unit 22 require a complete census throughout the unit to be completed at 3-year intervals for population and distribution changes. A census is completed in one subunit (22B, 22C, etc) on an annual basis to determine changes in age and sex structure of the population.

Harvest History

In 2005, the BOG established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Seward Peninsula Muskox Cooperators Group. However, despite this allowing a harvest opportunity to Alaska residents outside of Unit 22, the harvest within Unit 22E was still below harvest quotas (**Table 3**) for all hunts. From 2004–2007, annual average hunter success rate for bull harvest was approximately 65% and 21% success rate for cow harvest (**Table 3**).

In Unit 22E, muskoxen inhabit Federal, State, and private lands with varying degrees throughout the subunit. Typically, hunters from the village of Shismaref have been successful under both the State and Federal permits because muskoxen inhabit Federal and private lands close to the village. In the village of Wales within Unit 22E, State permits are more readily filled due to the Federal lands being further from the village.

In addition to the State and Federal registration hunts, the State administers a drawing hunt for Unit 22E (DX098) for bulls only which for the period of 2004–2008 has a hunter success rate of 80% with an average of 9 male muskoxen harvest (ADF&G 2009b).

Effects of the Proposal

Harvest quotas are rarely met for this portion of Unit 22E and there is a harvestable surplus of muskoxen to allow harvest under both State and Federal regulations on Federal lands. Rescinding the Federal land closure would provide an opportunity to meet the harvest quota either under Federal or State regulations on Federal public lands in Unit 22E with minimal impact to the muskoxen population because harvest quotas are in place.

Table 2. Age and sex composition of Seward Peninsula muskox groups in Unit 22E (ADF&G 2009a and FWS 2009).

Unit	Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio	Yearling: cow ratio
22E	2002	313	57 (18%)	19 (6%)	32 (10%)	84 (27%)	29 (9%)	32 (10%)	57 (18%)	0	50:100*	50:100
22E	2005	501	83 (17%)	28 (6%)	43 (9%)	161 (32%)	69 (14%)	34 (7%)	77 (15%)	6 (1%)	36:100	33:100
22E	2008	199	37 (19%)	13 (7%)	9 (5%)	59 (30%)	14 (7%)	12 (6%)	19 (10%)	1 (1%)	51:100	26:100

(%) is of total sampled population
* In 2002, 50% of the population was sampled and favored larger groups. Smaller groups were likely to be all bulls, therefore the number of bulls is probably underestimated. This bull:cow ratio should be seen as a minimum.

Table 3: Results of state and federal muskox hunts on the Seward Peninsula 2004-2007 (ADF&G 2009b and FWS 2009).

Hunt #	Year	Muskox Harvest Quota [a]	Cow Muskox Harvest Quota [a]	# of State Permits Issued (TX104 or RX104[b])	# of State hunters who hunted	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX 114)	# of Federal hunters who hunted	Federal Bull Harvest	Federal Cow Harvest
TX104 and RX114	2004	51	25	31	18	14	2	15	2	2	0
TX104 and RX114	2005	69	35	47	32	18	9	16	6	3	2
RX104[b] and RX114	2006	69	35	26	12	10	0	11	5	1	4
RX104 and RX114	2007	69	35	57	36	24	6	7	0	0	0

[a] Combined State and Federal quotas (Gorn 2005 and 2007)
[b] TX104 was changed from a Tier II hunt to a Tier I subsistence registration hunt (RX104) effective for the 2006-2007 regulatory year

OSM CONCLUSION

Support Proposal WP10-74

Justification

Harvest quotas are rarely met for this portion of Unit 22E and there is a harvestable surplus of muskoxen to allow harvest under both State and Federal regulations on Federal public lands. In 2005, the State changed the Tier II subsistence hunt (TX104) to a Tier I registration hunt (RX104), which is open to all Alaskan residents regardless of community residence. Despite this increase in opportunity for all Alaskan residents, the harvest of muskoxen for Unit 22E has consistently been below quotas thereby giving a harvestable surplus of muskoxen in this area. By rescinding the Federal land closure, it would give an opportunity to meet the harvest quota either under Federal or State regulations on Federal public lands in Unit 22E with minimal impact to the muskoxen population because harvest quotas are in place.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-74. Rescinding the Federal closure on muskox in Unit 22E would give an opportunity meet the harvest quota either under Federal or State regulations on Federal public lands in Unit 22E with minimal impact to the muskox population. Harvest quotas are rarely met in Unit 22E and there is a harvestable surplus of muskoxen to allow for both a Federal and State harvest.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-74

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-74
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-074: This proposal requests changing the Unit 22E federal subsistence muskox season by removing the closure of federal public lands to non-federally qualified users.

Introduction: Muskox populations in Unit 22E have increased over the past 15 years and now sustain hunting harvest through federal subsistence and state subsistence and drawing hunts. This proposal requests the reopening Unit 22E federal public lands to non-federally qualified users for the hunting of muskox. If adopted, more hunters could participate in the hunt.

Impact on Subsistence Users: Removing the closure to non-federally qualified users may increase Alaska resident participation in muskox hunts on federal public lands in Unit 22E without impact to subsistence opportunity since the existing quotas have not been reached.

Opportunity Provided by State: In Unit 22E the following muskox hunting regulations are effective during 2009-2010:

> One bull by registration permit RX104; residents only; season August 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22E during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> One cow by registration permit RX104; residents only; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22E during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> RX104 Harvest Quota: Total combined quota is 62 muskox (including up to 31cows) in Unit 22E.
>
> Drawing hunt DX097 has an August 1 through March 15 season for resident or nonresident hunters with drawing permit; bag limit is one bull 4 years old or older by permit; tag fee required.

Conservation Issues: There are no conservation concerns due to hunting by permit with established harvest quotas. Recent harvest quotas have not been reached in Unit 22E, so allowing additional opportunity is a way to increase annual harvest.

Recommendation: Support.

WP10-75 Executive Summary	
General Description	WP10-75 requests that the harvest of cow muskoxen be allowed for the entire season August 1–March 15, not only the period from January 1–March 15, in Unit 22E. *Submitted by the Seward Peninsula Regional Advisory Council*
Proposed Regulation	**Unit 22E—Muskox** *1 muskox by Federal permit or State permit; ~~however, cows may only be taken during the period Jan. 1–Mar. 15~~ Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.* — *Aug. 1–Mar. 15*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-75

ISSUES

WP10-75, submitted by the Seward Peninsula Regional Advisory Council, requests that the harvest of cow muskoxen be allowed for the entire season August 1–March 15, not only the period from January 1–March 15, in Unit 22E.

DISCUSSION

The proponent is requesting that the regulation allowing cow harvest during part of the season be rescinded so that cows can be harvested for the entire season. The proponent states that the population has increased in this area, and states there would be minimal impact to the total muskoxen population because there are quotas on the total number of cow muskoxen allowed for harvest in Unit 22 E.

Existing Federal Regulation

Unit 22E—Muskox	
1 muskox by Federal permit or State permit; however, cows may only be taken during the period Jan. 1–Mar. 15 Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Aug. 1–Mar. 15*

Proposed Federal Regulation

Unit 22E—Muskox	
1 muskox by Federal permit or State permit; ~~however, cows may only be taken during the period Jan. 1–Mar. 15~~ Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Aug. 1–Mar. 15*

Existing State Regulation

Unit 22E—Muskox	
One bull by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskoxen are taken (including up to 31 cows).	*Aug. 1–Mar. 15*
OR	

One muskox by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskoxen are taken (including up to 31 cows)	*Jan. 1–Mar. 15*
One bull 4 years old or older by drawing permit for both residents and non-residents	*Aug. 1–Mar. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 49% of Unit 22E and are managed by the National Park Service as part of the Bering Land Bridge National Preserve. (See **Unit 22 Map**).

Customary and Traditional Use Determinations

The rural residents of Unit 22E excluding Little Diomede Island have a positive customary and traditional use determination for muskoxen in Unit 22E.

Regulatory History

Refer to WP10-74

Biological Background

In 2007, the Seward Peninsula muskoxen census found 2688 muskoxen in Unit 22 and Unit 23SW which is a 12.6% increase from the 2005 census count of 2,387 muskoxen and a 16.4% increase in population size since 2002 when 2050 muskoxen were counted (**Table 1**). For Unit 22E, the Seward Peninsula muskoxen census results for 1992-2007 have showed an increasing population trend since 1998 (**Table1**). In 2005, the Seward Peninsula census data showed group locations per subunits within Unit 22E (**Figure 3**) where there were a total of 58 groups located for a total of 863 muskoxen.

The most recent available information for composition surveys for Unit 22E were completed in 2008 and classified 99% of the animals (198 of 199 muskoxen) by sex and age. In 2008, the population composition for Unit 22E comprised 19% (37 of 199) of mature bulls (≥4 years), 37% (73 of 199) of mature cows (≥3 years), and 10% (19 of 199) yearlings (**Table 2**). The proportion of yearling, 2-year old, and 3-year old animals surveyed in 2008 is similar to results in 2005 (**Table 2**). The 2008 composition survey categorized 35 calves (18%) of the sampled population which suggests good calf survival during this time (ADF&G 2009a). The percentage of cows that are ≥3 years old (37%) shows a moderately high reproductive potential within the 22E muskoxen population. Muskoxen in Arctic National Wildlife Refuge showed the age of first reproduction ranged between two to five years with 60% (9 of 15) successfully reproducing at three years of age. Older female muskoxen (≥ 10 years) reproduced successfully 76% (13 of 17) within this population (Reynolds 2001).

Harvest is not the only limiting factor to muskoxen populations. Predation of muskoxen by grizzly bears and other predators has been well-documented in the Arctic National Wildlife Refuge population (Reynolds 2002). However, few accounts of other mortality factors have been documented on the Seward Peninsula (Gorn 2007, Persons 2005).

Management Direction

Refer to WP10-74

Table 1. Seward Peninsula muskox census results, Units 22 and 23 Southwest, 1992-2007 (ADF&G 2008 and Gorn 2007).

Year	Unit					Total Muskoxen in Unit 22 and Unit 23SW	Total % increase from previous census	Total % change from previous census in Unit 22E only	% Average Annual rate of increase in Unit 22E
	22B	22C	22D	22E	23SW				
1992	3	49	340	180	134	706	n/a	n/a	
1994	11	79	405	184	246	925	31.0%	+2.2%	+1.1%
1996	51	87	308	327	178	951	0.03%	+78%	+39%
1998	27	124	714	362	205	1432	50.5%	+10.7%	+5.4%
2000	159	148	774	461	255	1797	25.4%	+27.3%	+13.7%
2002	189	257	771	632	201	2050	14.1%	+37.1%	+18.6%
2005	326	220	796	863	182	2387	16.4%	+36.5%	+12.2%
2007	329	445	746	949	219	2688	12.6%	+9.9%	+4.9%

Harvest History

In 2005, the Alaska State Board of Game (BOG) established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Seward Peninsula Muskox Cooperators Group. However, the harvest within Unit 22E was still below harvest quotas (**Table 3**) for all hunts, despite allowing a harvest opportunity to Alaska residents outside of Unit 22 (**Table 4**). From 2004-2007, annual average hunter success rate for bull harvest was approximately 65% and 21% success rate for cow harvest (**Table 3**). The current harvest rate of cow muskoxen does not negatively impact the population growth in 22E, however extending the cow harvest opportunity throughout the entire season could risk diminishing this growth and must be monitored (Gorn 2009, pers. comm.).

In Unit 22E, muskoxen inhabit Federal, State, and private lands with varying degrees throughout the subunit. Typically, hunters from the village of Shishmaref have been successful under both the State and Federal permits because muskoxen inhabit Federal and private lands close to the village. In the village of Wales within Unit 22E, State permits are more readily filled due to the Federal lands being further from the village. The State currently has a cow harvest only for Jan. 1–Mar. 15, and therefore residents from villages further from Federal lands may not experience the same Federal subsistence opportunity to harvest cow muskoxen as other rural residents with a positive customary and traditional determination in Unit 22E.

In addition to the State and Federal registration hunts, the State administers a drawing hunt for Unit 22E (DX098) for bulls only which for the period of 2004-2008 has a hunter success rate of 80% with an average of 9 male muskoxen harvest (ADF&G 2009b).

Effects of the Proposal

Allowing cow harvest for the whole season would likely increase the total harvest of cows and have the overall effect on reducing the population growth within Unit 22E. However, annual average hunter success (2004-2007) was 21% for cow harvest and cow harvest is currently in single digits. Currently the cow harvest is well below the harvest quota for muskoxen in 22E, therefore minimal impact to the population is expected even with an increase in cow harvest. If the proposal is approved, muskoxen

Table 2. Age and sex composition of Seward Peninsula muskox groups in Unit 22E (ADF&G 2009a and FWS 2009).

Unit	Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio	Yearling: cow ratio
22E	2002	313	57 (18%)	19 (6%)	32 (10%)	84 (27%)	29 (9%)	32 (10%)	57 (18%)	0	50:100*	50:100
22E	2005	501	83 (17%)	28 (6%)	43 (9%)	161 (32%)	69 (14%)	34 (7%)	77 (15%)	6 (1%)	36:100	33:100
22E	2008	199	37 (19%)	13 (7%)	9 (5%)	59 (30%)	14 (7%)	12 (6%)	19 (10%)	1 (1%)	51:100	26:100

(%) is of total sampled population
* In 2002, 50% of the population was sampled and favored larger groups. Smaller groups were likely to be all bulls, therefore the number of bulls is probably underestimated. This bull:cow ratio should be seen as a minimum.

Table 3: Results of state and federal muskox hunts on the Seward Peninsula 2004-2007 (ADFG 2009 and FWS 2009).

Hunt #	Year	Muskox Harvest Quota [a]	Cow Muskox Harvest Quota [a]	# of State Permits Issued (TX104 or RX104[b])	# of State hunters who hunted	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX 114)	# of Federal hunters who hunted	Federal Bull Harvest	Federal Cow Harvest
TX104 and RX114	2004	51	25	31	18	14	2	15	2	2	0
TX104 and RX114	2005	69	35	47	32	18	9	16	6	3	2
RX104[b] and RX114	2006	69	35	26	12	10	0	11	5	1	4
RX104 and RX114	2007	69	35	57	36	24	6	7	0	0	0

[a] Combined State and Federal quotas (Gorn 2005 and 2007)
[b] TX104 was changed from a Tier II hunt to a Tier I subsistence registration hunt (RX104) effective for the 2006-2007 regulatory year

Table 4: Alaskan residence community for Unit 22E State muskoxen hunt on the Seward Peninsula 2005-2008 (ADF&G 2009b and FWS 2009)

	Muskox Harvest 2005		Muskox Harvest 2006		Muskox Harvest 2007		Muskox Harvest 2008	
Community	**State**	**Federal**	**State**	**Federal**	**State**	**Federal**	**State**	**Federal**
Anchorage	n/a	n/a	n/a	n/a	**10**	n/a	**3**	n/a
Big Lake	**1**	n/a	**1**	n/a	n/a	n/a	n/a	n/a
Chugiak	n/a	n/a	n/a	n/a	**1**	n/a	n/a	n/a
Eagle River	**1**	n/a	n/a	n/a	**1**	n/a	n/a	n/a
Fairbanks	**1**	n/a	**1**	n/a	**1**	n/a	n/a	n/a
Glennallen	n/a	n/a	n/a	n/a	**1**	n/a	n/a	n/a
Homer	**1**	n/a	**1**	n/a	n/a	n/a	**1**	n/a
Kenai	n/a	n/a	n/a	n/a	**1**	n/a	**1**	n/a
Nome	**1**	n/a	n/a	n/a	**0**	n/a	**4**	n/a
Petersburg	n/a	n/a	n/a	n/a	**1**	n/a	**1**	n/a
Seward	n/a	n/a	n/a	n/a	**1**	n/a	n/a	n/a
Shishmaref	**17**	**4**	**0**	**5**	**7**	**0**	n/a	**0**
Sitka	n/a	n/a	n/a	n/a	**3**	n/a	n/a	n/a
Soldotna	n/a	n/a	n/a	n/a	**3**	n/a	**3**	n/a
Stebbins	**2**	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sterling	n/a	n/a	n/a	n/a	**1**	n/a	**1**	n/a
Tin City	n/a	n/a	n/a	n/a	**1**	n/a	**1**	n/a
Wales	**5**	0	**7**	n/a	**2**	n/a	**2**	n/a
Wasilla	n/a	n/a	n/a	n/a	**1**	n/a	**1**	n/a
Total	**29**	n/a	**10**	n/a	**29**	n/a	**18**	n/a

n/a represents no hunter success or unsuccess
0 represents that at least one hunter was unsuccessful

population growth in Unit 22E would need to be monitored to determine if the increase in cow harvest was having an effect by declining the population.

OSM CONCLUSION

Support Proposal WP10-75

Justification

Harvest quotas are rarely met for this portion of Unit 22E, and therefore, a harvestable surplus of muskoxen exists for both State and Federal regulations on Federal public lands. In 2005, the State changed the Tier II subsistence hunt (TX104) to a Tier I registration hunt (RX104), which is open to all Alaskan residents regardless of community residence. Despite this increase in opportunity for all Alaskan residents, the harvest of cow muskoxen for Unit 22E has consistently been below quotas thereby giving a harvestable surplus of muskoxen in this area, therefore minimal impact to the population is expected.

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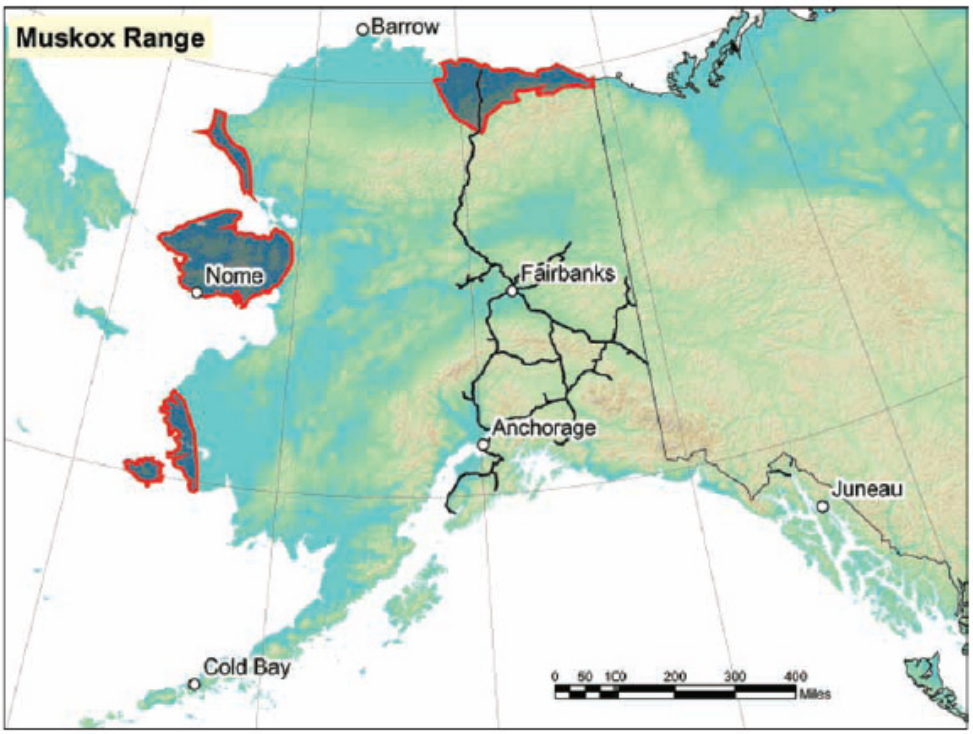

Figure 1. Current range of muskoxen in Alaska (ADF&G).

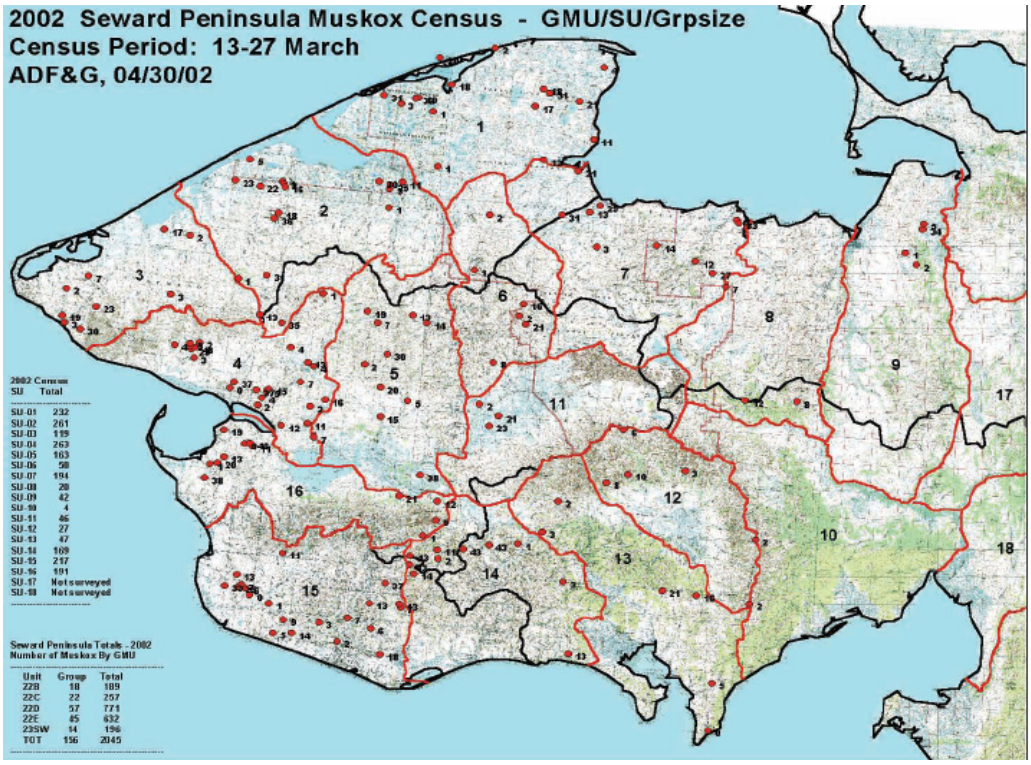

Figure 2. Seward Peninsula muskox census results, 2002 (Joly 2007, courtesy of ADF&G). Black lines are GMU (game management unit) boundaries; red lines are SU (survey unit) boundaries.

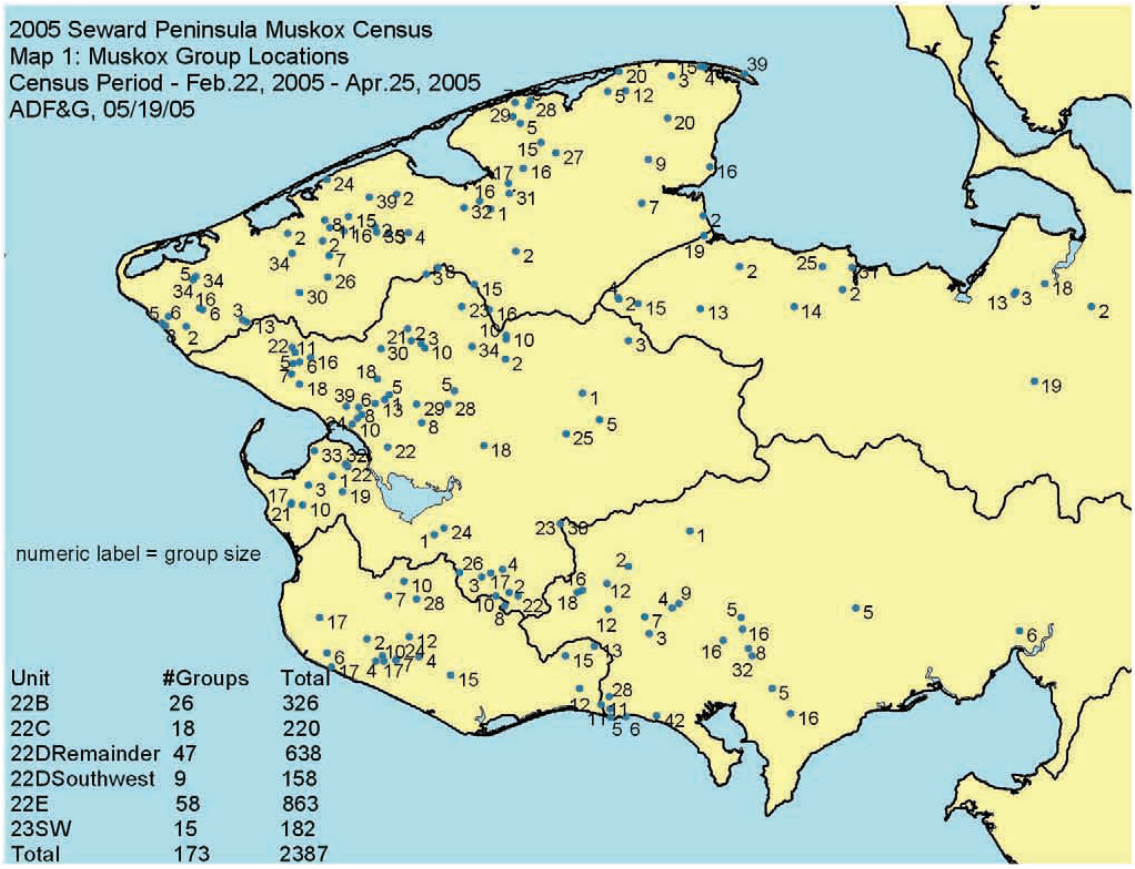

Figure 3. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G).

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-75. The muskox population is increasing in Unit 22E. Adopting a cow harvest is supported because there is a harvestable surplus of cow muskoxen in Unit 22E. Minimal impact on the muskox population is expected because the number of muskoxen that have been harvested in the past has been quite low. The harvestable surplus has not been met in the past.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-75

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-75: This proposal requests changing the Unit 22E federal subsistence muskox season by removing the closure of federal public lands to non-federally qualified users and by opening the federal subsistence cow season on August 1. The portion of the proposal to remove the closure to non-federally qualified users for muskox in Unit 22E is supported by the department (see comments on WP10-74). The portion of the proposal to liberalize the federal subsistence cow muskox season for Unit 22E is addressed below.

Introduction: The proposal would liberalize the federal subsistence cow muskox hunting season by five months in Unit 22E. The current muskox harvest quota allocates 50% of the harvest as cows. The cow muskox quota has not been reached in Unit 22E.

Impact on Subsistence Users: Expanding the federal subsistence cow muskox hunting season by five months will significantly expand federal subsistence hunter opportunity to harvest a cow and reach the established quota for Unit 22E.

Opportunity Provided by State: In Unit 22E, the following muskox hunting regulations were effective in 2009-2010:

> One bull by registration permit RX104; residents only; season Aug 1-Mar 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome ADF&G and license vendors in Unit 22E during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> One cow by registration permit RX104; residents only; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome ADF&G and license vendors in Unit 22E during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> RX104 Harvest Quota: Total combined quota is 62 muskox (including up to 31cows) in Unit 22E.
>
> Drawing hunt DX097 has an August 1 through March 15 season for resident or nonresident hunters with drawing permit; bag limit is one bull 4 years old or older by permit; tag fee required.

Conservation Issues: None. Hunting is by permit with established harvest quotas in RX104 hunt that have not been reached so additional opportunity and participation is warranted.

Other Comments: In the 2010-2011 regulatory year, the state muskox season for cows in hunt RX104 will open on August 1 which match the dates requested in WP10-75.

Recommendation: Support.

WP10-76 Executive Summary	
General Description	Proposal WP10-76 requests the addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale. *Submitted by the Seward Peninsula Subsistence Regional Advisory Council*
Proposed Regulation	*§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20,* ***22****, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-76

ISSUES

Proposal WP10-76, submitted by the Seward Peninsula Subsistence Regional Advisory Council, requests the addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale.

DISCUSSION

The Seward Peninsula Subsistence Regional Advisory Council (Council) stated that it submitted the proposal so that subsistence users may more fully utilize brown bears they harvest under Federal subsistence regulations. The Federal Subsistence Board (Board) and the Subsistence Regional Advisory Councils, statewide, have considered several proposals related to brown bear handicrafts and have repeatedly emphasized the importance of the region-specific approach to bear handicraft regulations (FSB 2004: 209–274). The Council has discussed the sale of bear handicrafts extensively during eight of their meetings since 2002. The addition of Unit 22 to the list of units with brown bear handicraft regulations is consistent with Section 803 of ANILCA, where the term "subsistence uses" means,

> *. . .the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of non-edible byproducts of fish and wildlife resources taken for personal and family consumption; for barter, or sharing for personal or family consumption; and for customary trade.*

Existing Federal Regulation: Bear Handicrafts

> *§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.*

Proposed Federal Regulation: Bear Handicrafts

> *§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur of a brown bear (including claws) taken from Units 1–5, 9A–C, 9E, 12, 17, 20, **22**, 23, 24B (only that portion within Gates of the Arctic National Park) 25 and 26.*

Extent of Federal Public Lands

Federal public lands comprise approximately 32% of Unit 22 and consist of 18% Bureau of Land Management (BLM) 12% National Park Service (NPS), 2% and U.S. Fish and Wildlife Service (FWS) lands (**Unit 22 map**).

Customary and Traditional Use Determinations

Rural residents of Unit 22 have a positive customary and traditional use determination for brown bear in Unit 22.

Regulatory History

The Board has considered numerous proposals regarding the sale of handicrafts made from the nonedible byproducts of black and brown bears harvested under Federal subsistence regulations. The Board has adopted bear handicraft regulations for the regions that have requested them and has acknowledged the importance of region-specific regulations because of cultural differences throughout the state. The Council has discussed handicrafts made from bear parts, in detail, during its 2002, 2004, 2005, 2006, 2007, 2008 winter meetings and at both its winter and fall 2009 meetings (SPSRAC 2009: 96–98; SPSRAC 2008: 100–102; SPSRAC 2007: 24–26; SPSRAC 2006: 40–50; SPSRAC 2005: 25, 28–33; SPSRAC 2004: 23–26; SPSRAC 2002: 53–56). They have opposed most proposals to restrict the sale of handicrafts made from bear parts where allowed in other regions of the state.

In 2002, the Board considered a statewide proposal, WP02-01, to classify black and brown bears as furbearers for the purpose of allowing the sale of bear hides and parts. While the Board denied this request, citing conservation concerns, it adopted a regulation allowing the use of black bear fur for handicrafts, seeking to align with the regulation adopted by the State of Alaska in 1998 (FWS 2002: 2). The Council voted to oppose the proposal in deference to diverse beliefs about bears throughout the state and because black bears are not common in their region (SPSRAC 2002:53–56).

In 2004, the Board considered Proposal WP04-01 to allow the sale of handicraft items made from the fur of brown bear. This same proposal was submitted to and adopted by the Alaska Board of Game in spring 2004. After extensive discussion, the Board adopted Federal regulations that allow for the sale of handicrafts made from brown bear fur including claws. Various Regional Advisory Councils held different views of the proposal. The Board adopted the proposal, but only for those three regions whose Regional Advisory Councils considered it appropriate: Eastern Interior, Bristol Bay and Southeast Alaska (Units 1–5, 9A–C, 9E, 12, 17, 20 and 25) (FWS 2004: 16). The Council voted to oppose the proposal because they harvest bears for meat and were concerned about the impact of the sale of bear handicrafts and also in deference to diverse beliefs regarding bears throughout the state (SPSRAC 2004: 23–26).

In 2005, Proposal WP05-01, which asked to clarify the definition of bear handicrafts to include fur and claws and to prevent commercial sale of bear handicrafts, was submitted by the USFWS (FSB 2005: 198). The proposal addressed regulations for the sale of handicrafts made from both black and brown bears. The Board adopted the proposal with modifications. The Council deferred the proposal to those regions that recommended allowed sales of bear handicrafts (SPSRAC 2005: 25, 28–33).

As noted above, Proposal WP05-01 was intended to clarify the definition of bear handicrafts and to prevent commercial sales of bear handicrafts. The Board acted on all elements of that proposal except the language addressing commercial sales. In 2006, Proposal WP06-01 was submitted by the Board to limit commercial sales of bear handicrafts (FWS 2006:8). The Council opposed this proposal because it was concerned about restrictions on customary trade. This proposal was discussed subsequent to the Board's adoption of regulations for customary trade of subsistence harvested fish in January 2003 (FSB 2003). The Council did not want to see future regulation of customary trade of other subsistence resources (SPSRAC 2006: 40–50).

In 2007, Proposal WP07-01 was submitted by the Alaska Department of Fish and Game (ADF&G) and requested that claws be removed from the Federal definition of fur and that sales of handicraft items made from the claws, bones, teeth, sinew, or skulls of black and brown bears to be allowed for sale only between Federally qualified subsistence users statewide (FWS 2007: 10). The Council voted to oppose this proposal because they did not want to limit the ability of subsistence harvesters in other regions to sell bear claw handicrafts (SPSRAC 2007: 24–26).

In 2008, Proposal WP08-05 was submitted by the ADF&G and requested the removal of all unit-specific regulations related to the sale of brown bear handicrafts made of skin, hide, pelt or fur. It also requested that the sales of brown bear handicrafts made of claws, bones, teeth, sinew or skull should occur only between Federally qualified subsistence users (FWS 2008: 183). The Council voted to oppose this proposal in deference to regions that allow for the sale of brown bear handicrafts. At this meeting, the Council decided to consider a proposal to add Unit 22 to the list of regions that allow for the sale of handicrafts made from brown bear parts (SPSRAC 2008: 100–102).

At its spring 2008 meeting, the Board addressed Proposal WP08-05 and, at the request of the ADF&G, deferred action on the proposal pending the formation of a brown bear claw handicraft working group. Deferring the proposal would allow time for the work group "to address this issue of sale and tracking, specifically whether or not it's even feasible" (FSB 2008:117). The Board directed that the group include representatives from all interested Subsistence Regional Advisory Councils and State and Federal staff (FSB 2008: 102–119). This proposal is still being deferred pending the outcome of the brown bear claw handicraft working group. An update on the workgroup has been provided under the discussion of Proposal WP10-02.

Proposal WP10-76 is the result of discussions at the winter 2009 Council meeting. The Office of Subsistence Management staff presented a briefing on the ADF&G's request for the formation of a brown bear handicraft working group. This briefing prompted a discussion on the practical aspects of the sale of brown bear claw handicrafts. During this meeting, the Council decided to propose the inclusion of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown bears harvested under Federal subsistence regulations can be used to make handicrafts for sale (SPSRAC 2009: 96–98).

Effects of the Proposal

The Federal subsistence harvest limit for brown bear in Unit 22 is one bear per year. This proposal does not change the harvest limit. Therefore, if adopted, it would have little or no effect on bear populations or on other users. Adoption of this proposal will allow for increased utilization of brown bears already harvested under Federal subsistence regulations. Adoption of this proposal may provide subsistence users with a small amount of cash if they opt to make and sell handicrafts from the skin, hide, pelt or fur, including claws, of brown bears harvested for food. As noted, subsistence harvest limits for brown bears are in place and these regulations dictate that edible meat must be salvaged. Thus, the amount of brown bear skin, hide, pelt or fur, including claws, for handicrafts is limited by these regulations.

OSM CONCLUSION

Support Proposal WP10-76.

Justification

In the past, the Council has supported the sale of brown bear claw handicrafts in other regions. The addition of Unit 22 to the list of areas from which the skin, hide, pelt or fur, including claws, of brown

bears harvested under Federal subsistence regulations can be used to make handicrafts for sale is consistent with Section 803 of ANILCA. Adoption of this proposal will allow for increased utilization of brown bears already harvested under Federal subsistence regulations. Adoption of this proposal may provide subsistence users with a small amount of cash if they opt to make and sell handicrafts from the skin, hide, pelt or fur, including claws, of brown bears harvested for food. As noted, subsistence harvest limits for brown bears are in place and these regulations dictate that edible meat must be salvaged.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-76. Adopting this proposal would allow subsistence users to more fully utilize brown bears harvested under Federal subsistence management regulations. The Council knows that the Brown Bear Handicraft Working Group is still working on this issue, but continued to support this proposal. The Council noted that the subsistence users in Unit 22 should be able to use brown bear parts for handicrafts. The Council also recognized that there are very few brown bears harvested in Unit 22 under Federal subsistence management regulations.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-76

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-076: This proposal adds Unit 22 to the list of units where it is legal to sell brown bear handicrafts (including claws) made by federal subsistence users from brown bears harvested under federal subsistence regulations.

Introduction: The Seward Peninsula Regional Advisory Council submitted this proposal to reverse their previous decision prohibiting sales of handicrafts made from federal subsistence harvested brown bears in Unit 22. The previous position was based on the Council's conclusion that sale of brown bear handicrafts was not customary and traditional for residents of this region. Existing federal regulations authorize sale of federal subsistence brown bear handicrafts in Units 1-5, 9A-C, 9E, 12, 17, 20, and 25. This proposal requests adding Unit 22 as an authorized area.

State regulations prohibit the buying, selling, or bartering of any part of a black or brown/grizzly bear, except an article of handicraft made from the fur of a bear.

> Handicraft is defined as: a finished product in which the shape or appearance of the natural material has been substantially changed by skillful use of hands, such as sewing, carving, etching, scrimshawing, painting, or other means and which has substantially greater monetary and aesthetic value than the unaltered natural material alone.

Conservation Issues: Brown bear harvests have increased since incremental liberalization of seasons and bag limits were initiated in 1997. Recent unit-wide harvests are approximately 85% higher than the 5-year average harvest prior to 1997. Providing an economic incentive might further increase brown bear harvests. The state-wide prohibition in state regulations is intended to reduce the take of brown bears for economic purposes. Adopting this proposal as written compounds problems with the international trade of endangered species and contributes to the illegal harvest, overharvest, and waste of bears in Alaska and in other states and countries. With the North American brown and black bears listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and brown bear populations in the 48 conterminous states listed as threatened under the Endangered Species Act, regulations allowing unlimited and untracked sales of bear claws, teeth, bones, and skulls violate sound wildlife management principles.

Enforcement Issues: Without uniform regulations applicable to state and federal subsistence harvested brown bears, the sale of handicraft bear claws, as proposed, will create an enforcement problem and increase risk of enforcement action on legitimate subsistence users. Different state and federal subsistence regulations will be difficult to enforce in Unit 22 because of the patchwork of land status and uncertainty of the source of harvested bears that are turned into handicrafts.

Other Comments: A brown bear handicraft committee was formed to address some of the State of Alaska's concern, on behalf of the legitimate subsistence user and management of the resources. This workgroup is comprised of Regional Advisory Council members, federal and state biologists, and federal and state enforcement officers. Progress towards finding solutions to the state concerns have been made during the work group meeting held in 2009. Further meetings

are necessary to complete the task of developing a means to ensure Alaska's brown bear resources, the federal subsistence users, and handicrafts buyers are protected.

Recommendation: Defer until the work group completes its work on finding solutions to protect subsistence users and the resource in authorization of customary trade. If the Board will not defer, then Oppose: the Regional Advisory Council previously took action not to authorize this customary trade because it was not customary and traditional in their region.

WP10-77 Executive Summary	
General Description	WP10-77 requests that the Federal hunt areas for muskoxen within Unit 22D remainder be aligned with the State hunt areas by establishing a Kougarok, Kuzitrin, and Pilgrim river drainages hunt area. *Submitted by the National Park Service*
Proposed Regulation	**Unit 22D—Muskox** ***Unit 22D, that portion within the Kougarok, Kuzitrin and Pilgrim River drainages — 1 muskox by Federal permit or State Tier I subsistence registration permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Bering Land Bridge National Preserve, in consultation with ADF&G and BLM.*** — ***Aug. 1–Mar. 15*** *Unit 22D, remainder—1 musk ox by Federal permit or State Tier ~~II~~ **I subsistence registration** permit; however, cows may only be taken during the period Jan. 1–Mar. 15. Federal public lands are closed to the taking of musk ox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the ~~Western Arctic National Parklands~~ **Bering Land Bridge National Preserve**, in consultation with ADF&G and BLM.* — *Aug. 1–Mar. 15*
OSM Conclusion	**Support** Proposal WP10-77 **with modification** to clarify the regulatory language because the Kuzitrin River drainage encompasses the Kougarok and Pilgrim river drainages. *Unit 22D, that portion within the **Kuzitrin** River drainages — 1 muskox by Federal permit or State Tier I subsistence registration permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Bering Land Bridge National Preserve, in consultation with ADF&G and BLM.*
Seward Peninsula Regional Council Recommendation	**Support** Proposal WP10-77 **with modification** as described in the OSM Conclusion

continued on next page

WP10-77 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-77 **with modification** to reduce the description difference between State and Federal regulations.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-77

ISSUES

WP10-77, submitted by the National Park Service, requests that the Federal hunt areas for muskoxen within Unit 22D remainder be aligned with the State hunt areas by establishing a Kougarok, Kuzitrin, and Pilgrim river drainages hunt area.

DISCUSSION

The proponent is requesting the current Federal hunt area of Unit 22D remainder be separated into two hunt areas to align with the State hunt areas by establishing a Kougarok, Kuzitrin and Pilgrim river drainages hunt area. Currently the entire Federally designated 22D remainder is closed when harvest quotas are met, while the State was able to keep its eastern 22D hunt area (the proposed Kuzitrin area) open and allowing continued subsistence harvest in this area. Emergency Order 05-11-09 closed the state subsistence hunting season for muskoxen by registration permit in Unit 22D remainder on October 13, 2009, because the joint State/Federal harvest quota of 16 muskoxen had been reached (ADF&G 2009a). Based on this closure, the National Park Service (the Federal in-season manager) followed suit and closed the Federal subsistence muskoxen hunt in GMU 22D remainder on October 17, 2009. Currently the Federal regulations designate two hunt areas within Unit 22D while the State has three hunt areas within Unit 22D. This results in a discrepancy between available lands for Federal subsistence opportunity and state subsistence opportunity for muskoxen. Aligning the Federal and State hunt areas would give Federal managers additional flexibility to keep areas open to subsistence harvest when the joint State/Federal harvest quotas have not been met in specific areas.

Existing Federal Regulation

Unit 22D—Muskox

Unit 22D, remainder – 1 musk ox by Federal permit or State Tier II permit; however, cows may only be taken during the period Jan. 1–Mar. 15. Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Aug. 1–Mar. 15*

Proposed Federal Regulation

Unit 22D—Muskox

Unit 22D, that portion within the Kougarok, Kuzitrin and Pilgrim River drainages – 1 muskox by Federal permit or State Tier I subsistence registration permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Bering Land Bridge National Preserve, in consultation with ADF&G and BLM.	***Aug. 1–Mar. 15***
Unit 22D, remainder—1 musk ox by Federal permit or State Tier ~~H~~ ***I subsistence registration*** *permit; however, cows may only be taken during the period Jan. 1–Mar. 15. Federal public lands are closed to the taking of musk ox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the ~~Western Arctic National Parklands~~* ***Bering Land Bridge National Preserve****, in consultation with ADF&G and BLM.*	*Aug. 1–Mar. 15*

Existing State Regulation

Unit 22D—Muskox

22D, Kuzitrin River Drainage – One muskox by registration permit for residents only. Season will be closed by emergency order when the quota of 11 muskox are taken (including up to 4 cows)	*Jan. 1 – Mar 15 (Permit/Hunt #RX099)*
22D, remainder – One bull by registration permit for residents only. Season will be closed by emergency order when the quota of 16 muskox are taken (including up to 7 cows)	*Aug. 1 – Mar 15 (Permit/Hunt #RX104)*
OR	
One muskox by registration permit. Season will be closed by emergency order when the quota of 16 muskox are taken (including up to 7 cows)	*Jan 1 – Mar 15 (Permit/Hunt #RX104)*
One bull 4 years old or older by drawing permit for both residents and non-residents	*Aug 1 – Mar 15 (Permit/Hunt #DX102)*

Extent of Federal Public Lands

Federal public lands comprise approximately 16% of Unit 22D and consist of 11% National Park Service and 5% Bureau of Land Management lands (See **Unit 22 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 22C, 22D (excluding St. Lawrence Island), and White Mountain have a positive customary and traditional use determination for muskox in Unit 22D, which includes the Kougarok, Kuzitrin, and Pilgrim River drainages.

Rural residents of Unit 22D excluding St. Lawrence Island have a positive customary and traditional use determination for muskoxen in Unit 22D remainder.

Regulatory History

The Seward Peninsula Cooperative Muskox Management Plan (1994) established the guiding management goals for muskoxen in this region.

In 1995, WP95-44 was adopted by the Federal Subsistence Board (the Board) to establish the first Federal muskoxen hunt on the Seward Peninsula and granted a Federal subsistence priority for Alaskan residents with a positive customary and traditional determination for muskoxen in Unit 22. The Board established a season of Sept. 1 – Jan. 31 for Units 22D, 22E, and 23 west of and including the Buckland River drainage, and limited the harvest to bulls with a quota of 3% of the population from the most recent census (FWS 1995).

In 1996, WP 96-51 was adopted by the Board to increase the harvest from 2 to 8 muskoxen in Unit 22D. The proposal was submitted by the Seward Peninsula Subsistence Regional Advisory Council to increase the harvest limit to 12 muskoxen but was adopted with modification to increase the harvest to 8 muskoxen.

In 1997, the Board stratified Unit 22D into two permit areas comprising BLM lands and Bering Land Bridge National Preserve (NPS lands), with half of permits designated in each area. This decision was based on harvest information indicating all muskoxen harvest in Unit 22D was on BLM land. The split of permits was intended to encourage subsistence hunters to harvest from NPS lands in the eastern end of the unit.

In 1998, the Seward Peninsula Subsistence Regional Advisory Council proposed Proposal 89 to extend the season (Sept. 1 – Jan. 31) two and a half months to Aug. 1 – Mar. 31 for Units 22D, 22E, and Unit 23 SW. However, Proposal 89 was adopted with modification by the Board to extend the season to Aug. 1 – Mar. 15 in Units 22D and 22E and that portion of Unit 23.

In 1999, Proposal 46 extended the Special Action (SA 97-14) that combined the State/Federal harvest system. Due to the long traveling distances needed to reach Federal lands and the poor travel/snow conditions during that time, the six affected villages supported the combination of the State and Federal harvest systems to create more harvest opportunities due to declining hunter success rates under the Federal subsistence harvest. The combined Federal and State harvest was approved into permanent regulations by both the Alaska Board of Game (1998) and the Federal Subsistence Board (1999). The consensus was to manage on a subunit basis within Unit 22 and Unit 23SW to allow for continued growth of the muskoxen population in this region and to increase harvest opportunities. Sharing the harvest quota between Federal and State systems helped meet the subsistence needs of the local users that may not be met under only the Federal or State system separately. The cooperative management dispersed hunting pressure over an entire area regardless of land ownership to create a more biologically sound management approach (FWS 2001).

In 2000, the Board approved Proposal 00-56 to remove the split of two Federal permit areas, one on NPS land and the other on BLM land, as designated in 1997 in Unit 22D. Six of the Federal permits were then transferred into the State Tier II system.

In 2001, WP01-35 was adopted and added a cow harvest to several units, including 22D, and changed the overall harvest quotas for all subunits.

In 2006, WP06-41 established the use of a designated hunter permit for muskoxen in Unit 22 by Federally qualified subsistence users. Special provisions allowed a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user (designated hunter) to take muskoxen on their behalf, unless the recipient is a member of a community operating under a community harvest system.

In 2009, Emergency Order 05-11-09 closed the state subsistence hunting season for muskoxen by registration permit in Unit 22D remainder on October 13, 2009, because the joint State/Federal harvest quota of 16 muskoxen had been reached. Based on this closure, the Federal manager closed the Federal subsistence muskoxen hunt in GMU 22D remainder on October 17, 2009.

The Federal Subsistence Board authorized Emergency Special Action WSA09-06 on December 30, 2009, reopening the winter muskoxen season within Unit 22D remainder (that portion within the Kougarok, Kuzitrin, and Pilgrim River drainages from January 15 to March 15, 2009.

Biological Background

Historical accounts of muskoxen in Alaska show they were extirpated by the late 1800s and may have disappeared from the Seward Peninsula hundreds of years earlier. Muskoxen were globally in decline which led to the decision to restore a protected population in Alaska. Thirty-four muskoxen were originally released in Fairbanks from Greenland in 1930. In 1935 and 1936, the entire herd in Fairbanks was transported to Nunivak Island where they continue to thrive. In 1970, thirty-six muskoxen were translocated from Nunivak Island to the southern portion of the Seward Peninsula in Units 22C and 22D and an additional thirty-five muskoxen from Nunivak Island were translocated in 1981 to join the existing population on Seward Peninsula. The entire current range of muskoxen in Alaska comprises many of the locations where Nunivak Island muskoxen were originally transplanted (**Figure 1**).

Muskoxen have dispersed and extended their range east throughout Seward Peninsula (**Figure 2 and 3**) and now occupy suitable habitat in Units 22C, 22D, 22E, 22B-West, and 23-SW. Individuals and small groups are found in Units 22B-East, 22A-North, Unit 23 along the Tagagawik River and in the Purcell Mountain, Unit 21 along the Yukon River near Ruby, and in Unit 24 near Huslia (Joly 2007).

Muskoxen censuses are scheduled every three years (2007, 2010, 2013, etc) to determine population size, distribution and percentage of yearlings in the population. In 2007, the Seward Peninsula muskoxen census found 2,688 muskoxen in Unit 22 and Unit 23SW, which is a 12.6% increase from the 2005 census count of 2,387 muskoxen and a 16.4% increase in population size since 2002 when 2,050 muskoxen were counted (**Table 1**). Specifically for Unit 22D, the Seward Peninsula muskoxen census results for 1992–2007 have shown a stable population trend since 1998 (**Table 1**). In 2005, the Seward Peninsula census data showed group locations per subunits within Unit 22D (**Figure 3**). For that portion west of the Tisuk River drainage and Canyon Creek in 22D, there were a total of 9 groups located for a total of 158 muskoxen.

The most recent composition surveys for Unit 22D were completed in 2006 and 97% of the animals were classified (503 of 516 muskoxen) by sex and age (**Table 2**). The population composition for Unit 22D was

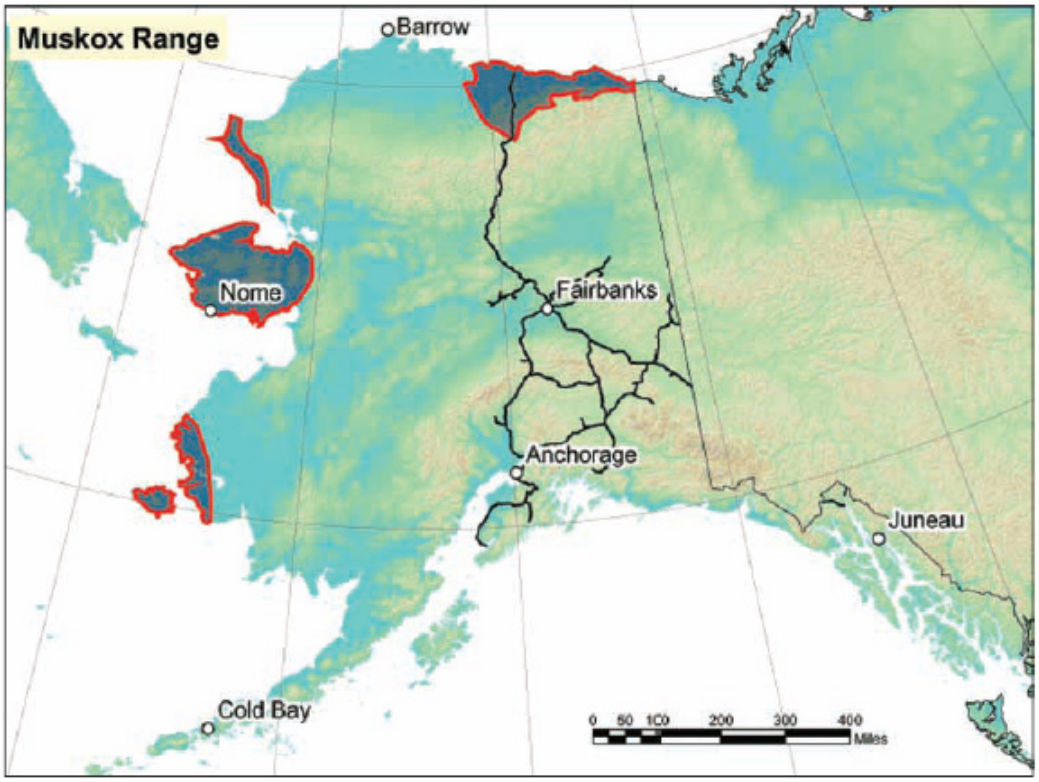

Figure 1. Current range of muskoxen in Alaska (ADF&G)

25% (131 of 516) bulls ≥3 years, 5% (28 of 516) two-year old bulls, 45% (234 of 516) cows ≥3 years, 5% (26 of 516) two-year old cows, and 16% (84 of 516) yearlings. Bulls of all age classes comprised 31% (159 of 516) of the population surveyed and cows of all age classes represented 58% (301of 516) (**Table 2**). The percentage of cows (50%) shows a high reproductive potential within the 22D muskoxen population. Muskoxen in Arctic National Wildlife Refuge showed the age of first reproduction ranged between two to five years with 60% (9 of 15) successfully reproducing at three years of age. Older female muskoxen (≥ 10 years) reproduced successfully 76% (13 of 17) within this population (Reynolds 2001).

Management Direction

The Seward Peninsula Muskox Cooperators Group (SPMCG) provides recommendations regarding muskoxen management on the Seward Peninsula. The SPMCG is comprised of staff from Alaska Department of Fish and Game (ADF&G), National Park Service (NPS), U.S. Fish and Wildlife Service (FWS), U.S. Bureau of Land Management (BLM), Bering Straits Native Corporation, Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association, residents of Seward Peninsula communities, and representatives from other interested groups or organizations.

Management goals for muskoxen in Unit 22 are to allow for continued growth and range expansion while providing for a limited harvest of muskoxen in accordance with State and Federal laws. Muskoxen along the Nome road systems of subunits 22B and 22C are managed for viewing, education, and other nonconsumptive uses.

Current management objectives for muskoxen in Unit 22 require a complete census throughout the unit to be completed at 3-year intervals for population and distribution changes. A census is completed

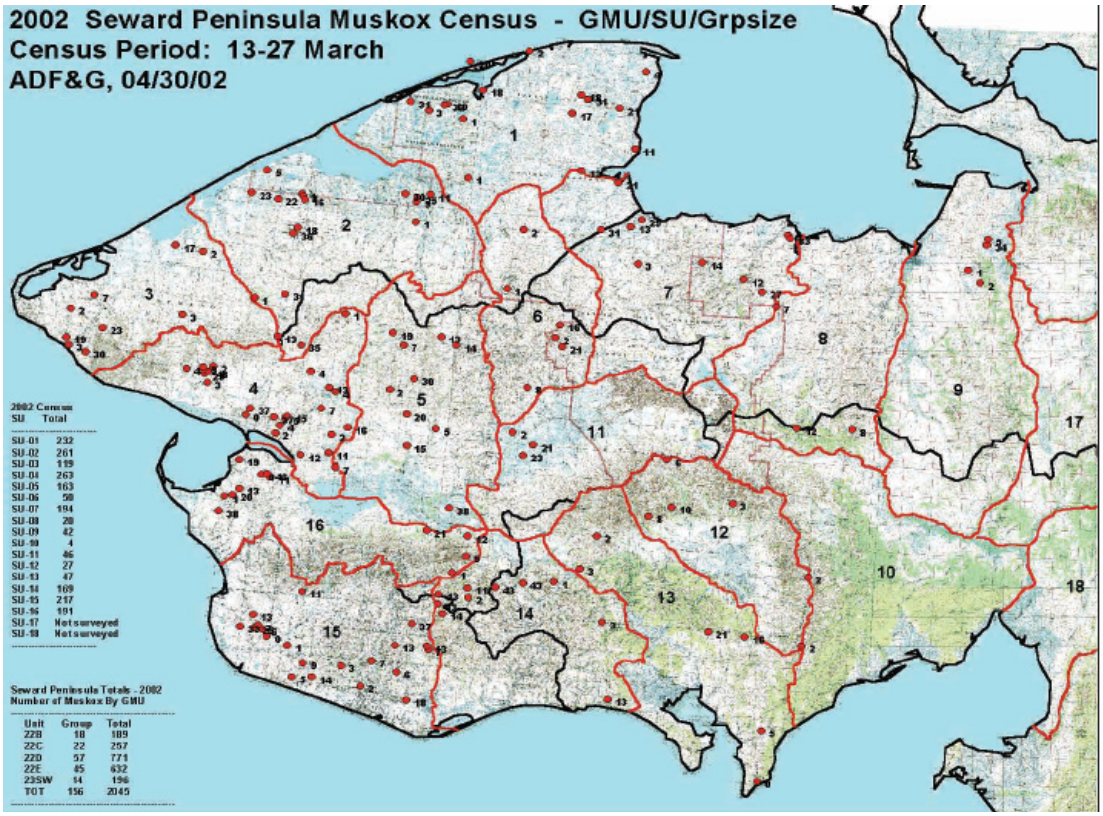

Figure 2. Seward Peninsula muskox census results, 2002 (Joly 2007, courtesy of ADF&G). Black lines are GMU (game management unit) boundaries; red lines are SU (survey unit) boundaries.

in one subunit (22B, 22C, etc) on an annual basis to determine changes in age and sex structure of the population. A resident drawing hunt is administered in Unit 22D remainder and 22D Southwest and registration hunts are administered in the remaining subunits of Unit 22.

Harvest History

In 2005–2006 the allowable harvest rates recommended for Unit 22D by the SPMCG and adopted by the Alaska Board of Game were 5% in Unit 22D remainder (including up to 2% cow harvest).

Prior to 2008, the State administered a Tier II subsistence hunt in Unit 22D. In regulatory year 2008–2009, the State changed the Tier II subsistence hunt to a Tier I registration hunt (RX102) which is open to all Alaska residents. In the regulatory year 2009–2010, the hunt number changed to RX 104 but continues to be a registration subsistence hunt open to residents only.

In addition to the State and Federal registration hunts, the State administers a drawing hunt (DX102) for bulls only for portions of Unit 22D including 22D remainder starting in the 2008–2009 regulatory year. In 2008, three bulls were harvested in Unit 22D remainder from the drawing hunt.

From 2006–2008, the average annual cow harvest for the State has been three cow muskoxen in Unit 22D. For the same time period, the average annual State hunter success rate was 08% with the highest success rate of 14% (5 cows from 36 hunters) occurring in 2006 (**Table 3**).

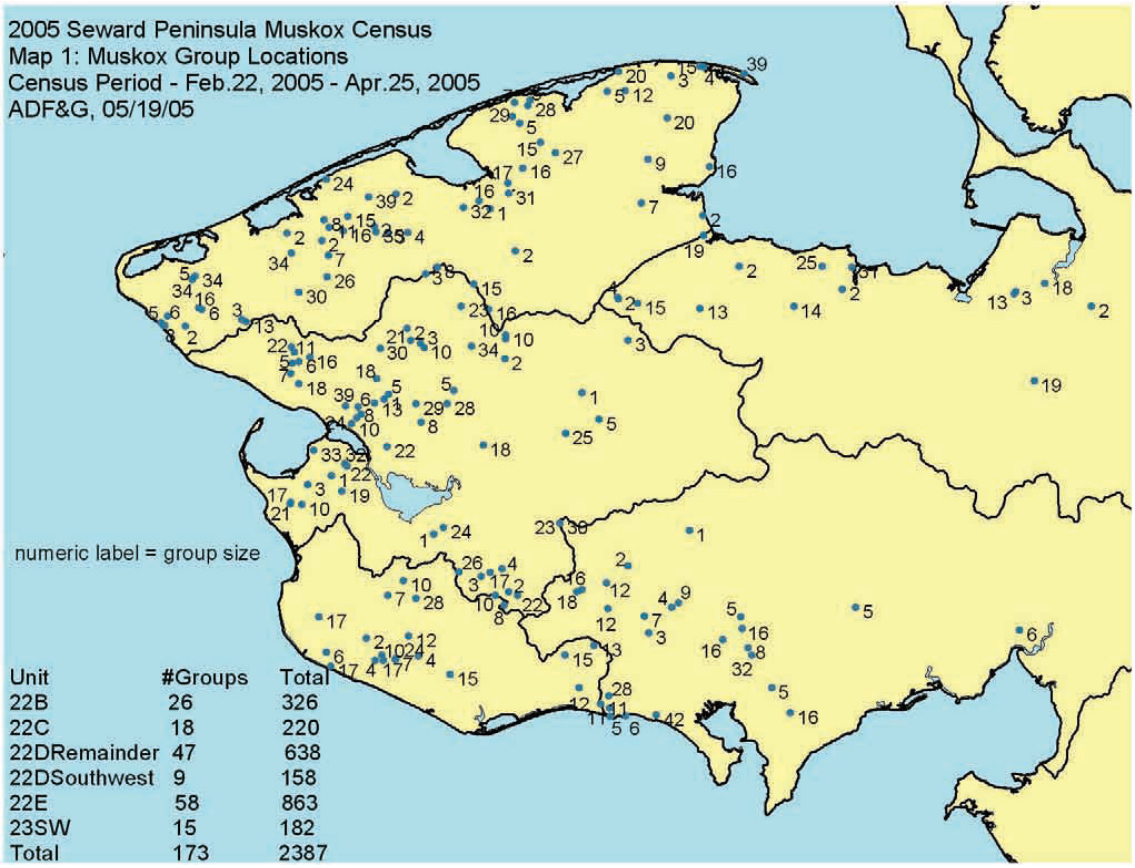

Figure 3. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G)

Table 1. Seward Peninsula muskox census results, Units 22 and 23 Southwest, 1992–2007 (ADFG 2008 and Gorn 2007).

Year	Unit					Total Muskoxen in Unit 22 and Unit 23SW	Total % increase from previous census	Total % change from previous census in Unit 22D only	% Average Annual Change in population in Unit 22D
	22B	22C	22D	22E	23SW				
1992	3	49	340	180	134	706	n/a	n/a	
1994	11	79	405	184	246	925	31.0%	+19.1%	+9.5%
1996	51	87	308	327	178	951	0.03%	-23.9%	-11.95%
1998	27	124	714	362	205	1432	50.5%	+131%	+65.5%
2000	159	148	774	461	255	1797	25.4%	+8.4%	+4.2%
2002	189	257	771	632	201	2050	14.1%	-0.3%	-0.15%
2005	326	220	796	863	182	2387	16.4%	+3.2%	+1.06%
2007	329	445	746	949	219	2688	12.6%	-6.2%	-3.1%

Table 2. Age and sex composition of Seward Peninsula **muskoxen** groups in Unit 22D (Gorn 2007).

Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 or 4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio [a]	Yearling: cow ratio [b]
2002	454	70 (15%)	17 (4%)	30 (7%)	157 (35%)	9 (2%)	49 (11%)	33 (7%)	88 (19%)	2 (0.4%)	33:100 [c]	41:100
2006	516	99 (19%)	32 (6%)	28 (5%)	193 (37%) (	0 (0%)	41 (8%)	26 (5%)	84 (16%)	13 (3%)	42:100	36:100

(%) is of total sampled population
[a] Number of males ≥ 4 years old/100 cows ≥ 3 years old
[b] Number of yearlings/100 cows ≥ 3 years old
[c] In 2002, 59% of the population was sampled and favored larger groups. Smaller groups were likely to be all bulls; therefore the number of bulls is probably underestimated. This bull:cow ratio should be seen as a minimum.

Table 3: Results of state and federal muskox hunts in Unit 22D Remainder on the Seward Peninsula 2006–2008 (ADF&G 2009b and FWS 2009).

Hunt #	Year	Total 22D Remainder Muskox Harvest Quota [a]	# of State Permits Issued (TX102[b] or RX102[c])	# of State hunters who hunted	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX 115[e])	# of Federal hunters who hunted	Federal Bull Harvest	Federal Cow Harvest
TX102 and RX115/118	2006	32	45	36	19	5	3	2	0	0
TX102 and RX115/118	2007	30	54	36	23	3	3	0	0	0
RX102 and RX115	2008	16	90	55	22	2	7	0	0	0

[a] Combined State and Federal quotas for Unit 22D remainder and Unit 22D Kuzitrin (Gorn 2005 and 2007)
[b] TX102 for 2006–2007 was Unit 22D remainder and Unit 22D Kuzitrin/Pilgrim drainages
[c] RX102 in 2008 was formerly TX102 for Unit 22D remainder and Unit 22D Kuzitrin/Pilgrim drainages
[d] TX102 and RX102 were changed from a Tier II hunt to a Tier I subsistence registration hunt (RX104) effective starting the 2008–2009 regulatory year
[e] RX115 is for the remainder of Unit 22D

When compared to other Alaskan residence communities, the successful residents harvesting muskoxen in Unit 22D remainder were predominately from Nome and Brevig Mission (**Table 4, Figure 4**). In 2008, the State changed the Tier II subsistence hunt (TX102) to a Tier I registration hunt (RX102) which resulted in Alaskan residents outside Unit 22 being successful for muskoxen harvest (**Table 4**).

Effects of the Proposal

If this proposal is adopted it would align Federal and State hunt areas in Unit 22D remainder. This would allow the Federal managers the same flexibility as the State mangers to keep areas open to Federal subsistence harvest when the joint State/Federal harvest quotas have not been met in specific areas. This proposal would also allow Federally qualified users an opportunity to hunt in Unit 22D (that portion within the Kuzitrin River drainage) consistent with the opportunity already afforded by the State with minimal impact on the muskoxen population because a harvest quota is in place.

OSM CONCLUSION

Support Proposal WP10-77 **with modification** to clarify the regulatory language because the Kuzitrin River drainage encompasses the Kougarok and Pilgrim river drainages.

The modified regulation should read:

> *Unit 22D, that portion within the **Kuzitrin** River drainages — 1 muskox by Federal permit or State Tier I subsistence registration permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Bering Land Bridge National Preserve, in consultation with ADF&G and BLM.*

Justification

Aligning the Federal and State hunt areas would give Federal managers additional flexibility to keep areas open to subsistence harvest when the joint State/Federal harvest quotas have not been met in specific areas. Currently the State and Federal regulations are out of alignment with the designation of hunt areas within Unit 22D. The Federal regulations list two hunt areas within Unit 22D while the State has three hunt areas which results in a discrepancy between available lands and in diminished harvest opportunities for Federally qualified subsistence users in Unit 22D if the quota for the unit is reached.

Allowing Federally qualified users an opportunity to hunt in Unit 22D (that portion within the Kuzitrin river drainage) would be consistent with the opportunity already afforded by the State with minimal impact on the muskoxen population because a quota is in place.

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ADF&G 2009b. Harvest ticket database. Microcomputer database, updated June 16, 2009.

Table 4: Alaskan residence community for Unit 22D State muskoxen hunt on the Seward Peninsula 2006–2008 (ADF&G 2009b and FWS 2009).

City	Total Muskox Harvest 2006	Total Muskox Harvest 2007	Total Muskox Harvest 2008
Anchorage	n/a	n/a	2
Brevig Mission	5	6	3
Elim	1	1	n/a
Homer	n/a	n/a	0
Kotzebue	0	n/a	n/a
Noatak	n/a	1	n/a
Nome	16	17	15
Shaktoolik	1	n/a	n/a
Teller	n/a	1	1
Unalakleet	1	n/a	0
Valdez	n/a	n/a	1
Wasilla	n/a	n/a	2

Federal permits were given to residents of Brevig Mission and Teller but harvest was not successful (2006–2008) as shown in Table 2.
n/a represents no hunter success or unsuccess.
0 represents that at least one hunter was unsuccessful.

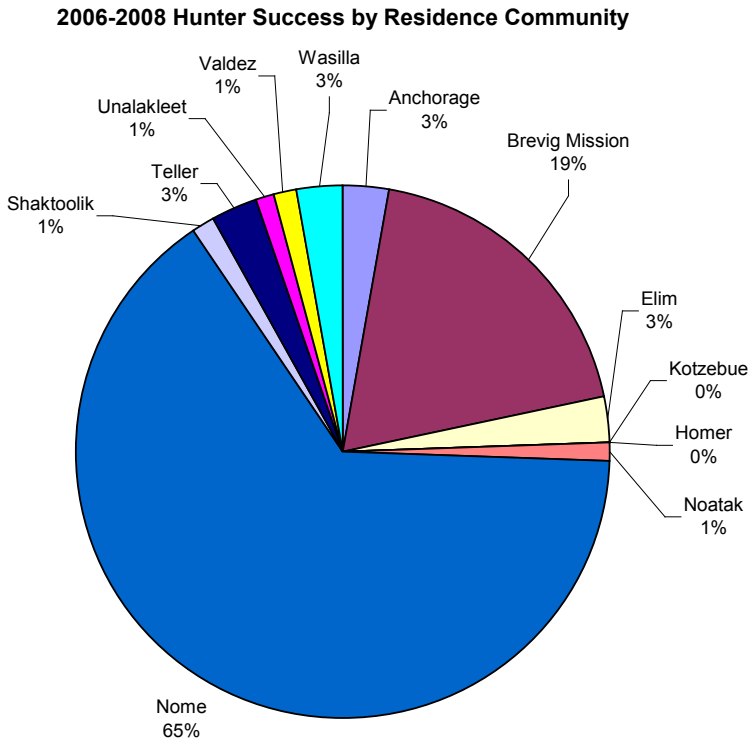

Figure 4. Average hunter success (2006–2008) by Alaskan residence community (ADF&Gb as shown in Table 4).

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-77 **with modification** as described in the OSM Conclusion. Adopting this proposal would align Federal and State hunt areas in Unit 22D remainder, which would allow flexibility in Federal management and would allow Federally qualified users an opportunity to hunt in Unit 22D consistent with the opportunity already provided by the State.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-77

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-77: This proposal divides Unit 22D Remainder federal subsistence muskox hunt areas into two parts (Kuzitrin and Remainder) to match the state hunt areas in this portion of Unit 22D.

Introduction: Muskox populations in Unit 22D have increased over the past 15 years and now sustain hunting harvest through federal subsistence and state hunts. This proposal recognizes the advantages of matching hunt areas in the respective federal and state regulatory systems.

Impact on Subsistence Users: Matching hunt areas in the state and federal subsistence hunting regulations will give increased flexibility for all hunters to respond to emergency closures when harvest quotas are reached.

Opportunity Provided by State: In Unit 22D, the following muskox hunting regulations were effective in 2009-2010:

> Unit 22D Kuzitrin River drainage:
> One muskox by registration permit RX099; residents only; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22D beginning July 24; tag required; no fee for required tag; trophy destruction of boss horn within 72 hours by Alaska Department of Fish and Game, trophy destruction required if other skulls (with horns) removed from Unit 22.
>
> RX099 Harvest Quota:
> Unit 22D Kuzitrin River drainage: Total combined quota is 11 muskox (including up to 4 cows).
>
> Unit 22D Remainder:
> One bull by registration permit RX104; residents only; season August 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22D during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> One cow by registration permit RX104; residents only; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22D during July 24 through March 15; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 22.
>
> RX104 Harvest Quota:
> Unit 22D Remainder: Total combined quota is 16 muskox (including up to 7 cows).

Drawing hunt DX102 has an August 1 through March 15 season for resident or nonresident hunters with drawing permit; bag limit is one bull 4 years old or older by permit; tag fee required.

Conservation Issues: None. Hunting is by permit with established harvest quotas.

Other Comments: The proposed description of the Kuzitrin drainage in Unit 22D is worded differently than in State regulation. State regulations do not identify the Kougarok or Pilgrim river drainages because both are tributaries and, thus, are a part of the Kuzitrin drainage. If adopted, federal and subsistence regulations would be parallel but worded differently.

Recommendation: Support with modification to reduce the description difference between state and federal regulations.

WP10-78 Executive Summary	
General Description	WP10-78 requests that the special provision to allow the harvest limit of one muskoxen and one bull moose for the Kingikmiut Dance Festival increase to three muskoxen in addition to one bull moose to occur within the regularly established season (1 muskox between August 1–March 15; cows allowed from January 1–March 15 and one bull moose between August 1–December 31) in Unit 22E. *Submitted by the Native Village of Wales*
Proposed Regulation	**Unit 22E—Special Provision—Moose, Muskox** *Unit 22E–The taking of one bull moose and ~~one~~* ***up to three*** *musk ox****en*** *by the community of Wales is allowed for the celebration of the Kingikmiut Dance Festival under the terms of a Federal registration permit. Permits will be issued to individuals only at the request of the Native Village of Wales. The harvest may only occur* ***within regularly established seasons in Unit 22E.*** *~~between January 1 and March 15 in Unit 22E for a bull moose and in Unit 22E for a muskox.~~ The harvest will count against any established quota for the area* ***Moose*** ***Aug. 1–Dec. 31*** ***Muskoxen*** ***Aug. 1–Mar. 15***
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be thorough and complete. There are sufficient muskoxen to allow the limit to be increased to "up to 3 muskoxen." By wording the regulation as "up to 3 muskoxen" the federal manager can adjust the harvest limit based upon current census and other information in future years. The delegation to the federal manager can occur via a letter of delegation from the Board.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-78

ISSUES

WP10-78, submitted by the Native Village of Wales, requests that the special provision to allow the harvest limit of one muskoxen and one bull moose for the Kingikmiut Dance Festival increase to three muskoxen in addition to one bull moose to occur within the regularly established season (1 muskox between August 1–March 15; cows allowed from January 1–March 15 and one bull moose between August 1–December 31) in Unit 22E.

DISCUSSION

The proponent requests that special provision of one muskoxen and one bull moose for the celebration of the Kingikmiut Dance Festival correspond with the established seasons and that the harvest limit of one muskoxen be expanded to three muskoxen in Unit 22E. The proponent states since the reestablishment of the festival several years ago, the date has settled into a late summer/early fall period, however the dates of the festival are flexible and can be scheduled to follow the successful hunt. The proponent states the change of harvest season would allow taking moose and muskoxen for fresh meat prior to the festival thus reducing the demands for storage. The additional muskoxen would help ensure the community and guests are supplied with subsistence resources for the festival in accordance with traditional and customary hospitality.

Existing Federal Regulations

Unit 22E—Special Provision—Moose, Muskox

Unit 22E–The taking of one bull moose and one musk ox by the community of Wales is allowed for the celebration of the Kingikmiut Dance Festival under the terms of a Federal registration permit. Permits will be issued to individuals only at the request of the Native Village of Wales. The harvest may only occur between January 1 and March 15 in Unit 22E for a bull moose and in Unit 22E for a muskox. The harvest will count against any established quota for the area	*Jan. 1–Mar. 15*

Unit 22E— Muskox

Unit 22E — 1 muskox by Federal permit or State permit; however, cows many only be taken during the period Jan. 1–Mar. 15	*Aug. 1–Mar. 15*
Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations.	*Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM*

Unit 22E—Moose

1 bull	*Aug. 1–Dec. 31*

Federal public lands are closed to the taking of moose except by Federally qualified subsistence users hunting under these regulations.

Proposed Federal Regulation

Unit 22E—Special Provision—Moose, Muskox

Unit 22E–The taking of one bull moose and ~~one~~ ***up to three*** *musk ox****en*** *by the community of Wales is allowed for the celebration of the Kingikmiut Dance Festival under the terms of a Federal registration permit. Permits will be issued to individuals only at the request of the Native Village of Wales. The harvest may only occur* ***within regularly established seasons in Unit 22E.*** *~~between January 1 and March 15 in Unit 22E for a bull moose and in Unit 22E for a muskox.~~ The harvest will count against any established quota for the area*	***Moose***	***Aug. 1–Dec. 31***
	Muskoxen	***Aug. 1–Mar. 15***

Existing State Regulation

Unit 22E — Muskox

One bull by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskoxen are taken (including up to 31 cows).	*Aug. 1–Mar. 15*
OR	
One muskox by registration permit for residents only. Season will be closed by emergency order when the quota of 62 muskoxen are taken (including up to 31 cows)	*Jan. 1–Mar. 15*
One bull 4 years old or older by drawing permit for both residents and non-residents	*Aug. 1–Mar. 15*

Unit 22E—Moose

1 bull for residents only	*Aug. 1–Dec. 31*
OR	
1 antlered bull for residents only	*Jan. 1–Jan. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit for non-residents. Season closed by emergency order when 10 bulls are taken.	*Sept. 1–Sept. 14*

Extent of Federal Public Lands

Approximately 52% of the lands in Unit 22E are Federal public lands. Bering Land Bridge National Preserve manages 49% of the lands and Bureau of Land Management manages approximately 3% of the lands **(Unit 22 Map).**

Customary and Traditional Use Determinations

Rural residents of Unit 22 have a positive customary and traditional use determination for moose in Unit 22. All rural residents of Unit 22E, excluding Little Diomede Island have a positive customary and traditional use determination for muskoxen in Unit 22E. The only village that is affected by this proposal would be the Village of Wales.

Regulatory History

In 2002, the Seward Peninsula Subsistence Regional Advisory Council submitted two proposals which were approved with modification by the Federal Subsistence Board (Board), WP02-36 which established the Special Provision for the harvest for Kingikmiut Dance Festival in Unit 22E and WP02-37 which revised the quota system for muskoxen to authorize the Superintendent of the Western Arctic National Parklands to announce an annual harvest quota and any needed closures in consultation with ADF&G and BLM for Units 22B, 22D, 22E, and 23SW.

WSA 03-02 was submitted by the Native Village of Wales and adopted by the Board to extend the opportunity to harvest one muskox from November 15–December 31 to November 15–March 15 for the Kingikmiut Dance Festival to provide additional opportunity for the village to harvest a muskox for the festival. The harvest counted against any established quota for the area.

In the summer of 2003, the Village of Wales submitted a Temporary Special Action request, WSA03-09, to change the harvest season for muskox for the Kingikmiut Dance Festival to Jan. 1–Mar. 15. This Temporary Special Action was approved by the Federal Subsistence Board in October 2003 and was subsequently proposed in WP04-69 to extend the dates for both moose and muskoxen, and adopted by the Board in the 2004–2005 regulations.

For the celebration of the Kingikmiut Dance Festival, the current special provision allows for one muskox to be harvested between January 1 and March 15. For the regular harvest season in Unit 22(E), 1 muskox may be harvested by Federal permit or State Tier II permit from August1–March 15; however cows may only be taken during the period January 1–March 15.

Biological Background

Muskoxen

In 2007, the Seward Peninsula muskoxen census found 2688 muskoxen in Unit 22 and Unit 23SW which is a 12.6% increase from the 2005 census count of 2,387 muskoxen and a 16.4% increase in population size since 2002 when 2050 muskoxen were counted (**Table 1**). Specifically for Unit 22E, the Seward Peninsula muskoxen census results for 1992–2007 have showed an increasing population trend since 1998 (**Table 1**). In 2005, the Seward Peninsula census data showed group locations per subunits within Unit 22E (**Figure 1**) where there were a total of 58 groups located for a total of 863 muskoxen.

The most recent available information for composition surveys for Unit 22E were completed in 2008 and classified 99% of the animals (198 of 199 muskoxen) by sex and age. In 2008, the population composition for Unit 22E comprised 19% (37 of 199) of mature bulls (≥4 years), 37% (73 of 199) of mature cows (≥3 years), and 10% (19 of 199) yearlings (**Table 2**). The proportion of yearling, 2-year old, and 3-year old animals surveyed in 2008 is similar to results in 2005 (**Table 2**). The 2008 composition survey categorized 35 calves (18%) of the sampled population which suggests good calf survival during this time (ADF&G 2009a). The percentage of cows that are ≥3 years old (37%) shows a moderately

Table 1. Seward Peninsula **muskoxen** census results, Units 22 and 23 Southwest, 1992-2007 (ADF&G 2008 and Gorn 2007)

Year	Unit					Total Muskoxen in Unit 22 and Unit 23SW	Total % increase from previous census	Total % change from previous census in Unit 22E only	% Average Annual rate of increase in Unit 22E
	22B	22C	22D	22E	23SW				
1992	3	49	340	180	134	706	n/a	n/a	
1994	11	79	405	184	246	925	31.0%	+2.2%	+1.1%
1996	51	87	308	327	178	951	0.03%	+78%	+39%
1998	27	124	714	362	205	1432	50.5%	+10.7%	+5.4%
2000	159	148	774	461	255	1797	25.4%	+27.3%	+13.7%
2002	189	257	771	632	201	2050	14.1%	+37.1%	+18.6%
2005	326	220	796	863	182	2387	16.4%	+36.5%	+12.2%
2007	329	445	746	949	219	2688	12.6%	+9.9%	+4.9%

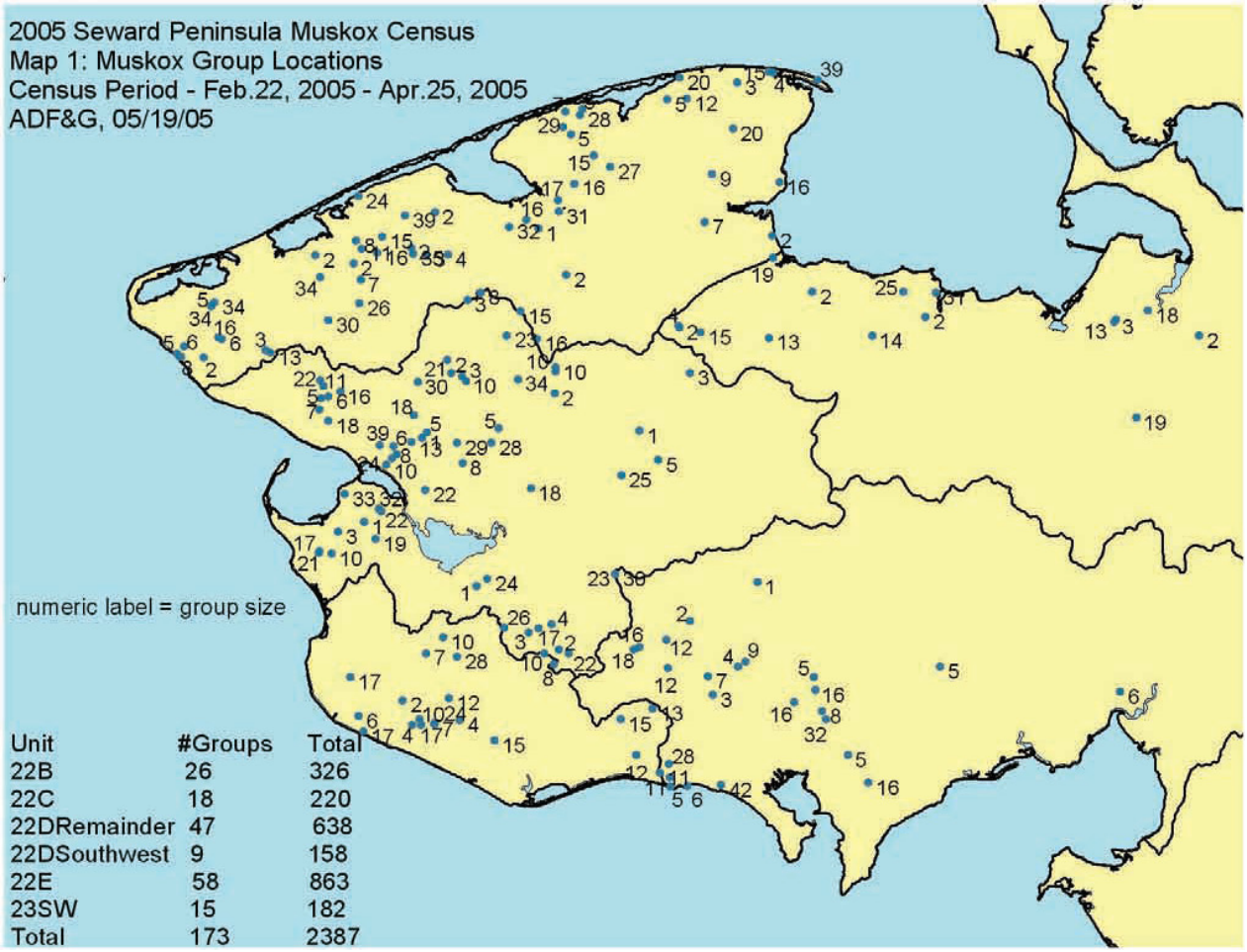

Figure 1. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G)

Table 2. Age and sex composition of Seward Peninsula **muskox** groups in Unit 22E (ADF&G 2009a and FWS 2009)

Unit	Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio	Yearling: cow ratio
22E	2002	313	57 (18%)	19 (6%)	32 (10%)	84 (27%)	29 (9%)	32 (10%)	57 (18%)	0	50:100*	50:100
22E	2005	501	83 (17%)	28 (6%)	43 (9%)	161 (32%)	69 (14%)	34 (7%)	77 (15%)	6 (1%)	36:100	33:100
22E	2008	199	37 (19%)	13 (7%)	9 (5%)	59 (30%)	14 (7%)	12 (6%)	19 (10%)	1 (1%)	51:100	26:100

(%) is of total sampled population

* In 2002, 50% of the population was sampled and favored larger groups. Smaller groups were likely to be all bulls, therefore the number of bulls is probably underestimated. This bull:cow ratio should be seen as a minimum.

high reproductive potential within the Unit 22E muskoxen population. Muskoxen in Arctic National Wildlife Refuge showed the age of first reproduction ranged between two to five years with 60% (9 of 15) successfully reproducing at three years of age. Older female muskoxen (≥ 10 years) reproduced successfully 76% (13 of 17) within this population (Reynolds 2001).

Moose

Historically, moose probably immigrated into the Seward Peninsula in the late 1930s and by the late 1960s became a resident species due to suitable habitat in Unit 22. Moose populations increased during the 1970s and peaked between 7,000 and 10,000 animals during the 1980s (Gorn 2008). Density independent factors were believed to have caused the population to decrease during the early 1990s with several severe winters during that time period (Nelson 1995). Populations within Unit 22 have never recovered to the peak levels of the 1980s with brown bear predation on moose calves being speculated as the main limiting factor (Gorn 2008). The current population of moose in Unit 22E remains well above the management goal of 200–250 animals (Gorn 2008).

From 1996 to 2001, aerial moose census conducted by ADF&G showed the population declined 2.8% annually in Unit 22E (**Table 3**). In March 2003, the aerial census estimated approximately 504 moose within 22E, which showed a drastic increase in the population by 99% annually since 2001 (**Table 3).** However**,** the 2003 census used a spatial census technique to stratify habitat areas likely to support moose and is not directly comparable to previous population estimates which were minimum direct counts during surveys of riparian habitat. In addition, it is probable that the observed increase is due to scarcity of snow cover during the winter which enabled moose to remain in their summer range in Unit 22E rather than migrate to winter drainages in Unit 22D as had been shown during past telemetry studies in the 1980s (Gorn 2008).

Management Direction

Muskoxen

Refer to WP10-74

Moose

State management goals for moose in Unit 22 are to complete censuses in the 5 subunits of Unit 22 on a 3-year rotational basis to estimate moose abundance. The latest census completed in 2006 estimated 587 moose in Unit 22E. The State has a goal of 200–250 moose for Unit 22E and therefore, intends to reduce the population to the upper threshold and attempt to maintain a bull:cow ratio of 30 bulls:100 cows (Gorn 2008). In addition, there is a State management objective to complete late fall and/or early spring aerial surveys to provide an index of moose population status and trends, sex and age composition, and yearling recruitment. However, a sex and age composition for Unit 22E has never been completed by ADF&G.

Harvest History

Muskoxen

In 2005, the Alaska (BOG) established a Tier I subsistence registration hunt, previously a Tier II hunt, in Unit 22E as proposed by the Seward Peninsula Muskox Cooperators Group. However, despite this allowing a harvest opportunity to Alaska residents outside of Unit 22, the harvest within Unit 22E was

Table 3. Seward Peninsula **moose** census results, Unit 22E, 1991-2006 (ADF&G 2008 and Gorn 2008).

Year	Unit 22E	Total % change from previous census in Unit 22E only	% Average Annual rate of increase in Unit 22E
1991	226	n/a	n/a
1996	196	-13.3%	-2.6%
2001	169	-13.8%	-2.7%
2003	504	+198%	+99%
2006	587	+16.5%	+5.5%

still below harvest quotas (**Table 4**) for all hunts. From 2004–2007, annual average hunter success rate for bull harvest was approximately 65% and 21% success rate for cow harvest (**Table 4**).

In Unit 22E, muskoxen inhabit Federal, State, and private lands with varying degrees throughout the subunit. Typically, hunters from the village of Shismaref have been successful under both the State and Federal permits because muskoxen inhabit Federal and private lands close to the village. In the village of Wales within Unit 22E, State permits are more readily filled due to the Federal public lands being further from the village.

In addition to the State and Federal registration hunts, the State administers a drawing hunt for Unit 22E (DX098) for bulls only which for the period of 2004–2008 has a hunter success rate of 80% with an average of 9 male muskoxen harvest (ADF&G 2009b).

Moose

Although moose have been present in Unit 22 for a relatively short time, they rapidly became an extremely important food source for many Seward Peninsula residents, with the demand by hunters high throughout the Unit (Persons 2000). Gravel roads and navigable rivers provide easy access to suitable moose habitat.

The State administers two general harvest seasons for moose in Unit 22E. Residents may harvest one bull August 1–December 31 OR one antlered bull January 1–January 31. In 2008, ADF&G added a registration hunt (RM853) for residents and non-residents for one bull moose from September 1–September 14. The season (RM853) is closed once 10 bulls have been harvested. The Federal subsistence harvest season is August 1 and December 31.

The annual harvest in Unit 22E has been relatively low and hunter effort typically occurs in the first general harvest season between August and December (**Table 5**). Average annual hunter success between 2004 and 2007 has been approximately 43% in Unit 22E. Access by road and river and the use of ATVs and other off-road vehicles allows harvest prior to snowfall.

Effects of the Proposal

This proposal would allow the Native Village of Wales, to take a bull moose and up to three muskoxen either early in the season to celebrate the festival in the fall, or during optimal winter traveling conditions

Table 4. Results of state and federal **muskoxen** hunts on the Seward Peninsula 2004-2007 (ADFG 2009b and FWS 2009)

Hunt #	Year	Muskox Harvest Quota [a]	Cow Muskox Harvest Quota [a]	# of State Permits Issued (TX104 or RX104[b])	# of State hunters who hunted	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX 114)	# of Federal hunters who hunted	Federal Bull Harvest	Federal Cow Harvest
TX104 and RX114	2004	51	25	31	18	14	2	15	2	2	0
TX104 and RX114	2005	69	35	47	32	18	9	16	6	3	2
RX104[b] and RX114	2006	69	35	26	12	10	0	11	5	1	4
RX104 and RX114	2007	69	35	57	36	24	6	7	0	0	0

[a] Combined State and Federal quotas (Gorn 2005 and 2007)
[b] TX104 was changed from a Tier II hunt to a Tier I subsistence registration hunt (RX104) effective for the 2006-2007 regulatory year

Table 5. Results of state and federal **moose** hunts on the Seward Peninsula 2004-2007 (ADFG 2009b and FWS 2009)

Year	General harvest Aug 1–Dec 31	General harvest Jan 1–Jan 31	# of State hunters reported [1]	Total State Bull Harvest	Federal subsistence harvest Aug. 1–Dec. 31	# of Federal hunters reported	Total Federal Bull Harvest
2004	9	0	14	9	0	1	0
2005	9	0	21	9	0	0	0
2006	6	1	23	7	1	1	1
2007	16	0	40	16	0	0	0

[1] Actual number of hunters who hunted

which would make it safer for the hunter. The timing of the hunt is not tied to a scheduled festival date which would allow the flexible opportunity for the festival to be scheduled.

OSM CONCLUSION

Support Proposal WP10-78

Justification

Both muskoxen and moose populations within Unit 22E can support the harvest limits for the celebration of the Kingikmiut Dance Festival to be changed to increase the number of muskoxen that may be taken and lengthen the harvest season by five months to correspond with the established seasons for muskoxen and moose in Unit 22E.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-78. Extending the moose and muskox harvest seasons and increasing the harvest limit for the Kingikmiut Dance Festigal would allow for enough meat for the festival.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP-10-78

The Interagency Staff Committee found the staff analysis to be thorough and complete. There are sufficient muskoxen to allow the limit to be increased to “up to 3 muskoxen.” By wording the regulation as “up to 3 muskoxen” the federal manager can adjust the harvest limit based upon current census and other information in future years. The delegation to the federal manager can occur via a letter of delegation from the Board.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-078: This proposal allows ceremonial festival harvest in the community of Wales of 1 moose and 3 muskox within harvest quota guidelines using individual federal subsistence registration permits for Unit 22E.

Introduction: Muskox populations in Unit 22E have increased over the past 15 years and now appear stable. Federal subsistence, State Tier I subsistence, and drawing hunts share harvest quotas and occur annually in the subunit. Moose populations have increased above management objectives since a period of low population during 2000-2005.

Impact on Subsistence Users: None. Ceremonial harvest is not a subsistence use protected under ANILCA Title VIII on federal public lands. Ceremonial harvest is allowed under state regulations on all lands.

Opportunity Provided by State: Under State of Alaska regulations 5AAC 92.034, the Commissioner of the Alaska Department of Fish and Game "may issue permits for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values." This is a simple permitting process that is usually accomplished by letter within a day of the request. These state permits are widely used for traditional, cultural activities, and are valid on all lands, including private lands near villages. Using the state permit system would be more convenient and avoid enforcement problems.

Conservation Issues: There are no moose or muskox conservation concerns because proposed ceremonial harvest would be under established harvest quotas.

Other Comments: In 2010-2011 regulatory year, the State season for cows in hunt RX104 will open on August 1, which lengthens the time female muskox are available for harvest.

All of the lands surrounding and in the vicinity of the community of Wales are non federal pubic lands where the federal permit would not be valid. Federal and state staff should notify the proponent of the availability of ceremonial or cultural permits from the State of Alaska. No State of Alaska ceremonial or cultural permit requests from Region V have been denied to date.

Recommendation: Oppose, for two reasons: (1) This use is already authorized under state regulations. The Alaska Department of Fish and Game has asked the federal subsistence program to not authorize ceremonial harvest where not traditional and where already authorized under permit by the state. (2) The Federal Subsistence Board does not have authority to issue cultural permits because these authorize take for purposes that are not subsistence activities protected by ANILCA. In addition, the state issues cultural permits (5 AAC 92.034) that are valid on all lands, including federal public lands that are closed to other than federally qualified subsistence users.

WP10-79 Executive Summary	
General Description	Proposal WP10-79 requests that the harvest limit of one bull moose be changed to one antlered bull, and that the harvest season be extended from August 1–December 31 to August 1–March 15. *Submitted by the Native Village of Wales*
Proposed Regulation	**Unit 22E—Moose** *1* ***antlered*** *bull* *Aug. 1–~~Dec. 31~~* **Mar. 15** *Federal public lands are closed to the taking of moose except by Federally qualified subsistence users hunting under these regulations.*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** changing current regulation to "one antlered" instead of "1 bull." **Neutral** but prefer that federal regulations avoid extending the season into spring.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-79

ISSUES

Proposal WP10-79, submitted by the Native Village of Wales, requests that the harvest limit of one bull moose be changed to one antlered bull, and that the harvest season be extended from August 1–December 31 to August 1–March 15.

DISCUSSION

The proponent requests the current harvest limit of one bull moose be changed to one antlered bull to help eliminate the inadvertent harvest of cow moose. In addition, the proponent requests the harvest season be increased by three months to include January through March to provide more harvest opportunity and flexibility for Federally qualified subsistence users. The State regulation allows for an additional month of harvest for antlered bulls until January 31, however, Federal lands are closed and therefore individuals are not able to harvest under State regulations on Federal lands. Therefore, Federally qualified subsistence users are unable to take advantage of an extra month of hunting opportunity.

Existing Federal Regulation

Unit 22E—Moose

1 bull	*Aug. 1–Dec. 31*
Federal public lands are closed to the taking of moose except by Federally qualified subsistence users hunting under these regulations.	

Proposed Federal Regulation

Unit 22E—Moose

1 ***antlered*** *bull*	*Aug. 1–~~Dec. 31~~* **Mar. 15**
Federal public lands are closed to the taking of moose except by Federally qualified subsistence users hunting under these regulations.	

Existing State Regulation

Unit 22E—Moose

1 bull for residents only	*Aug. 1–Dec. 31*
OR	
1 antlered bull for residents only	*Jan. 1–Jan. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit for ***non-residents****. Season closed by emergency order when 10 bulls are taken.*	*Sept. 1–Sept. 14*

Extent of Federal Public Lands

Approximately 52% of the lands in Unit 22E are Federal public lands. Bering Land Bridge National Preserve manages 49% of the lands and BLM manages approximately 3% of the lands **(Unit 22 Map).**

Customary and Traditional Use Determinations

Rural residents of Unit 22 have a positive customary and traditional use determination for moose in all of Unit 22.

Regulatory History

In 2002, the Seward Peninsula Subsistence Regional Advisory Council submitted a proposal that was adopted with modification by the Federal Subsistence Board (Board), and WP02-34 changed the moose harvest season from August. 1–March 31 to August 1–December 31 in Unit 22E and changed the harvest limit from one moose to one bull moose.

In the summer of 2003, the Village of Wales submitted a temporary special action request, WSA03-09, to change the harvest season for moose from November 15–December 31 to January 1–March 15. This Temporary Special Action was approved by the Federal Subsistence Board in October 2003 and was subsequently proposed in WP04-69 to extend the dates for both moose and muskoxen, and adopted by the Board in the 2004–2005 regulations.

In 2008, the Board approved WSA 08-19 by delegated authority to extend the moose harvest two months from August 1–December 31 to August 1–February 28 in Unit 22E.

Biological Background

Moose migrated into the Seward Peninsula in the late 1930s and by the late 1960s became a resident species due to suitable habitat in Unit 22. Moose populations increased during the 1970s and peaked between 7,000 and 10,000 animals during the 1980s (Gorn 2008). Density independent factors were believed to have caused the population to decrease during the early 1990s with several severe winters during that time period (Nelson 1995). Populations within Unit 22 have never recovered to the peak levels of the 1980s with brown bear predation on moose calves being speculated as the main limiting factor (Gorn 2008). Current population of moose in Unit 22E remains well above the management goal of 200–250 animals (Gorn 2008) with estimates in 2006 of 587 moose (**Table 1**).

An aerial moose census conducted by ADF&G in 2001 showed the local population declined 2.8% annually since 1996 (**Table 1**). In March 2003, the aerial census estimated approximately 504 moose within 22E, which showed a drastic increase in the population by 99% annually since 2001 (**Table** 1**).** However**,** the 2003 census used a spatial census technique to stratify habitat areas likely to support moose and is not directly comparable to previous population estimates which were minimum direct counts during surveys of riparian habitat. In addition, it is probable that the observed increase is due to scarcity of snow cover during the winter which enabled moose to remain in summer range in Unit 22E rather than migrate to winter drainages in Unit 22D as had been shown during past radiocollar studies in the 1980s (Gorn 2008). The most recent moose census in Unit 22E was completed in 2006 and estimated 587 moose within this area.

Table 1. Seward Peninsula **moose** census results, Unit 22E, 1991–2006 (ADF&G 2008 and Gorn 2008)

Year	Unit 22E	Total % change from previous census in Unit 22E only	% Average Annual rate of increase in Unit 22E
1991	226	n/a	n/a
1996	196	-13.3%	-2.6%
2001	169	-13.8%	-2.7%
2003	504	+198%	+99%
2006	587	+16.5%	+5.5%

Moose in Alaska typically begin to cast their antlers in late November with most mature males having cast their antlers by early January (Van Ballenberghe 1983). A few small-antlered males may retain their antlers for another 60 or 80 days (Van Ballenberghe 1983).

Management Direction

State management goals for moose in Unit 22 are to complete censuses in the 5 subunits of Unit 22 on a 3-year rotational basis to estimate moose abundance. The latest census completed in 2006 estimated 587 moose in Unit 22E. The State has a goal of 200–250 moose for Unit 22E and therefore, intends to reduce the population to the upper threshold and attempt to maintain a bull:cow ratio of 30 bulls:100 cows (Gorn 2008). In addition, there is a State management objective to complete late fall and/or early spring aerial surveys to provide an index of moose population status and trends, sex and age composition, and yearling recruitment. However, a sex and age composition for Unit 22E specifically has not been completed by ADF&G.

Harvest History

Although moose have been present in Unit 22 for a relatively short time, they rapidly became an extremely important food source for many Seward Peninsula residents (Persons 2000). Gravel roads and navigable rivers provide easy access to suitable moose habitat in the fall and early winter, and snow machines provide access during the winter season.

The State administers two general harvest seasons for moose in Unit 22E. One bull for residents may be harvested August 1–December 31 OR one antlered bull may be harvested January 1–January 31. In 2008, ADF&G added a registration hunt (RM853) for residents and non-residents for one bull moose from September 1–September 14. The season is closed once 10 bulls are harvested for the registration hunt. The Federal subsistence harvest season is aligned with the State general harvest season between August 1 and December 31, but the State general harvest continues until January 31 giving State users an additional month opportunity.

The annual harvest in Unit 22E has been relatively low (**Table 2)** and hunter effort typically occurs in the first general harvest season between August and December. Between 2004 and 2007, the combined average annual hunter success for State and Federal hunters has been approximately 42% in Unit 22E. Access by road and river and the use of ATVs and other off-road vehicles allows harvest prior to snowfall.

Table 2: Results of State and Federal **moose** hunts on the Seward Peninsula 2004-2007 (ADFG 2009 and FWS 2009)

Year	General harvest Aug 1–Dec 31	General harvest Jan 1 –Jan 31	# of State hunters reported [1]	Total State Bull Harvest	Federal subsistence harvest Aug. 1–Dec. 31	# of Federal hunters reported	Total Federal Bull Harvest
2004	9	0	14	9	0	1	0
2005	9	0	21	9	0	0	0
2006	6	1	23	7	1	1	1
2007	16	0	40	16	0	0	0

[1] Actual number of hunters who hunted

Effects of the Proposal

Most mature bull moose will have cast their antlers by the end of January and therefore, the extension of the harvest season through March may not provide a significant amount of additional opportunity to harvest a mature bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest. Current population of moose in Unit 22E remains well above the management goal of 200–250 animals with estimates in 2006 of 587 moose. Average hunter success between 2004 and 2007 has been approximately 42% in Unit 22E with less than 1% from Federal harvest. Therefore, no conservation concerns are raised by extending the season.

OSM CONCLUSION

Support Proposal WP10-79

Justification

Currently, the Federally qualified subsistence user may harvest moose from August 1 to December 31 which is one month less than individuals hunting under State regulations on State lands. Because Federal lands are closed to non-Federally qualified subsistence users, individuals may not harvest under State regulations on Federal lands. If the current harvest limit of one bull moose be changed to one antlered bull it would help eliminate the inadvertent harvest of cow moose. Increasing the harvest season by three months to include January through March would provide more harvest opportunity and flexibility for Federally qualified subsistence users. The population can support additional harvest and is above the management objective for Unit 22E. The most recent moose census in Unit 22E was completed in 2006 and estimated 587 moose within this area. In addition, the annual harvest in 22E has been relatively low and hunter effort typically occurs in the first general harvest season for the State between August and December. Most mature bull moose will have cast their antlers by the end of January and therefore, extending the harvest season through March may not provide a significant amount of additional opportunity to harvest a mature bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-79. It is important to educate people about this change in hunt season and it should help toward eliminating the inadvertent harvest of cows. This change should provide additional harvest opportunity.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-79

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-79
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-79: This proposal extends the federal subsistence moose season to August 1 through March 31 with a bag limit of one antlered bull in Game Management Unit 22E.

Introduction: This proposal requests liberalization of the federal subsistence moose hunting season in Unit 22E in response to recent growth of the moose population. Since the 2002/2003 hunting season, the federal subsistence moose hunt in Unit 22E was shortened by three months and was restricted to bull-only in response a decline in the moose population.

Impact on Subsistence Users: Extending the season from December 31 to March 31 will allow an additional 3 months of harvest opportunity for hunters. The take of antlered bulls after January 1 will be reduced due to antler-drop during the winter season. Very few to no antlered bulls are expected to be available in the March portion of the season, so it is difficult to distinguish cows.

Opportunity Provided by State: Populations are now above management objectives and support State hunting by residents with harvest tickets for bulls and nonresidents with State registration permit for antler restricted bulls. In Unit 22E, the following moose hunting regulations were effective in 2009-2010:

> One bull by harvest ticket; residents only; season August 1 through December 31;
> Or
> One antlered bull by harvest ticket; residents only; season January 1 through January 31;
>
> One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by registration permit RM853; nonresidents only; season September 1 through September 14; permits available online or in person at Nome Alaska Department of Fish and Game beginning August 1; harvest must be reported within 3 days of kill; season closed by emergency order when harvest quota is reached.

Conservation Issues: None, unless cows are inadvertently harvested during February and March. The moose population in Unit 22E has increased in recent years following a period of low population during 2000-2005. There are no moose conservation issues due to low hunting pressure, bag limit of antlered bull, and population above management objective. If this proposal is adopted, bull moose harvest will likely increase but will not exceed sustained yield. No other state or federal subsistence moose season in Unit 22 extends beyond January 31 due to the lack of available antlered bulls. The number of antlered bulls in February and March are very few to none, and the Department wants to avoid the take of cows for conservation reasons.

Enforcement Issues: Extending the federal subsistence moose season through the winter months for bulls only could result in the inadvertent take of cow moose misidentified as bulls that have shed their antlers.

Other Comments: A three-month expanded season is not needed to provide priority opportunity for subsistence.

Recommendation: Support changing current regulation to "one antlered" instead of "1 bull." Neutral but prefer that federal regulations avoid extending the season into spring.

WP10-80 Executive Summary	
General Description	WP10-80 requests that the winter moose season in Unit 22A remainder be shifted from January 1–31 to January 15–February 15. The shift in season timing would better allow the communities of Stebbins and St. Michael to meet their subsistence needs. *Submitted by the Stebbins Community Association*
Proposed Regulation	**Unit 22A—Moose** *Unit 22A remainder—1 bull. However, during the period ~~Jan 1~~* ***Jan. 15*** *~~–Jan.31~~.* ***Feb. 15****, only an antlered bull may be taken. Federal public lands are closed to the taking of moose except by residents of Unit 22A hunting under these regulations.* *Aug. 1–Sept. 30* *~~Jan. 1–Jan. 31~~* ***Jan. 15–Feb. 15***
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-80

ISSUES

WP10-80, submitted by the Stebbins Community Association, requests that the winter moose season in Unit 22A remainder be shifted from January 1–31 to January 15–February 15. The shift in season timing would better allow the communities of Stebbins and St. Michael to meet their subsistence needs.

DISCUSSION

The proponent requests the current winter season be shifted from January 1–January 31 to January 15–February 15 due to short daylight and inclement weather making it too difficult to take advantage of the harvest opportunity for moose in Unit 22A remainder. The length of the season would remain the same, but shifting the winter season would more meaningful better opportunity for subsistence hunters.

Existing Federal Regulation

Unit 22A—Moose

Unit 22A remainder—1 bull. However, during the period Jan. 1–Jan. 31, only an antlered bull may be taken. Federal public lands are closed to the taking of moose except by residents of Unit 22A hunting under these regulations.	*Aug. 1–Sept. 30* *Jan. 1–Jan. 31*

Proposed Federal Regulation

Unit 22A—Moose

*Unit 22A remainder—1 bull. However, during the period ~~Jan. 1~~ **Jan. 15**~~–Jan.31~~. **Feb. 15**, only an antlered bull may be taken. Federal public lands are closed to the taking of moose except by residents of Unit 22A hunting under these regulations.*	*Aug. 1–Sept. 30* *~~Jan. 1–Jan. 31~~* ***Jan. 15–Feb. 15***

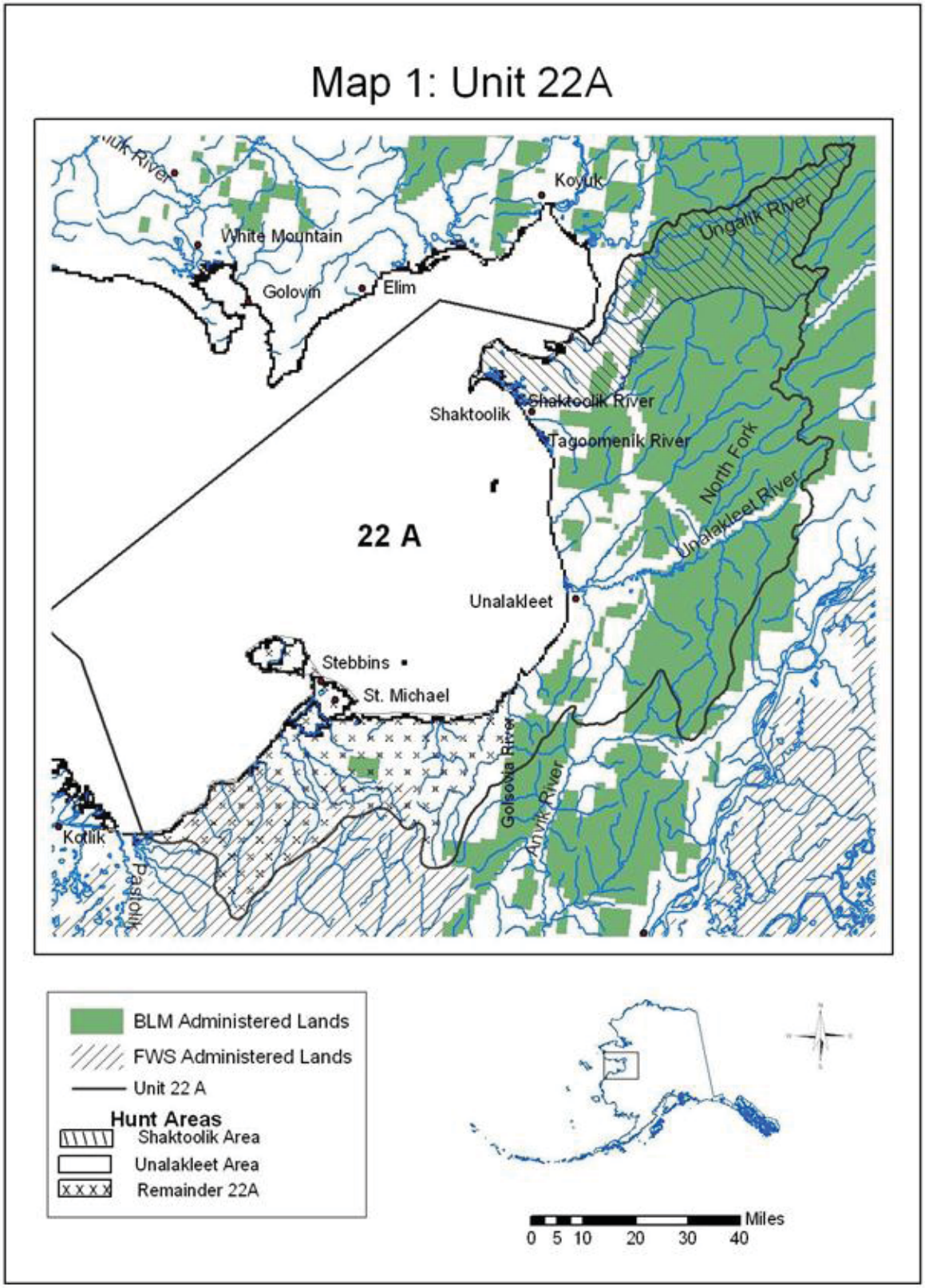
Existing State Regulation

Unit 22A—Moose

1 bull for residents only	*Aug. 1–Sept. 30*
OR	
1 antlered bull for residents only	*Jan. 1–Jan. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit for non-residents.	*Sept. 1–Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 60% of Unit 22A. The BLM manages 52 % and the Yukon Delta NWR manages 9% of the Federal public lands in Unit 22A. **(Unit 22A Map).**


Map 1: Unit 22A
Koyuk
White Mountain
Golovin
Elim
Ungalik River
Shaktoolik
Shaktoolik River
Tagoomenik River
North Fork
Unalakleet River
22 A
Unalakleet
Stebbins
St. Michael
Golsovia River
Anvik River
Kotlik
Pastolik
BLM Administered Lands
FWS Administered Lands
Unit 22 A
Hunt Areas
Shaktoolik Area
Unalakleet Area
Remainder 22A
Miles
0 5 10 20 30 40

Customary and Traditional Use Determinations

Rural residents of Unit 22 have a customary and traditional use determination for moose in Unit 22A remainder.

Regulatory History

In 2003, the Alaska Board of Game closed the Unalakleet River drainage area for the State nonresident season, shortened the fall resident season by 3 weeks to August 15–September 25 and closed the winter season. Also in 2003, the State issued Emergency Order 05-05-03 shortening the moose season to December 1–December 31 and the harvest limit from one bull to one antlered bull in a portion of Unit 22A in the Golsovia River drainage and south, and closing the winter season north of the Golsovia River drainage.

In 2003, WSA03-14 was adopted by the Federal Subsistence Board (Board) to change the harvest from one bull to one antlered bull and shorten the moose season by 31 days in Unit 22A—remainder (the Golsolvia River drainage and south) and also close the winter season in Unit 22A north of the Golsolvia River drainage.

In 2004, Proposal WP04-70 was adopted with modification by the Board to change 1 antlered moose to 1 bull during the fall season and to shorten the harvest season in Unit 22A, that portion in the Unalakleet River drainage and all drainages flowing into Norton Sound north of the Golsovia River drainage and south of the Tagoomenik and Shaktoolik River drainages by five days, to close September 25th.

In 2005, the Alaska Board of Game passed State Proposal 6, which shifted the resident winter moose season for the remainder of Unit 22A from December 1–December 31 to January 1–January 31 under State regulations. Also in 2005, ADF&G issued Emergency Order 05-08-05, which shifted the resident winter moose season for the remainder of Unit 22A from December 1–December 31 to January 1–January 31.

In 2006, WP06-38 was adopted by the Board to shift the winter moose season in Unit 22A remainder from December 1–December 31 to January 1–January 31. WP06-38 addressed the change of the season made by special action WSA05-12/13 and placed them into permanent regulation.

In 2008, two similar proposals were submitted addressing changes to moose regulations for Unit 22A. Proposal WP08-36, submitted by the Native Village of Unalakleet and adopted with modification by the Board, opened a Federal subsistence moose hunting season in the Unalakleet River drainage in central Unit 22A from August 15–September 14 with a one bull limit. Proposal WP08-37, submitted by the Seward Peninsula Regional Advisory Council and adopted with modification by the Board, had the same request as WP08-36, but added a provision whereby the local Bureau of Land Management (BLM) manager would issue up to 20 Federal permits annually in coordination with the Alaska Department of Fish and Game (ADF&G).

Biological Background

Historically, moose immigrated into the Seward Peninsula in the late 1930s and by the late 1960s became a resident species due to suitable habitat in Unit 22. Moose populations increased during the 1970s and peaked between 7,000 and 10,000 animals during the 1980s (Gorn 2008). Density independent factors were believed to have caused the population to decrease during the early 1990s with several severe winters during that time period (Nelson 1995). Populations within Unit 22 have never recovered to the

peak levels of the 1980s with brown bear predation on moose calves being speculated as the main limiting factor (Gorn 2008). Current population estimates of moose in Unit 22A remains below the management goal of 600–800 animals (Gorn 2008) with recent estimates in 2008 of 339 moose (at 90% C.I. 259–419 moose) (ADF&G 2008). However, the aerial moose census conducted in 2008 showed an increasing trend from a low in 2003 when 75 moose were counted (**Table 1**) (ADF&G 2008).

In addition, there is a State management objective to complete late fall and/or early spring aerial surveys to provide an index of moose population status and trends, sex and age composition, and yearling recruitment. In 2006, a spring survey was completed for the central portion of Unit 22A including the Unalakleet area and classified 137 adults with a recruitment rate of 16% and a ratio of 20 calves:100 adults. In 2007, the spring survey classified 82 adults and found 18:calves:100 adults and 15% recruitment rate. Snow cover was variable between surveys, with the 2006 spring survey having excellent visibility of moose and their tracks due to complete snow cover and the 2007 survey having poor visibility due to lack of snow.

Moose in Alaska typically begin to cast their antlers in late November with most mature males having cast their antlers by early January (Van Ballenberghe 1983). A few small-antlered males may retain their antlers for another 60 or 80 days (Van Ballenberghe 1983).

Harvest History

Although moose have been present in Unit 22 for a relatively short time, they rapidly became an extremely important food source for many Seward Peninsula residents (Persons 2000). Gravel roads and navigable rivers provide easy access to suitable moose habitat in the fall and early winter, and snow machines provide access during the winter season.

The ADF&G harvest ticket database for Unit 22A provides a summary of harvest by nonresident and non-local Alaskans, but local harvest may be underreported. From 2000 through 2008, an average of 13 moose per year were reported taken by residents in Unit 22A via ADF&G moose harvest tickets (ADF&G 2009) (**Table 2**). The southern portion of Unit 22A includes harvests by residents of St. Michael and Stebbins, but much of the moose harvest is not reported on harvest tickets from these areas. However, the most complete moose harvest data from villages is from the large mammal community-based harvest assessments conducted by Kawerak. Since 2000, 62% of the known harvest by residents of Stebbins and St. Michael has occurred in December or January. The preferred time to hunt is during the winter because moose habitat is difficult to access before freeze up.

Effects of the Proposal

Currently, the Federally qualified subsistence user may harvest moose from January 1 to January 31. If the proposal is adopted, the season would be shifted to January 15 to February 15 which allows the same amount of time to harvest a moose, but during a period of the year where more snow coverage is likely. This change is unlikely to have a significant impact on the moose population; therefore, there is no conservation concern at this time. If this proposal is adopted, it would allow the residents of Stebbins and St. Michael to harvest moose when the weather and daylight are more favorable giving more flexibility for Federally qualified subsistence users while having minimal impact on the population. However, most mature bull moose will have cast their antlers by the end of January and therefore, the extension of the harvest season through February 15 may not increase the opportunity for subsistence hunters to harvest an antlered bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest.

Table 1. Unit 22A moose recruitment surveys in the Unalakleet River drainage (Gorn 2007, Pearsons 2004).

Year	Size of Survey Area	Adults	Calves	Total Moose	Calves: 100 adults	Percent Calves	Estimated Density
1989	1124 mi^2	273	52	325	19	16	0.29 mi^2
2003	2000 mi^2	64	11	75	15	15	0.05 mi^2
2005	2400 mi^2	112	10	123	9	8	0.05 mi^2
2006	2400 mi^2	137	27	164	20	16	0.05 mi^2
2008	2400 mi^2	268	71	339	21	21	0.14 mi^2
Total	—	854	171	1026	84	66	—
Average	1981 mi^2	171	34	205	17	15	0.12 mi^2

Table 2, Unit 22A moose harvest reported by residents on moose harvest tickets, 2000-2006 (ADF&G 2009)

Residence	2000	2001	2002	2003	2004	2005	2006	2007	2008
Unalakleet	11	8	13	6	4		2	1	9
St. Michael	1	2	3	2	2	2	3	5	2
Shaktoolik		2		2				1	
Stebbins	1	1	4	3		5		4	1
Russian Mission									
Kotlik									
Kaltag		1				1			
Mountain Village					1				
Koyuk							1	2	
Alaknak							1		
Barrow			1						
Fairbanks			1	1				1	
Anchorage		1	1	1		2		1	
Eagle River					1				
Soldotna						1			
Nome									1
Totals	13	15	22	15	8	11	7	15	13

OSM CONCLUSION

Support Proposal WP10-80

Justification

If this proposal is adopted, it will address the interest of the residents of Stebbins and St. Michael to harvest moose in January and February when the weather and daylight are more favorable. However, most mature bull moose will have cast their antlers by the end of January and therefore, the extension of the harvest season through February 15 may not increase the opportunity for subsistence hunters to harvest an antlered bull. However, immature bulls may cast their antlers later in the spring and could provide an opportunity for harvest.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-80. The lack of daylight and inclement weather makes it difficult to take advantage of the winter moose season. The season shift to a later date would provide a better opportunity to subsistence users for harvesting moose.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-80

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-80
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-80: This proposal changes the federal subsistence winter moose season to January 15 through February 15 in Game Management Unit 22A Remainder (described as Unit 22A South in the proposal).

Introduction: This proposal requests a two week delay of the winter federal subsistence moose hunt in Unit 22A Remainder. The existing federal subsistence moose hunting winter season dates are January 1 through January 31. The proponent indicates delaying the season by two weeks will potentially increase hunt success.

Impact on Subsistence Users: Delaying the winter season opening by two weeks later in January will decrease available antlered bulls due to antler-drop during the winter season. Winter travel conditions may improve for hunters with slightly longer day-length.

Opportunity Provided by State: In Unit 22A Remainder, the following moose hunting regulations were effective in 2009-2010:

> One bull by harvest ticket; residents only; season Aug 1-Sept 30;
> Or
> One antlered bull by harvest ticket; residents only; season Jan 1-Jan 31;
>
> One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket; nonresidents only; season Sept 1- Sept 30.

Conservation Issues: Moose populations in Unit 22A Remainder are not censused on a rotational basis by Alaska Department of Fish and Game in Unit 22. However, low hunting effort and probable exchange of moose between local areas and the Yukon River drainage (located easterly of Unit 22A) have provided stable populations that allow State hunting of bulls by harvest ticket for residents and nonresidents. An antlered bull bag limit in the state and federal subsistence winter hunts avoids the take of cows to conserve the population when little is known about bull:cow ratios or total population size. Although data are scant, current harvests are considered to be within sustained yield of the population. Adoption of this proposal will not cause conservation concerns or impede the population objective due to the winter bag limit of antlered bull.

Enforcement Issues: No other moose season in Unit 22 goes beyond January 31 on federal and non-federal lands due to the lack of available antlered bulls. The number of antlered bulls in February is very few to none, and the Department wants to avoid the take of cows.

Recommendation: Oppose. The Regional Advisory Council should consider pursuing establishment of a community harvest hunt under federal subsistence regulations in cooperation with the State to establish harvest quotas per community. Developing a community harvest program will provide additional opportunity to take harvestable surplus from the growing moose population to meet needs of the communities, improve harvest reporting, and adjust harvest quotas to match biological fluctuations in the population.

WP10-81 Executive Summary	
General Description	Proposal WP10-81 seeks to lower the wolf harvest limit in Unit 22. *Submitted by the Alaska Wildlife Alliance*
Proposed Regulation	**Unit 22—Wolf Hunting** ~~*No limit*~~ ***10 Wolves*** *Nov. 1–April 15*
OSM Preliminary Conclusion	**Oppose**
Seward Peninsula Regional Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose** as submitted. **Support with modification** to change the federal subsistence bag limit from "unlimited" to 20 wolves and liberalizing the federal subsistence season to match the state season in order to more closely adopt customary and traditional subsistence use by hunting of wolves and reduce enforcement due to mixed land ownership.
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP10-81

ISSUES

Proposal WP10-81 was submitted by the Alaska Wildlife Alliance and seeks to lower the wolf harvest limit in Unit 22.

DISCUSSION

Proposal WP10-81 requests that the harvest limit for wolf hunting in Unit 22 be reduced to 10 wolves. The proponent notes that in Unit 22, wolves are vulnerable to tracking, pursuit and shooting by hunters using snowmachines.

Existing Federal Regulation

Unit 22— Wolf Hunting

No limit	*Nov. 1–April 15*

Proposed Federal Regulation

Unit 22—Wolf Hunting

~~*No limit*~~ ***10 Wolves***	*Nov. 1–April 15*

Existing State Regulation

Unit 22—Wolf Hunting

20 Wolves	*Aug. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 33% of Unit 22 and consist of 18% Bureau of Land Management (BLM), 11% National Park Service (NPS) and 2% U.S. Fish and Wildlife Service (FWS) lands (see Unit 22 Map).

Customary and Traditional Use Determinations

Rural residents of Units 21D (north and west of the Yukon River), 22, 23, and Kotlik have a positive customary and traditional use determination to harvest wolves in Unit 22.

Regulatory History

There has been no harvest limit for wolf hunters in Unit 22 since the beginning of the Federal Subsistence Management Program in 1990. Units 25A and 22 are the only units in Alaska that currently have no Federal harvest limit for wolves in the hunting regulations.

The Federal Subsistence Management Program wolf hunting season in Unit 22 extended from August 10–April 30 in 1990. Action taken on a proposal from the Seward Peninsula Subsistence Regional Advisory

Council (Proposal 47) changed the wolf hunting season to November 1–April 15 in regulatory year 1995/96. With a trapping license, during trapping season, a trapper may take free ranging wolves with a firearm on BLM and FWS lands of Unit 22. The Federal Subsistence Management Program wolf trapping season in Unit 22 is from November 1–April 15 with no harvest limit. Hunters may take wolves under State regulations on FWS, BLM, and Bering Land Bridge Nation Preserve lands in Unit 22.

Defenders of Wildlife submitted a proposal (Proposal 6) to the Alaska Board of Game requesting a November 1–March 31 season and 10 limit for wolf hunters in Unit 22. At its November 2009 meeting, the Alaska Board of Game rejected that proposal noting that the Unit 22 wolf harvest is current low and that there are no conservation concerns for wolves in Unit 22 (Ardizzone 2009, pers. comm.).

Biological Background

Wolves (*Canis lupus)* are found throughout Unit 22 and are well adapted to the mountains, tundra, and river valleys of the unit. Unit 22 contains extensive open habitat. Their main prey is caribou; wolves often move toward areas of high caribou concentrations. Other prey species may be used if caribou are not available; these include reindeer, small mammals, moose, hare, and beaver. Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Pups constituted about half of the wolf population each August in a central Brooks Range study area, and these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008). Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in northern Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. Radio collared wolves from other areas of Alaska have been found in Unit 22 (Persons 2006).

The size of the home range is believed to be dependant on prey abundance, the activities of neighboring packs, and each pack's individual habits. As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves (Adams et al. 2008). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

Since 1960, wolf numbers in Unit 22 have gradually increased and wolves expanded their range westward across the Seward Peninsula (Persons 2006). In 1980 the wolf population was estimated at fewer than 100 wolves (Grauvogel 1980). While there are no recent population estimates, it appears that wolf numbers in Unit 22 have increased based on data from sealing certificates and anecdotal information from observations by staff, reindeer herders, and other local residents (Persons 2006, ADF&G 2009a).

Seasonal movements of the Western Arctic Caribou Herd influences wolf distribution (Ballard et al. 1997, Persons 2006). In some years up to 17% of radio-collared wolf packs followed the migrating Western Arctic Caribou Herd and then returned to their original territory for denning (Ballard et al. 1997). Since 1996, a portion of the Western Arctic Caribou Herd has wintered on the Seward Peninsula, and wolves followed the caribou (Persons 2006). She observed that wolves were most abundant in the southern half of Norton Sound where caribou frequently wintered. The Unit 22 wolf population increased during winter months when caribou were present and wolves were becoming permanent residents of the unit (Persons

2006). Ballard et al. (1997) observed that when caribou densities were low, wolves switched to preying on resident moose.

Harvest History

The harvest of wolves, and the use, barter, and sale of pelts has long been important for subsistence uses in Unit 22.

State and Federal regulations currently require that wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. One of ADF&G's management objectives for Unit 22 is to maintain license vendors and fur sealers in all Unit 22 villages (Persons 2006).

From regulatory year 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 22 ranged from 18 to 66 wolves/year and most were shot (**Table 1**). While ADF&G (ADF&G 2009a) believes that wolf numbers in Unit 22 have increased during recent years, the reported Unit 22 wolf harvest has declined (Table 1). Persons (2006) observed the magnitude of the unreported wolf harvest in Unit 22 is substantial, and fur-sealing data provides a minimum estimate of the harvest. Often hunters and trappers only seal pelts that will be commercially tanned or sold to fur buyers. Many wolf hides are home tanned and used locally, so people see no reason to get them sealed (Persons 2006). Village-based harvest surveys completed in 5 villages in Unit 22 (Stebbins, Unalakleet, St. Michaels, Shaktoolik and Koyuk) in May 2002 and 2003, and June 2004 revealed that only about 1/3 of their wolf harvest was sealed (Persons 2006).

Table 1. Reported wolf harvest and method of take for Unit 22 (ADF&G 2009b and 2010b).

Regulatory	Reported Total	Method of take for total harvest from Unit 22				
Year	Harvest	Trap/snare	(%)	Shot	%	Unk
1999/2000	66	5	8	44	67	17
2000/01	65	4	6	56	86	5
2001/02	41	3	7	38	93	0
2002/03	45	5	11	32	71	8
2003/04	22	1	5	21	95	0
2004/05	39	4	10	34	87	1
2005/06	29	5	17	23	79	1
2006/07	19	3	16	13	68	3
2007/08	18	0	0	18	100	0
2008/09	24	4	17	17	71	3

Effects of the Proposal

If Proposal WP10-81 is adopted, the Federal wolf hunting harvest limit for Unit 22 would decrease to 10 wolves. This proposal would make the Federal subsistence wolf hunting harvest limit lower than State regulations. Currently, there is no limit on the number of wolves that can be taken by hunters under Federal regulations in Unit 22.

The Unit 22 wolf harvest is not a conservation concern; current harvests are considered to be within sustanined yield for the population (ADF&G 2010a). It appears that wolf numbers in Unit 22 have increased and it is thought that the population is regulated more by natural factors than by the harvest by hunters and trappers (ADF&G 2009a, Persons 2006).

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP10-81.

Justification

Wolves have long been an important subsistence resource in Unit 22. The wolf population in Units 22 appears to be increasing and is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

At its November 2009 meeting, the Alaska Board of Game rejected a proposal from the Defenders of Wildlife to shorten hunting season and reduce the harvest limit to 10 wolves in Unit 22.

Even if this proposal were adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on FWS, BLM, and Bering Land Bridge Nation Preserve lands in Unit 22. As such, adoption of this proposal would not have the effect sought by the proponent.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-81. There are a lot of wolves in Unit 22 and the wolf population appears to be increasing. Wolves are an important subsistence resource in Unit 22. There is no need to limit the harvest of wolves.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-81. There was a letter of opposition submitted as a comment. The wolf population in Unit 22 remainder is healthy and growing. The OSM Preliminary Conclusion indicates that wolves have been an important subsistence resource in Unit 22.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-81

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-81
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-81: This proposal changes the wolf hunting season unlimited bag limit to 10 wolves in Unit 22.

Introduction: Wolf populations in Unit 22 are not censused; however, harvest and observation information suggest that populations have increased in recent years. The state bag limit for hunting wolves was set at 20 wolves in 2007 by the Alaska Board of Game. Current season (August 1 through April 30) allows for maximum opportunity within areas that do not have predator management programs. Current harvests approximate 41 wolves per year based on sealing records from 1997-2008 and are considered within sustained yield for the population. Among hunters/trappers taking wolves, no individual has reached the total bag limit of 20 wolves per season. In November 2009, the Alaska Board of Game rejected a proposal to change the hunting season bag limit to 10 wolves (similar proposal to WP10-81).

Impact on Subsistence Users: Reducing the bag limit 10 wolves will reduce opportunity for the few federal subsidence users who successfully harvest more than 10 wolves by hunting in Unit 22. Reducing the bag limit to 20 wolves to match the state season would still provide the federal subsistence opportunity but reduce the risk of enforcement due to travel over mixed land ownership.

Opportunity Provided by State: In Unit 22 the following wolf hunting regulations were effective in 2009-2010:

> Twenty wolves; residents and nonresidents; season August 1 through April 30; tag required for nonresidents; hide must be sealed within 30 days of kill.

Conservation Issues: None.

Enforcement Issues: Different bag limits for wolves across federal land (approximately 1/3 of the unit) and non-federal lands (2/3 of the unit) will create enforcement problems due to differing land status in Unit 22. Since the customary harvest by individuals is under 20 wolves, which is the state bag limit, a reduction of the bag limit to match the state bag limit would reduce the risk of enforcement actions if individuals are not on federal lands, while continuing to provide the federal opportunity for customary and traditional subsistence by rural residents on federal lands.

Recommendation: Oppose as submitted. Support with modification to change the federal subsistence bag limit from "unlimited" to 20 wolves and liberalizing the federal subsistence season to match the state season in order to more closely adopt customary and traditional subsistence use by hunting of wolves and reduce enforcement due to mixed land ownership.

WRITTEN PUBLIC COMMENTS

Oppose. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

WP10-82 Executive Summary	
General Description	Proposal WP10-82 requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 30–September 30. *Submitted by Virgil Adams*
Proposed Regulation	*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August ~~25~~**30**–September ~~15~~ **30**. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.*
OSM Conclusion	**Take no action**
Northwest Arctic Regional Council Recommendation	**No action taken** on proposal WP10-82.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Take no action** on Proposals WP10-82 if Proposal WP10-85 is adopted as modified.
Written Public Comments	**None**

WP10-83 Executive Summary	
General Description	Proposal WP08-83 requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 25–October 30. *Submitted by the Maniilaq Association*
Proposed Regulation	*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August 25–~~September 15~~ **October 30**. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.*

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WP10-83 Executive Summary *(continued)*	
OSM Conclusion	**Take no action**
Northwest Arctic Regional Council Recommendation	**No action taken** on WP10-83.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Take no action** on Proposals WP10-83 if Proposal WP10-85 is adopted as modified.
Written Public Comments	**None**

WP10-85 Executive Summary	
General Description	Proposal WP08-85 requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 15–September 30. *Submitted by the Native Village of Noatak*
	~~*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August 25–September 15. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service*~~.
Proposed Regulation	***The Noatak Controlled Use Area is closed for the period August 15 – September 30 to the use of aircraft in any manner either for hunting of an ungulate (with or having hooves), bear, wolf, or wolverine, or for transportation of hunters or harvested species. This does not apply to the transportation of hunters or parts of ungulate, bear, wolf, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service. The Noatak Controlled Use Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River and extending upstream to the mouth of Sapun Creek inclusive of the Noatak River and its tributaries.***
OSM Conclusion	**Support** Proposal WP10-85 **with modification** to use the current Federal regulatory language and adjust the dates as requested.

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WP10-85 Executive Summary *(continued)*	
Northwest Arctic Regional Council Recommendation	**Support** WP10-85 **with modification** as described in the OSM Conclusion
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-82/83/85

ISSUES

This analysis includes three proposals, all of which request a change in the time period during which aircraft are restricted in the Noatak Controlled Use Area. Because they are similar, they have been combined for the purposes of analysis.

- Proposal WP10-82, submitted by Virgil Adams, requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 30–September 30.

- Proposal WP08-83, submitted by the Maniilaq Association, requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 25–October 30.

- Proposal WP08-85, submitted by the Native Village of Noatak, requests changing the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 15–September 30.

DISCUSSION

The proponent for Proposal WP10-82 states that because caribou are migrating later in the season compared with previous years, the restriction on flying aircraft over the Noatak Controlled Use Area should be changed accordingly. The proponent also states that this will improve the opportunity for increased caribou harvests by subsistence users.

The proponent for WP08-83 states:

> Much has changed since the village of Noatak first requested the prohibition on the use of aircraft on the Noatak drainage in 1984. With climate change, the western arctic caribou are migrating later and later, and freeze up of the river and streams do not occur until mid-October.

The proponent also claims that restricting the use of aircraft over the Noatak Controlled Use Area through the end of October will allow caribou to migrate on their normal routes, which will improve subsistence hunting opportunities.

The proponent for WP08-85 claims that climate change has had an effect on migration timing and routes of the Western Arctic Caribou Herd and the closure period of the Noatak Controlled Use Area should change accordingly.

The fall caribou season in Unit 23 has seen user conflicts between local hunters, non-local hunters, and commercial operators for three decades. To address these issues, the Unit 23 Working Advisory Group was formed in 2008 to work towards developing common-ground solutions. Since 2000, caribou fall migration has shifted both spatially and temporally within Unit 23, generally occurring two to six weeks later in the fall when compared to the prior two decades (Dau 2007). As a result, caribou appear sporadically outside the boundaries and time-period defined by the provisions of the Noatak Controlled Use Area (Noatak CUA).

Existing Federal Regulation

Unit 23 — Special Provisions

(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August 25–September 15. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.

Proposed Federal Regulations

WP10-82

*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August ~~25~~**30**–September ~~15~~ **30**. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.*

WP10-83

*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August 25–~~September 15~~ **October 30**. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.*

WP10-85

~~*(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August 25–September 15. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service*~~.

The Noatak Controlled Use Area is closed for the period August 15 – September 30 to the use of aircraft in any manner either for hunting of an ungulate (with or having hooves), bear, wolf, or wolverine, or for transportation of hunters or harvested species. This does not apply to the transportation of hunters or parts of ungulate, bear, wolf, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service. The Noatak

Controlled Use Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River and extending upstream to the mouth of Sapun Creek inclusive of the Noatak River and its tributaries.

Existing State Regulations

(A) (ii) Noatak Controlled Use Area: a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. The area is closed from August 15 – September 30 to the use of aircraft in any manner for big game hunting, including transportation of big game hunters, their hunting gear, and/or parts of big game; however, this does not apply to the transportation of big game hunters or parts of big game to and between publicly owned airports.

Extent of Federal Public Lands

Federal public lands comprise approximately 56% of Unit 23 and consist of 40% National Park Service, 7% US Fish and Wildlife Service, and 9% Bureau of Land Management lands. (See **Unit 23 Map**).

Regulatory History

In 1988, the Alaska Board of Game implemented the Noatak CUA (**Unit 23 Map**), which restricted the use of aircraft in any manner for big game hunting from August 20 through September 20. However, the Alaska Board of Game amended the proposal to limit the original CUA to that section of river between the mouths of Sapun Creek and the Kugururok River. In 1990, the Federal Subsistence Board adopted the Noatak CUA when the Federal government assumed responsibility for management of subsistence harvests on Federal public lands in Alaska.

The Alaska Board of Game modified the CUA boundaries beginning with the 1994–95 regulatory year, to a five-mile corridor on either side of the Noatak River beginning at the mouth of the Noatak River and extending upstream to the mouth of Sapun Creek with the objective of separating boat and airplane hunters during the fall season. The CUA restrictions were in effect from August 25 to September 15. The Federal Subsistence Board adopted Proposal 50 at its April 1995 meeting, which incorporated the changes made by the Alaska Board of Game into the Federal subsistence regulations effective the 1995/96 regulatory year.

Biological Background

Because these three proposals cite the Western Arctic Caribou Herd (WACH) as the reason for changing the Noatak CUA closure dates, biological information pertaining to the WACH is included herein. The WACH passes repeatedly through the Noatak valley on its seasonal north-south migration. In mid-August to mid-September, the fall migration begins as the WACH moves southwest toward Kotzebue and Norton Sound, through mountain passes and across the Noatak River to winter range in the upper Kobuk drainage, Nulato Hills or areas on the Seward Peninsula. Although caribou cross the Noatak every fall, the route and timing of their migration varies from year to year and from decade to decade (Dau 2005).

In 2003, 99% of the WACH (486,000 of 490,000 animals) was on summer range with an estimated density of 11.2 caribou/mi^2 (Dau 2005). However in 2007, the census estimate had decreased to 377,000 caribou. The fall population composition of the WACH from 1961–2004 averaged 44 calves:100 cows and 48 bulls:100 cows (Dau 2005). In 2009, the bull:cow ratio was 45:100, and the calf:cow ratio was 48:100 (ADF&G 2009).

WACH migration has shifted both temporally and spatially throughout Unit 23 and as a result, caribou movements have occurred outside the current three-week period as defined by the Noatak CUA (Dau 2007) with migration occurring in early to mid-September rather than in August (Dau 2007).

Management Direction

The management goals for the WACH are: (1) protect and maintain the WACH and its habitat; (2) provide for subsistence and recreational hunting on a sustained yield basis; (3) provide for viewing and other uses of caribou; and (4) perpetuate associated wildlife populations, including carnivores. The management objectives center on habitat protection; cooperation among State and Federal agencies, as well as local governing bodies; simple, consistent and understandable regulations; minimizing conflict between user groups; and the understanding, appreciation and integration of both scientific information and traditional knowledge in the management of the herd.

Harvest History

There is a long history of hunting caribou by the people in the Noatak valley (Georgette and Loon 1988), especially in the fall when bulls are harvested prior to the rut. During most of the twentieth century, caribou were reliably found in the upper Noatak—in contrast to other areas—where they were accessible by traditional hunting methods; i.e., primarily by snow machines from late October–early May (Dau 2005). Few local hunters use aircraft to hunt caribou, while nonlocal hunters rely almost entirely on aircraft to access caribou hunting areas in Unit 23. Once in the field, nonlocal hunters use boats to float the river, or ATV's supplied by hunting guides, who store them at remote camps.

Subsistence harvests comprises on average 95% of the total harvest in Unit 23 with approximately 14,000–15,000 caribou harvested annually (ADF&G 2009); although the total nonlocal harvest has increased incrementally each year since 1999.

Current Events Involving Species

At its November 2009 meeting, the Alaska Board of Game adopted Proposal 22 which revised the time period in the special provision that restricts aircraft use over the Noatak Controlled Use Area from August 25–September 15 to August 15–September 30. Proposal 22 was developed through consensus by the Unit 23 User Conflict Working group which includes representatives of Unit 23 Advisory Committees and Regional Advisory Councils, guides, transporters, Federal and State agencies, tribal government, native corporations, and the Northwest Arctic Borough. The Working Group helps to address concerns regarding competition between users in the area.

Effects of the Proposal

If any of these proposals are adopted, Federally qualified subsistence users within Unit 23 would have less competition from commercial operators, their clients, and general hunters along the Noatak River. However, if proposals WP10-82 or WP10-83 were adopted the aircraft restrictions under Federal regulations would be out of alignment with the recent changes made by the Board of Game, making enforcement difficult due to the varied land status in the area. If proposal WP10-85 was adopted it would align Federal and State regulations for the Noatak CUA and would support the aircraft restriction dates reached by consensus by the Unit 23 User Conflict Working Group.

OSM CONCLUSION

Support Proposal WP10-85 **with modification** to use the current Federal regulatory language and adjust the dates as requested.

The modified regulation should read:

> *(A) You may not use aircraft in any manner either for hunting of ungulates, bear, wolves, or wolverine, or for transportation of hunters or harvested species in the Noatak Controlled Use Area for the period August ~~25~~ **15**–September ~~15~~ **30**. The Area consists of that portion of Unit 23 in a corridor extending five miles on either side of the Noatak River beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek. This closure does not apply to the transportation of hunters or parts of ungulates, bear, wolves, or wolverine by regularly scheduled flights to communities by carriers that normally provide scheduled air service.*

Take no action on Proposals WP10-82 and WP10-83. Proposal WP10-85 addresses similar dates as those found in these proposals and aligns with recent actions taken by the State based on a proposal submitted to the Alaska Board of Game from the Unit 23 User Conflict Working Group.

Justification

WACH migration has shifted both temporally and spatially throughout Unit 23 and as a result, caribou movements have occurred outside the current three-week period of aircraft closure in the Noatak CUA. For example, in 2007 caribou occurred in pulses and lulls throughout the fall, and in 2008, migrating caribou appeared in mid-August and continued through most of September. Because of this shift of season, lengthening the effective period of the Noatak CUA would accomplish the original objective of separating boat and airplane hunters during the fall season. This would help to alleviate the concern that aircraft use disturbs the WACH into moving away from areas subsistence users' access via boat.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

NORTHWEST ARCTIC REGIONAL ADVISORY COUNCIL

No action taken on Proposal WP10-82.

No action taken on Proposal WP10-83.

Support Proposal WP10-85 **with modification** as described in the OSM Conclusion.

INTERAGENCY STAFF COMMITTEE COMMENTS WP10-82/83/85

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Comments WP10-82, WP10-83, and WP10-85
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-082, WP10-83, and WP10-85: These proposals change the closure dates for aircraft restrictions in the Noatak Controlled Use Area (CUA). These proposals are similar to a deferred proposal (WP08-50) to change closure dates. WP10-82 requests a change from August 25 through September 15 to August 30 through September 30. WP10-83 requests a change from August 25 through September 15 to August 25 through October 30. WP10-85 requests a change from August 25 through September 15 to August 15 through September 30.

Introduction: The Noatak (CUA) was created to minimize conflicts between boat-based local hunters and aircraft-supported visiting hunters along portions of the Noatak River in Unit 23. The variable nature of caribou migrations in recent years caused the CUA aircraft restrictions to not coincide with the availability of caribou. Over the past two years, the Unit 23 Working Group developed a consensus recommendation for CUA aircraft restrictions and pilot education requirements for hunting in Unit 23. Proposals were presented at the Alaska Board of Game November 2009 meeting. The Board supported CUA aircraft restrictions as presented in Proposal 22 with effective dates of August 15 through September 30; however, the state-approved dates differ from those requested in WP10-82 and WP10-83. The Board approved a mandatory pilot education requirement for pilots transporting game in Unit 23 (Proposal 19).

Opportunity Provided by State: In November 2009, the Alaska Board of Game approved the following regulations related to aircraft-supported hunting in Unit 23; they become permanent in 2010-2011, as follows:

5 AAC 92.003. Hunter education and orientation requirements.

() In Unit 23, a pilot may not transport parts of big game with an aircraft without having, in actual possession, a certificate of successful completion of a department-approved education course regarding big game hunting and meat transportation in this Unit; however, this provision does not apply to the transportation of parts of big game between state maintained airports;

5 AAC 92.540 Controlled Use Areas. In the following areas, access for hunting is controlled as specified:

(9) Unit 23

(A) the Noatak Controlled Use Area:

(i) the area consists of that portion of Unit 23 in a corridor extending five miles on either side of, and including, the Noatak River, including the river, beginning at the mouth of the Noatak River, and extending upstream to the mouth of Sapun Creek;

(ii) the area is closed from August **<u>15</u>** through September **<u>30</u>** to the use of aircraft in any manner for big game hunting, including the transportation of big game

> hunters, their hunting gear, or parts of big game; however, this provision does not apply to the transportation of big game hunters, their hunting gear, or parts of big game to and between **publicly owned** airports;

Conservation Issues: The Western Arctic caribou herd is large, and hunting effort and harvest rates are not conservation concerns. Other game species are adequately conserved through management of seasons and bag limits.

Other: The proposed access restrictions only apply to federally-qualified subsistence users hunting under federal subsistence regulations on federal public lands. Access restrictions adopted by the Board of Game apply to those hunting under state regulations on all lands.

Recommendations: Support WP10-85; use CUA restrictions during August 15 through September 30 to match the Unit 23 Working Group recommendation and recent action by Alaska Board of Game. (If adopt WP10-85 as modified, take no action on WP10-82 and WP10-83.)

WP10-84 Executive Summary	
General Description	Proposal WP10-84 requests that the regulation allowing for the harvest of one muskox by Federal permit or State Tier II permit be revised as follows: change the Tier II permit to State Tier I subsistence registration permit, change the sex of the animal that can be harvested during the Aug. 1–Dec. 31 season to bulls only, and allow the harvest of any muskox during the Jan. 1–Mar. 31 season. S*ubmitted by the Northwest Arctic Regional Advisory Council*
Proposed Regulation	**Unit 23—Muskox** *Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage — 1 muskox by Federal permit or State Tier ~~II~~ **I Subsistence Registration** permit; however, ~~cows~~ **bulls only** may ~~only~~ be taken during the period ~~Jan. 1–Mar. 15~~ **Aug. 1–Dec. 31**.* — *Aug. 1–Dec. 31* ***OR*** ***1 muskox by Federal permit or State Tier I Subsistence Registration permit.*** — *Jan. 1–Mar. 15* *Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures for Unit 23 will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.*
OSM Conclusion	**Support** Proposal WP10-84 **with modification** to clarify the regulatory language for the Aug. 1–Dec. 31 season. The modified regulation should read: *Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage — ~~1 muskox~~ **1 bull** by Federal permit or State Tier ~~II~~ **I Registration** permit;* — *Aug. 1–Dec. 31* ***OR*** ***1 muskox by Federal permit or State Tier I Registration permit.*** — *Jan. 1–Mar. 15* *Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures for Unit 23 will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.*

continued on next page

WP10-84 Executive Summary *(continued)*	
Northwest Arctic Regional Council Recommendation	**Support** WP10-84 **with modification** as described in the OSM analysis Preliminary Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-84 **with modification** so harvest during the August 1 through December 31 portion of the hunt is limited to 1 bull instead of 1 muskox.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-84

ISSUES

Proposal WP10-84, submitted by the Northwest Arctic Regional Advisory Council, requests that the regulation allowing for the harvest of one muskox by Federal permit or State Tier II permit be revised as follows: change the Tier II permit to State Tier I subsistence registration permit, change the sex of the animal that can be harvested during the Aug. 1–Dec. 31 season to bulls only, and allow the harvest of any muskox during the Jan. 1–Mar. 31 season.

DISCUSSION

In January 2008, the Alaska Board of Game adopted new regulations that changed the State managed hunt in Unit 23—Seward Peninsula west of and including the Buckland River drainage, from a Tier II hunt to a Tier I subsistence hunt. The proponent would like to align the Federal and State regulations to improve management coordination since State and Federal hunts share a single total harvest quota, while still allowing for continued opportunity for Federally qualified subsistence users by allocating harvest among two seasons through registration permits.

Existing Federal Regulation

Unit 23—Muskox

Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage — 1 muskox by Federal permit or State Tier II permit; however, cows may only be taken during the period Jan. 1–Mar. 15.	*Aug. 1–Mar. 15*
Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures for Unit 23 will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	

Proposed Federal Regulations

Unit 23—Muskox

*Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage — 1 muskox by Federal permit or State Tier ~~II~~ **I Subsistence Registration** permit; however, ~~cows~~ **bulls only** may ~~only~~ be taken during the period ~~Jan. 1–Mar. 15~~ **Aug. 1–Dec. 31**.*	*Aug. 1–Dec. 31*
OR	
1 muskox by Federal permit or State Tier I Subsistence Registration permit.	*Jan. 1–Mar. 15*

Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures for Unit 23 will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.

Existing State Regulations

Unit 23 — Muskox

Unit 23 — Seward Peninsula west of and including the Buckland River drainage.

***Residents**: One **bull** by **registration** permit (RX106). Season will be closed by emergency order when the quota of 16 muskoxen are taken (including up to 8 cows).*	*Aug. 1–Mar. 15*
OR	
***Residents**: One **muskox** by **registration** permit (RX106). Season will be closed by emergency order when the quota of 16 muskoxen are taken (including up to 8 cows).*	*Jan. 1–Mar. 15*
***Both residents and non-residents**: One bull 4 years old or older by **drawing** permit (DX106).*	*Aug. 1–Mar. 15*

Unit 23 — that portion north and west of Noatak River

***Residents**: One bull by **Tier II** permit (TX107).*	*Aug. 1–Mar. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 56% of Unit 23 and consist of 40% National Park Service, 7% US Fish and Wildlife Service, and 9% Bureau of Land Management lands. (See **Unit 23 Map**).

Customary and Traditional Use Determinations

The rural residents of Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage have a positive customary and traditional use determination for muskoxen in this area of Unit 23SW. The rural residents of Unit 23 east and north of the Buckland River drainages have a positive customary and traditional use determination for muskoxen in Unit 23 remainder.

Regulatory History

The Seward Peninsula Cooperative Muskox Management Plan (1994) established the management goals for muskoxen in this region.

In 1995 the Federal Subsistence recognized the positive customary and traditional use of musk ox by rural residents in Unit 22 and Unit 23 west of and including the Buckland River drainage and also established the first Federal muskoxen hunt on the Seward Peninsula. The Board established a season of Sept. 1–Jan.

31 for Units 22D, 22E, and 23 west of and including the Buckland River drainage, and limited the harvest to bulls with a quota of 7 muskoxen (FWS 1995).

In 1999, the Board supported proposal 46, which extended the Special Action (SA 97-14) that combined the State/Federal harvest system. The combined Federal and State harvest was approved into permanent regulations by both the Alaska Board of Game (1998) and the Federal Subsistence Board (1999). The consensus was to manage on a subunit basis within Unit 22 and Unit 23SW to allow for continued growth of the muskoxen population in this region and to increase harvest opportunities. The combination of the long traveling distances needed to reach Federal public lands and the poor travel/snow conditions during that time had resulted in reduced hunter success for the Federal hunt, so the six affected villages supported the combination of the State and Federal harvest systems to create expanded harvest opportunities. Sharing the harvest quota between Federal and State systems provided more opportunity than was provided by the Federal or State system separately. The dual Federal/State harvest management system also dispersed hunting pressure over an entire area regardless of land ownership to create a more biologically sound management approach (FWS 2001).

In 2001, the Board adopted Proposal WP01-35, which established a cow harvest between Jan. 1–Mar. 15 in Unit 23SW. This proposal was supported by the Seward Peninsula Cooperative Muskoxen Management Working Group (SPMCG), as it provided additional flexibility and opportunity for subsistence users, with minimal impact to the rate of growth of the muskox population. This proposal was supported by the Northwest Arctic and Seward Peninsula Subsistence Regional Advisory Councils (FWS 2001). Historically, there had been consistently low hunter success in all subunits, and adding the ability to harvest either sex during January–March was designed to improve hunter success.

In 2002, the Board adopted proposal WP02-37, which delegated the authority to the park Superintendent, in consultation with ADF&G and BLM, to set harvest quotas for Unit 22 and Unit 23SW.

In 2006, the Board adopted proposal WP06-55, which established the use of a designated hunter permit for muskoxen in Unit 23 (SW), south of Kotzebue Sound and west of and including the Buckland River drainage, by Federally qualified subsistence users.

Biological Background

Historical accounts of muskoxen in Alaska show they were extirpated by the late 1800s and may have disappeared from the Seward Peninsula hundreds of years earlier (Gorn 2007). Towards this end, thirty-four muskoxen were originally released in Fairbanks from Greenland in 1930. In 1935 and 1936, the entire herd in Fairbanks was transported to Nunivak Island where they continue to thrive. In 1970, thirty-six muskoxen were translocated from Nunivak Island to the southern portion of the Seward Peninsula in Units 22C and 22D. In 1981, thirty-five additional muskoxen from Nunivak Island were translocated to join the existing population on Seward Peninsula. By 2007, the Seward Peninsula population had grown to an estimated 2688 animals in Unit 22 and Unit 23SW (Gorn 2007). The entire current range of muskoxen in Alaska comprises many of the locations where Nunivak Island muskoxen were originally transplanted (**Figure 1**). Specifically for Unit 23SW, muskoxen census results for 1992–2007 showed a decreasing population trend from 2000 to 2005, however an upward trend was shown in 2007 (**Table 1**).

Muskoxen have dispersed and extended their range east throughout Seward Peninsula (**Figure 2 and 3**) and now occupy suitable habitat in Units 22C, 22D, 22E, 22B-West, and 23-SW. Individuals and small groups are found in Units 22B-East, 22A-North, Unit 23 along the Tagagawik River and in the Purcell Mountain, Unit 21 along the Yukon River near Ruby, and in Unit 24 near Huslia (Joly 2007). A census was completed on portion of the Selawik Wildlife Refuge (Unit 23) in 2005 to determine any further

Table 1. Seward Peninsula muskox census results, Units 22 and 23 Southwest, 1992–2007 (ADFG 2008 and Gorn 2007)

Year	Unit					Total % Change From Previous Census in Unit 23SW Only	% Average Annual Change in Population in Unit 23SW
	22B	22C	22D	22E	23SW		
1992	3	49	340	180	134	n/a	
1994	11	79	405	184	246	+83.5%	+40%
1996	51	87	308	327	178	-27.6%	-13.8%
1998	27	124	714	362	205	+15.2%	+7.6%
2000	159	148	774	461	255	+24.4%	+12.2%
2002	189	257	771	632	201	-21.2%	-10.6%
2005	326	220	796	863	182	-9%	-3%
2007	329	445	746	949	219	+20.3%	+10.2%

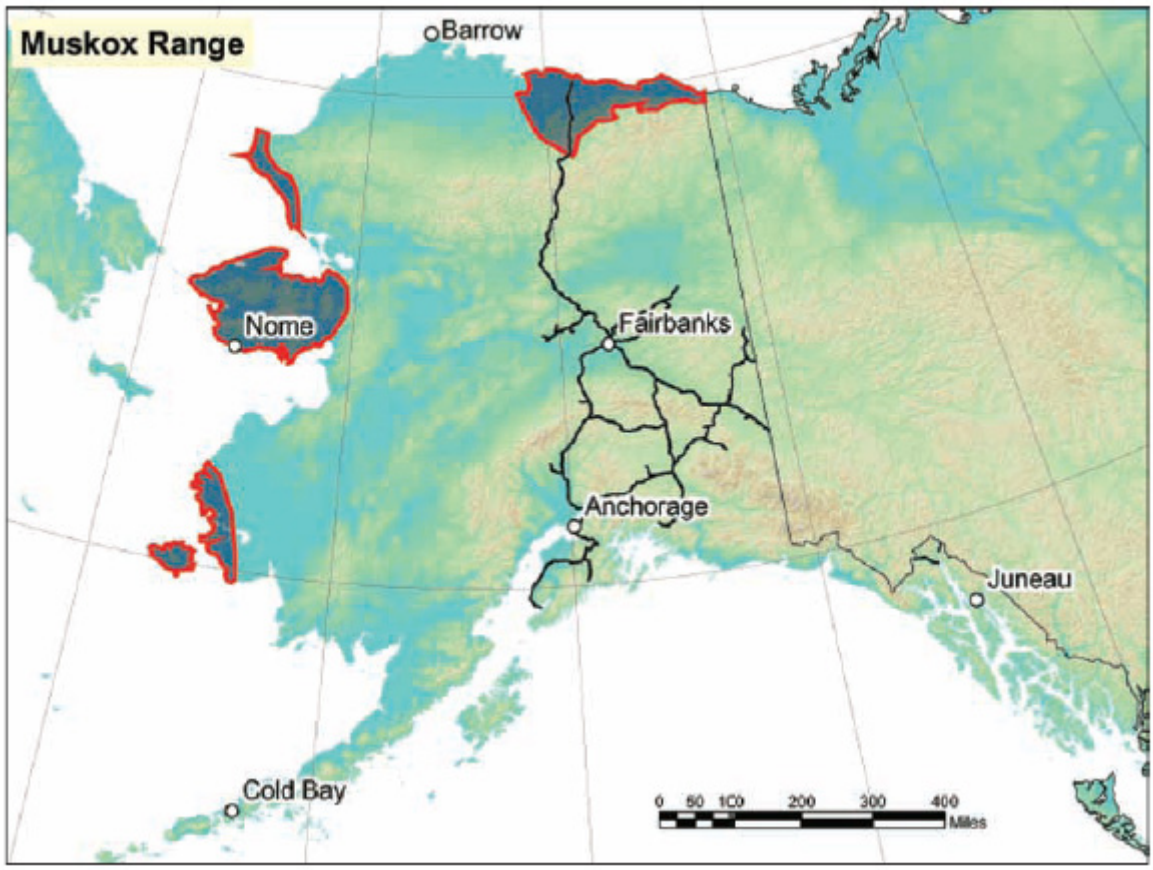

Figure 1. Current range of muskoxen in Alaska (ADF&G).

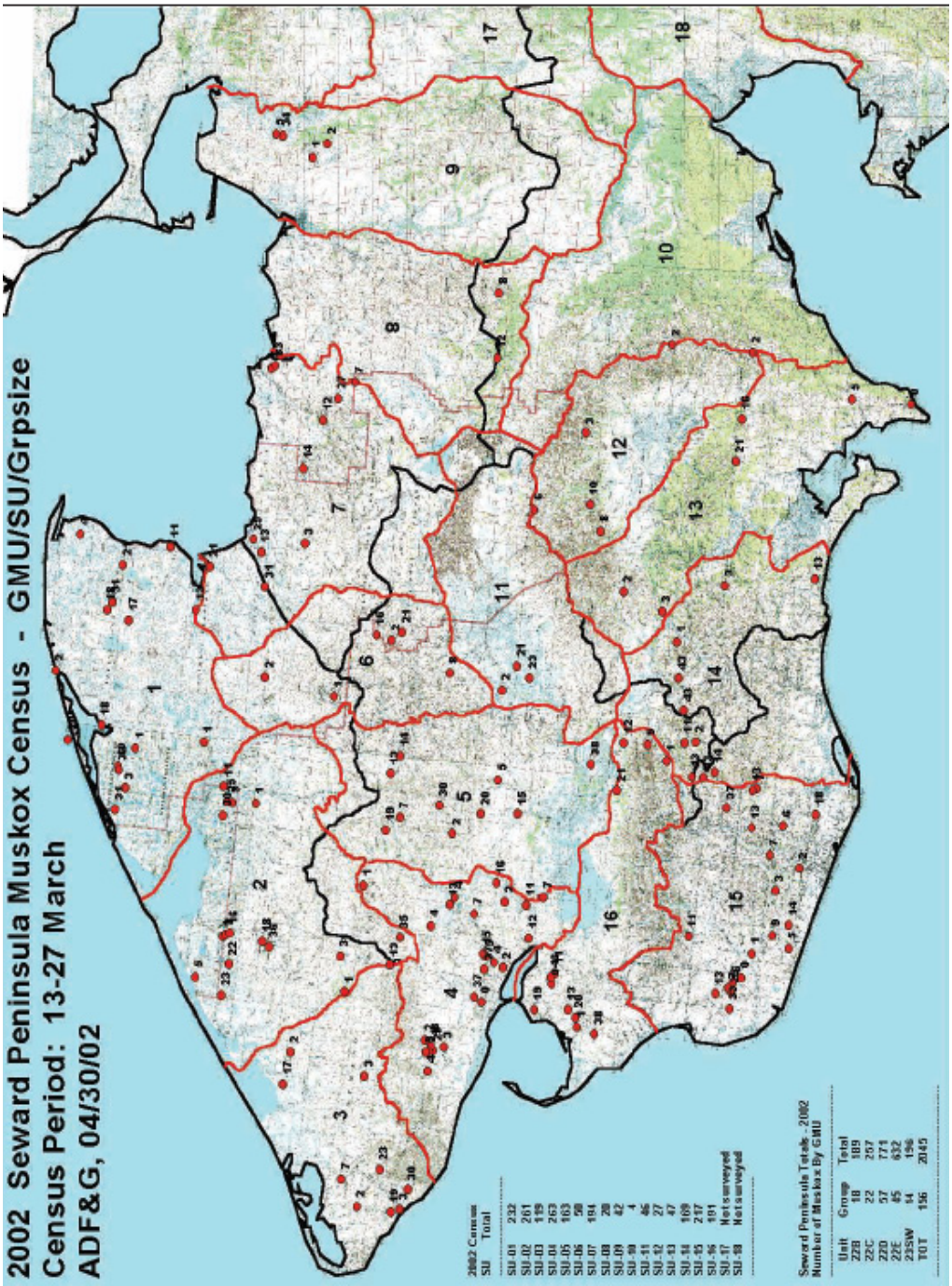

Figure 2. Seward Peninsula muskox census results, 2002 (Joly 2007, courtesy of ADF&G). Black lines are GMU (game management unit) boundaries; red lines are SU (survey unit) boundaries.

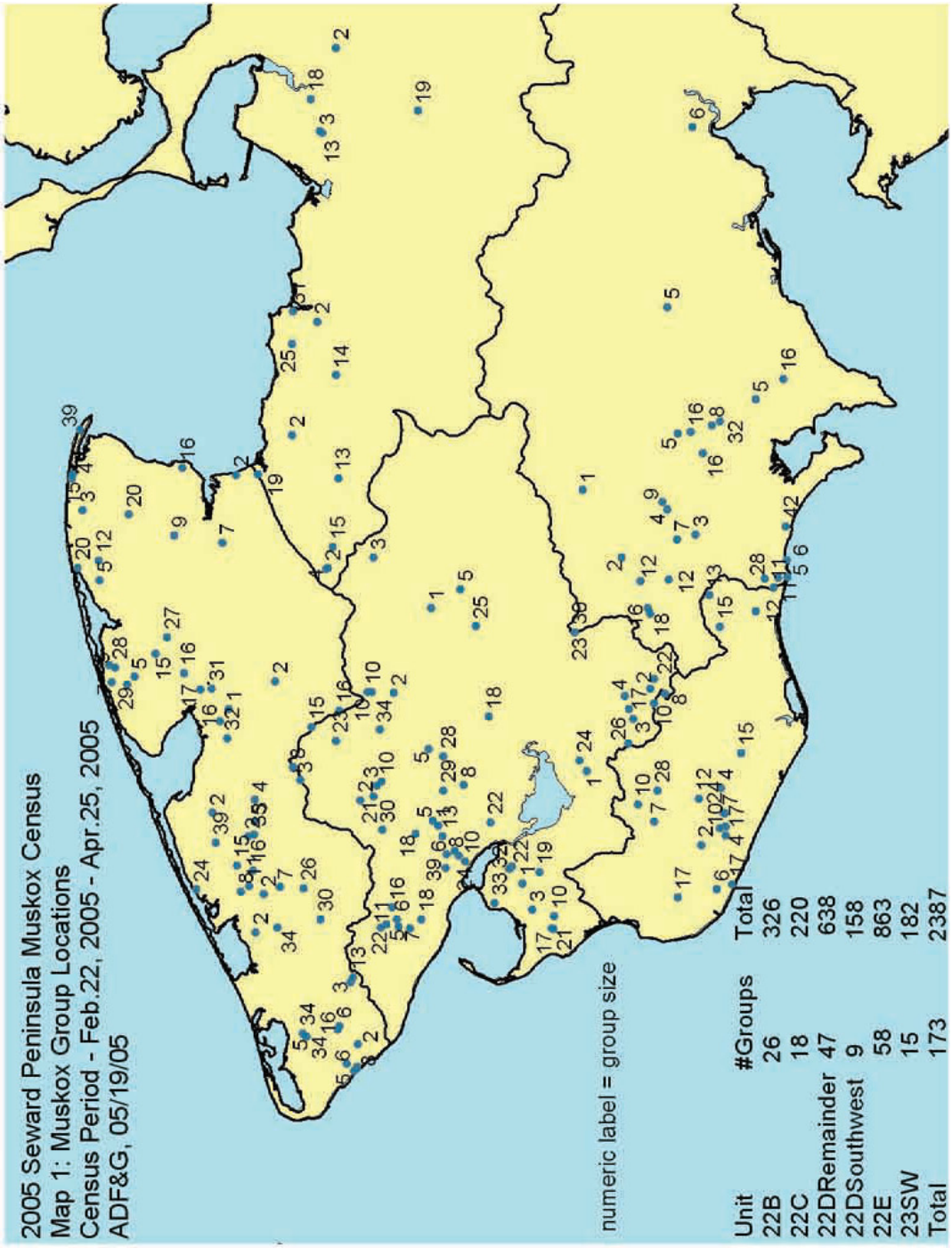

Figure 3. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G).

range expansion east of the Seward Peninsula but no muskoxen were observed in the area during that census (Gorn 2007). However personal observations of State staff and public have reported that the muskoxen population in Seward Peninsula is continuing to expand eastward and muskoxen have been observed in eastern 22B (Gorn 2007).

Muskoxen are more limited by snow than caribou due to their greater foot loading, low chest height, and smaller hooves, which make it more difficult to travel through deep or wind-hardened snow (Klein 1992). As a result, muskox tend towards coastal areas due to the higher winds which reduce the snow depth during winter (Dau 2005). Muskoxen tend to be more sedentary during periods of heavy snow cover; however, adult bulls generally tend to be less conservative than the general population and will enter previously unused winter habitats due to distant movements during the fall in search of harems (Smith 1989). Bulls may tend to be undercounted in composition surveys due to their proclivity for being solitary and therefore, are more difficult to spot during census. Despite the difficulty in counting lone bulls, bull:cow ratio is important to track to determine if bull:cow ratio is beginning to decline. Female muskoxen can potentially reproduce at 2 years of age (Jingfors and Klein 1982, Reynolds 2001) and have continued reproductive potential until 15–18 years of age (Reynolds 2001). In Alaska, muskoxen typically calve during May (Jingfors 1982) but may be born through mid-June (Reynolds 2001) and are weaned between December and February, or even later in non-pregnant or poorly fed cows (Adamczewski 1995, White et al. 1997).

It is likely that bulls and small mixed-sex groups are emigrating out of Unit 23SW further east on the peninsula in the Tagagawik, Selawik and Kobuk River drainages, and the Nulato Hills (Gorn 2007). In 2002, composition surveys were conducted for the Seward Peninsula which classified 88% of the animals (170 of 196 muskoxen) by sex and age. Yearling:cow (31 yearlings:100 cows) ratios are generally lower than other subunits on the Seward Peninsula (**Table 2**). In 2002, yearlings comprised 13% of the population which was the lowest of all the subunits for that census year. In Unit 23SW bulls of all age classes comprised 33% of the population censused in 2002. Unit 23SW has shown a decrease in muskoxen in two consecutive censuses in 2002 and 2005, but exhibited an increase in the 2007 census (ADFG 2008 and Gorn 2007).

Management Direction

The SPMCG provides recommendations regarding muskox management on the Seward Peninsula. The SPMCG is comprised of staff from Alaska Department of Fish and Game (ADF&G), National Park Service (NPS), Fish and Wildlife Service (FWS), Bureau of Land Management (BLM), Bering Straits Native Corporation (BSNC), Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association (NANA), residents of Seward Peninsula communities, and representatives from other interested groups or organizations.

State management goals for muskoxen in Unit 23SW are to allow for continued growth and range expansion while providing for subsistence hunting and eventually provide for recreational hunting of muskox on a sustained yield basis, as well as provide for nonconsumptive uses of muskoxen such as viewing and photography.

Current State management objectives for muskoxen in Unit 23SW require a complete census at 3-year intervals for population and distribution changes, as well as monitor changes in age and sex structure of the population. The census data is used to determine harvest amount in each subunit and how to divide the permits between the state and federal agencies to reach combined quotas.

Table 2. Age and sex composition of Seward Peninsula muskox groups in Unit 23SW (Gorn 2007, ADF&G 2009a).

Unit	Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio	Yearling: cow ratio
23SW	2002	170	33 (19%)	8 (5%)	15 (9%)	52 (31%)	20 (12%)	20 (12%)	22 (13%)	0	56:100	31:100
23SW	2008	141	19 (13%)	8 (6%)	7 (6%)	52 (37%)	8 (6%)	8 (6%)	16 (11%)	0	50:100	24:100
23SW	2009	117	12 (10%)	7 (6%)	5 (4%)	42 (36%)	12 (10%)	5 (4%)	15 (13%)	0	41:100	25:100

(%) is of total sampled population

Harvest History

The allowable harvest rates are recommended by the SPMCG and adopted by the State and Federal boards. Prior to 2005, the allowable harvest rate in Unit 23SW was 5% including up to a 2% cow harvest. In November 2005, the Alaska Board of Game adopted the SPMCG proposal to change the harvest rate in Unit 23SW to 8%. Reported harvests for Unit 23SW have been consistently lower than the harvest quotas. In response, more permits than the harvest quota are issued depending on previous success rates in the hunt area. In 2004–2005, residents of Buckland and Deering received 20 Tier II permits of which 10 individuals actually harvested a muskox for a hunter success rate of 90%. For the Federal subsistence hunt, three hunters out of seven permits issued, harvested a muskox for a hunter success rate of 67% (**Table 3**). The number of permits issued was increased in 2006–2007 with 39 Tier II (TX106) permits and 9 Federal (RX116) permits. With the increase in permits, eighteen hunters utilized the Tier II permits for a hunter success rate of 72% and three hunters used the Federal permits for a hunter success rate of 67%.

The majority of the harvest in Unit 23SW typically occurs in the winter season, likely because access by snowmachine is possible (**Table 4**). From 2004–2007, 69% of the total muskoxen were harvested in March and 85% were harvested between January and March.

Until 2008, harvest quotas were rarely met for this portion of Unit 23SW which potentially left a harvestable surplus of muskoxen. Prior to 2007, Unit 23SW showed a decrease in muskoxen in two consecutive censuses in 2002 and 2005, but exhibited an increase in the 2007 census (ADFG 2008 and Gorn 2007).

Effects of the Proposal

In 2008, the State changed the Tier II subsistence hunt (TX106) to a Tier I registration hunt (RX106), which is open to all Alaskan residents regardless of community residence. This was a shift in management strategy on the part of the State, and while there was limited harvest success (2 of 16) by residents outside Unit 23 in 2008, the potential exists for most of the harvest quota to be taken by non local hunters for the first portion of the season (Aug. 1–Dec. 31). Creating two seasons will allow a more equitable spread of the harvest between seasons. Currently, total harvest is controlled by closing the hunt by emergency order if the allowable harvest is reached resulting in lost opportunity to harvest muskoxen later in the season. Currently the allowable harvest is set based on percentages of animals identified during the most recent count. If this proposal is adopted, the quotas will remain intact, but will be distributed throughout the length of the season which will give an opportunity for subsistence hunters to use snowmachines, during adequate snowcover, to access distant Federal lands to harvest muskoxen.

OSM CONCLUSION

Support Proposal WP10-84 **with modification** to clarify the regulatory language for the Aug. 1–Dec. 31 season.

The modified regulation should read:

*Unit 23 south of Kotzebue Sound and west of and including the Buckland River drainage — ~~1 muskox~~ **1 bull** by Federal permit or State Tier ~~II~~ **I Registration** permit;*	*Aug. 1–Dec. 31*
OR	

Table 3: Results of state and federal muskox hunts on the Seward Peninsula 2004–2007 (ADFG 2009b and FWS 2009).

Hunt #	Year	Muskox Harvest Quota [1]	Cow Muskox Harvest Quota [1]	# of State Permits Issued (TX106 or RX106[2])	# of State hunters who used permit	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX 116)	# of Federal hunters who used permit	Federal Bull Harvest	Federal Cow Harvest
TX106 and RX116	2004	17	7	12	6	3	3	5	2	1	0
TX106 and RX116	2005	17	7	8	4	1	2	2	1	0	1
TX106 and RX116	2006	17	7	13	5	2	1	3	1	1	0
TX106 and RX116	2007	17	7	26	13	8	2	6	2	0	1
TX106/ RX106 and RX116	2008	17	7	49	20	15	1	5	0	0	0

[1] Combined State and Federal quotas (Gorn 2005 and 2007)
[2] In 2008, TX106 was changed to RX106

Table 4. Chronology of muskoxen state and federal harvest in Unit 23SW for 2004–2007 (ADF&G 2009b and FWS 2009).

	Chronology of Harvest															
	State harvest by month								Federal harvest by month							
Year	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
2004	1							5								1
2005						1	1	1								1
2006	1						1	1								1
2007		1	1			1		7						1		

1 muskox by Federal permit or State Tier I Registration permit. *Jan. 1–Mar. 15*

Federal public lands are closed to the taking of muskox except by Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures for Unit 23 will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.

Justification

Creating two seasons will allow a more equitable spread of the harvest between seasons. Currently the allowable harvest is set based on percentages of animals identified during the most recent survey of the population with harvest being controlled by closing the hunt by emergency order if the quota is reached. This results in a lost opportunity to harvest muskoxen later in the season.. If this proposal is adopted, the quotas will remain intact, but distribution will be throughout the length of the season which will give a continued opportunity for subsistence hunters without an impact to the muskoxen population because harvest quotas are in place.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

NORTHWEST ARCTIC SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support WP10-84 **with modification** as described in the OSM analysis Preliminary Conclusion.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-84

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-84
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-84: This proposal seeks to change the federal subsistence muskox hunting season dates from one continuous season (August 1 through March 15) into two seasons (August 1 through December 31 and January 1 through March 15) in Unit 23 Southwest (SW). These season dates allow the annual harvest quota to be allocated proportionally in each hunting period to allow harvest during the January 1 through March 15 season.

Introduction: The 2008-2009 regulatory year was the first hunt since the Unit 23 SW area changed from Tier II to Tier I, and the season closed by emergency order announcement when the harvest quota was reached on December 1. Hunt RX106 is open to all Alaska residents and is managed by quota, not by number of permits. The State authorizes a harvest quota of 12 bulls to the period August 1 through December 31 and a harvest quota of 4 muskox (plus unmet quota prior to January 1) to the period January 1 through March 15. This proposal provides consistency (seasons and harvest quotas) across federal and non-federal lands in Unit 23 SW.

Impact on Subsistence Users: Allowing a federal subsistence season with associated quota after January 1 will ensure that users have better access to muskox by using snow machines.

Opportunity Provided by State: In Unit 23 SW, that portion on Seward Peninsula west of and including Buckland River drainage has the following muskox regulations effective 2009-2010:

> One bull by registration permit RX106; season August 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available in Kotzebue, Deering, and Buckland beginning July 24; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 23
>
> One cow by registration permit RX106; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available in Kotzebue, Deering, and Buckland beginning July 24; tag required; no fee for required tag; trophy destruction required if skull (with horns) removed from Unit 23
>
> RX106 Harvest Quota: Total combined quota is 16 muskox (including up to 8 cows). Split quota management allows 12 bull muskox to be taken during August 1 through December 31; if bull quota is reached, the season is temporarily closed. During January 1 through March 15 the season re-opens with the remaining harvest quota applied to 'any muskox'; when the total combined quota is reached the season is closed by emergency order announcement.
>
> Drawing hunt DX106 has an August 1 through March 15 season for resident or nonresident hunter with drawing permit; bag limit is one bull 4 years old or older by permit; tag fee required.

Conservation Issues: There are no conservation issues; harvest is determined a quota.

Recommendation: Support with modification so harvest during the August 1 through December 31 portion of the hunt is limited to 1 bull instead of 1 muskox.

WP10-86 Executive Summary	
General Description	Proposal WP10-86 requests a change in the harvest season for moose in Unit 25C from September 1–15 to August 20–September 30. *Submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 25C — Moose** *1 antlered bull* ***Aug. 20*** *~~Sept. 1—~~Sept.* ***~~15~~ 30***
OSM Conclusion	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-86

ISSUE

Proposal WP10-86, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests a change in the harvest season for moose in Unit 25C from September 1–15 to August 20–September 30.

DISCUSSION

The proponent is requesting that the Federal moose season for Unit 25C be changed to match the August 20–September 30 season in adjoining portions of Units 25B and 20E within the Yukon-Charley Rivers National Preserve. The proponent states that this proposal would benefit Federally qualified subsistence users, especially the residents of Central, Circle, Eagle, and Fort Yukon, who hunt in the Yukon-Charley Rivers National Preserve, the White Mountains National Recreation Area and the Steese National Conservation Area, by providing an additional 27 days to hunt moose in Unit 25C. The proponent also states that aligning the fall season on all Federal public lands in Unit 25C with the seasons already allowed in Units 20E and 25B in the Yukon-Charley Rivers National Preserve would eliminate hunter confusion.

Existing Federal Regulation

Unit 25C — Moose

1 antlered bull	*Sept. 1–Sept. 15*

Proposed Federal Regulation

Unit 25C — Moose

1 antlered bull	***Aug. 20*** *~~Sept. 1–~~Sept****. ~~15~~ 30***

Existing State Regulations

Unit 25C — Moose

Resident: 1 bull Harvest	*Sept. 1–Sept. 15*
Nonresident: 1 bull Harvest	*Sept. 5–Sept. 25*

Extent of Federal Public Lands

Federal public lands comprise approximately 74% of Unit 25C, consisting of 64% Bureau of Land Management lands, 9% National Park Service lands and 1% Fish and Wildlife Service lands (see **Unit 25 Map**).

Customary and Traditional Use Determinations

There is no specific customary and traditional use determination for moose in Unit 25C. Therefore, all rural residents of the State of Alaska are eligible to hunt moose in Unit 25C.

Regulatory History

The current Federal and State regulations for moose in Unit 25C have been in place since 1993. In 2000, the State Board of Game created a registration hunt (RM865) in Unit 20E (excluding the Middle Fork Fortymile River), with the stipulation that a hunter could hunt both moose (RM865) and caribou (RC860), but not hold a registration permit for both species at the same time. These actions were in response to increased moose harvest and an increase in the number of caribou hunters in much of Unit 20E, and were designed to stabilize the moose harvest to maintain the bull:cow ratio within the State management objective.

Biological Background

For low-density populations of moose, such as those found in Unit 25C, the management goals are to: 1) provide for a sustained harvest, and 2) promote moose habitat enhancement by allowing natural fires to alter vegetation. The management objective in areas where aerial surveys are conducted is to maintain a bull:cow ratio of ≥30:100. In areas where aerial surveys are not conducted, the management objective is to keep large bull harvest at ≥20% of the total harvest. Current data on the moose population in Unit 25C indicates that the goals and objectives for this population are being met.

The Alaska Department of Fish and Game completed a geospatial population estimator (GSPE) moose survey (Ver Hoef 2001, Kellie and DeLong 2006) in Unit 25C (4,642 mi^2 survey area) during November–December 1997 in cooperation with the Bureau of Land Management (BLM). This technique did not incorporate a sightability correction factor (SCF). However, preliminary data by Boertje and others suggests an SCF of 1.1 to 1.2 is appropriate for most of these units, if October or November surveys are flown with good survey conditions (Gasaway et al. 1986, Boertje et al. 2009).

Based on the 1997 GSPE without an SCF, the ADF&G conservatively estimated Unit 25C moose density at 0.5 moose/mi^2 of moose habitat, with a total population estimate of 2,279 moose (90% CI ±15%). Utilizing a conservative SCF of 1.12, the estimated moose density was 0.6 moose/mi^2. Both estimates are within the expected range of 0.1–1.1 moose/mi^2 (average ≈0.6 moose/mi^2) found in all large areas of Interior Alaska (>800 mi^2) with lightly harvested bear and wolf populations (Gasaway et al. 1992). Very few moose density estimates have been outside this range during the last 30 years, except in areas where predation is reduced by humans.

During the 2004 spatial trend survey in Unit 25C, the calf to cow ratio was 14:100, and the bull to cow ratio was 45:100 (**Table 1**). These ratios suggest light hunting pressure and high predation on calves (Seaton 2008).

National Park Service (NPS) staff has periodically conducted moose surveys in the Yukon-Charley Rivers National Preserve, results from which are shown in **Table 2**. In 1997, a population estimation survey found a density of 0.27 moose/mi^2 (Burch and Demma 1997). In 1999 and 2003, NPS surveyed, including a 1,200-mi^2 portion of Unit 20E, and estimated the moose density for the entire survey area at 0.36 moose/mi^2 in 1999 and 0.26 moose/mi^2 in 2003 (Burch 2006). The two most recent aerial surveys, with portions of the preserve in Units 20E (northern portion), 25B and 25C, were conducted in November 2006 and November 2009 in a designated 3,096 mi^2 survey area consisting of 555 units along a 30–40 mile

Table 1. Unit 25C fall aerial moose composition counts, 1986–2007 (Seaton 2008).

Year	Bulls:100 Cows	Yearling bulls: 100 Cows	Calves:100 Cows	Calves	Percent calves	Adults	Moose observed	Moose per sq mi	90% CI
1986[a]	103	13	21	8	9	77	85		
1987[a]	77	11	28	13	14	83	96		
1988[a]	129	37	33	16	13	112	128		
1996[a]	119	19	11	3	5	57	60		
1996[b]	160	0	20	2	7	26	28		
1997[c]	53	13	37	80	20	319	399	0.49	0.42–0.56
2002[a]	71	16	9	4	5	77	81		
2002[b]	59	31	19	6	11	51	57		
2004[d]	45	14	14	4	9	42	46		
2007[c]	58	17	38	108	20	428	536	0.65[e]	0.49–0.81

[a] O'Brien Creek count area.
[b] Ophir Creek count area.
[c] Geospatial population estimator moose population estimate.
[d] Spatial trend survey.
[e] Not significantly different from the 1997 estimate.

Table 2. Moose survey results for Yukon-Charley Rivers National Preserve, 1997–2009 (Burch, 2006 & 2009).

Year	Bulls per 100 Cows	Calves per 100 Cows	Density moose/mi^2	Population estimate (CI 90%)
1997	60	28	0.27	737
1999	51	36	0.36	979
2003[+]	61	25	0.27	835
2006[+]	73	33	0.23	726
2009[+]	59	26	0.43	1,331

[+] Sightability correction factor of 1.2 applied to Geo Spatial Estimates .

wide corridor of the Yukon River drainage between Eagle and Circle, which includes the lower sections of the Charley, Nation and Kandik rivers. Moose densities were 0.23 moose/mi^2 in 2006 and 0.43 moose/mi^2 in 2009 (**Table 2**).

Analysis of the population survey data in the Preserve, for the survey years between 1997 and 2006, show the moose population has been relatively stable. However, 2009 data indicates that the population has grown, as there were notable increases in the, population density and population size compared to 2006 data (**Tables 2**). Survey data (1997–2009) indicates that the bull:cow ratios have been well above the State management objective of 30:100 in areas with aerial surveys, and well above the State management objective of 40:100 in all survey areas of Unit 20E (Gross 2008).

Harvest History

Unit 25C

For the past 11 years, the reported number of hunters and the reported amount of moose harvested has been slightly increasing. Between 1998 and 2009, the reported number of hunters in Unit 25C averaged 320 per year, with a range of 245–367 (**Table 3**). The reported harvest averaged 60 bulls per year, with a range of 52–79. Estimated unreported harvest averaged 11 bulls per year (**Table 4**).

Table 3. Unit 25C reported moose hunter residency and success, regulatory years 1998–1999 through 2008–2009 (Seaton 2008).

	Successful hunters					Unsuccessful hunters					
Regulatory year	Local[a] res	Non local res	Non res	Total	(%)	Local[a] res	Non local res	Non res	Total	(%)	Total hunters
1998–1999	5	68	11	84	(34)	23	130	13	166	(66)	250
1999–2000	8	47	14	69	(26)	21	156	19	196	(74)	265
2000–2001	7	53	19	79	(24)	29	198	20	247	(76)	326
2001–2002	2	50	9	61	(19)	23	218	26	267	(81)	328
2002–2003	7	54	13	74	(21)	23	224	33	280	(79)	354
2003–2004	3	43	6	52	(17)	20	210	19	249	(83)	301
2004–2005	4	41	6	51	(21)	15	164	15	194	(79)	245
2005–2006	3	56	4	63	(17)	17	248	39	304	(83)	367
2006–2007	3	53	6	62	(18)	18	226	41	285	(82)	347
2007–2008	4	55	9	68	(19)	9	248	32	289	(81)	357
2008–2009	6	63	10	79	(25)	16	184	32	232	(75)	311

[a] Hunters who live within the unit in which they reported hunting were considered local.

Table 4. Estimate of Unit 25C moose harvest, regulatory years 1999–2000 through 2008–2009 (Seaton 2008).

	Harvest by hunters							
	Reported[a]				Estimated			
Regulatory year	M	F	Unk	Total	Unreported[b]	Illegal/ Other[c]	Total	TOTAL
1999–2000	66	0	0	66	11	0	11	77
2000–2001	79	0	0	79	14	1	15	94
2001–2002	62	0	0	62	11	0	11	73
2002–2003	75	0	0	75	13	2	15	90
2003–2004	52	0	0	52	9	0	9	61
2004–2005	52	0	0	52	9	1	10	63
2005–2006	63	0	0	63	11	0	11	74
2006–2007	62	0	0	62	11	0	11	73
2007–2008	68	0	0	68	12	0	12	80
2008–2009	79	0	0	79	14	0	14	93

[a] Data from ADF&G harvest reports.
[b] Based on 17.7% unreported harvest (including wounding loss) estimated by Gasaway et al. (1992).
[c] Data from Fairbanks Bureau of Wildlife Enforcement wildlife mortality logs and ADF&G records.

Harvest and the number of hunters were lower in 2004 and 2005 compared to other years. In 2004 and 2005, much of interior Alaska was covered in a thick blanket of smoke in the fall due to record-setting wildfires. This may have contributed to the fewer number of hunters in the field and reduced moose harvest.

Yukon-Charley Rivers National Preserve — Units 20E, 25B and 25C

Moose hunting in the Preserve occurs primarily along the main rivers; the Yukon, Kandik, Nation and Charley. Federally qualified users who hunt in the Units 25B and 25C portions of the Preserve do so under Federal regulations, but report under a state registration permit. Federally qualified users who hunt in the Unit 20E portion of the Preserve report under State registration permit RM865.

Between 1983 and 2006, the number of hunters increased, however the number of moose harvested remained fairly stable (**Table 5**). Harvest reports indicate that approximately 178 moose were harvested in Unit 20E, 317 moose in Unit 25B and 27 moose in Unit 25C in the Preserve (Burch, 2006). Harvest in Unit 25C is somewhat proportional to the amount of land in the Preserve compared to the other two units, but may also be an indication that the more favorable and/or preferred hunting locations are outside the boundaries of Unit 25C.

Effects of the Proposal

If this proposal were adopted, the fall season dates of August 20–September 30 would become uniform throughout the Yukon-Charley Rivers National Preserve and all users would be provided an additional 27 days of hunting opportunity in Unit 25C. Because all rural residents are eligible to hunt under Federal regulations in Unit 25C, this could lead to an increase in the number of hunters, especially after the State resident season closes on September 15.

Federally qualified subsistence users would continue to need separate permits for Preserve lands; a State (green) harvest ticket in Unit 25C and State registration permit RM865, in Unit 20E. Federally qualified subsistence users hunting on BLM lands would continue to report under the current State (green) harvest ticket for Unit 25C. Permit RM865 has a stipulation that hunters may not possess State permit RC860, for hunting caribou in Unit 20E, at the same time as RM865 (see Regulatory History).

The amount of moose harvested is likely to increase, mainly due to the season extending into the rut, when moose are more vulnerable. This vulnerability necessitates improved harvest reporting to accurately determine the amount of harvest and to closely monitor the population for conservation purposes. Reporting compliance for RM865 has been much greater than for State green harvest tickets in Unit 20E (Gross 2010, pers. comm.). Therefore, reporting requirements for Unit 25C may need to be reexamined.

OSM CONCLUSION

Support Proposal WP10-86**.**

Justification

The fall season dates of August 20–September 30 would become uniform throughout the Yukon-Charley Rivers National Preserve.

The Unit 25C moose population appears healthy enough to allow for a few more bulls to be harvested.

Table 5. Moose hunting information from Yukon-Charley Rivers National Preserve, 1983–2006 (Burch 2006).

Year	Number of Hunters	Number of Reported Moose Harvest	Percent Success
1983	59	21	36
1984	46	19	41
1985	41	19	46
1986	48	13	27
1987	57	14	25
1988	66	17	26
1989	61	17	28
1990	81	35	43
1991	90	31	34
1992	100	12	12
1993	93	36	39
1994	126	32	25
1995	99	33	33
1996	94	24	26
1997	100	24	24
1998	80	37	46
1999	116	41	35
2000	102	38	37
2001	145	25	17
2002	129	34	26
2003	168	20	12
2004	104	26	25
2005	87	24	28
2006	83	29	35
Total	**2,175**	**621**	n/a
Mean	**91**	**26**	**30**
1st 10-yr mean	65	20	32
last 10-yr mean	110	29	28
Last 5-yr mean	114	27	25

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-86. This proposed regulation would not increase non-local participation but will provide increased opportunity for Federally qualified subsistence users. The regulation will not result in a conservation issue and will help align the moose hunting season for Federal lands within the unit.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-86

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-86
April 30, 2010, Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-86: The Eastern Interior Regional Advisory Council proposal would lengthen the federal subsistence moose hunting season in Unit 25C from September 1 through September 15 to August 20 through September 30.

Introduction: The proponent submitted this proposal to liberalize the Unit 25C federal subsistence moose hunting season by changing the season dates to match the federal subsistence moose hunting season dates for the federal public lands within Yukon-Charlie National Preserve of Units 25B and 20E. The 41-day federal subsistence moose hunting seasons within Units 25B and 20E within the Yukon-Charlie National Preserve are August 20 through September 30, which is 26 days longer than the 15-day federal subsistence moose hunting season in Unit 25C.

Impact on Subsistence Users: If adopted, the opportunity for federal subsistence moose hunters in Unit 25C will increase by an additional 26 days (173%), increasing federal subsistence hunting opportunity for moose in the White Mountains and Steese National Recreational Areas from 15 days to 41 days. If adopted, federal subsistence users would be allowed to hunt 10 days prior to and after the state moose hunting season in Unit 25C, potentially reducing interaction or competition with non-federally qualified moose hunters. If adopted, the liberalization of this road accessible federal subsistence moose hunt may attract other federally qualified users from other areas and regions resulting in competition with other federally qualified hunters.

Opportunity Provided by State: The state resident moose hunting season in Unit 25C is from September 1 through 15 with a limit of one bull. The state nonresident moose hunting season in 25C is September 5 through September 25 with a limit of one bull.

Conservation Issues: None under existing regulations. This is a bull-only hunt, and hunter participation is relatively stable.

Enforcement Issues: Federal public lands constitute approximately 74% of Unit 25C, but a significant portion of the easily accessible land is non-federal and in the state's non-subsistence use area. Federally-qualified hunters will need to be aware of the boundaries.

Other Comments: The expanded season, creating additional differences between the state and federal regulations, is not necessary to provide the opportunity for federal subsistence by rural residents on federal lands. Creating an expanded season for all rural residents of Alaska creates a priority that is not based on continued customary and traditional uses and cannot be justified based on a desire to reduce competition. Also, as the moose population declines, the expanded season will create unnecessary impacts on other subsistence users.

Recommendation: Oppose.

WP10-87 Executive Summary	
General Description	Proposal WP10-87 requests black bear be added to the species list for furbearers for Units 12, 20, and 25. *Submitted by the Eastern Interior Regional Advisory Council*
Proposed Regulation	*See analysis for regulation language.*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**2 Oppose**

STAFF ANALYSIS
WP10-87

ISSUES

Proposal WP10-87, submitted by the Eastern Interior Regional Advisory Council (Council), requests black bear be added to the species list for furbearers for Units 12, 20, and 25.

DISCUSSION

The proponent states that this action was submitted for a number of reasons, including:

- currently there is a loss of opportunity to harvest black bear in Units 12, 20, and 25 because trapping black bear is not legal;
- trapping black bear was a traditional harvest practice across a wide area of Alaska;
- being listed as a furbearer will allow harvesters to sell the hide and will provide income that will help cover the costs associated with other subsistence activities;
- adopting the proposal will provide additional opportunity for subsistence uses and once again permit people to use traditional trapping methods for black bear; and
- adopting the proposal will decrease the high rate of bear predation that currently limits moose and caribou populations in important hunting areas in the Eastern Interior Council Region.

Concerning the proponent's request to allow trapping for the purpose of predator control, the Federal Subsistence Management Program's policy is to not validate proposals for the stated purpose of predator control.

The proposal did not request a black bear trapping season and harvest limit; the proposal only requested a change to the definition of furbearer to include black bear. However, black bear trapping was mentioned as a reason for submitting the proposal. It is important to note that Federal subsistence regulations specifically do not allow the harvest of bear with a trap (59 Fed. Reg. 29034 [June 3, 1994][1]). If this proposal were adopted, Federally qualified users would not be allowed to harvest black bear with a trap on Federal public lands unless: 1) the proposed regulation was added to unit-specific provisions for Units 12, 20, and 25; and 2) a black bear trapping season and trapping harvest limit were adopted for Units 12, 20, and 25.

In January 2010, the State of Alaska Board of Game adopted a statewide regulation change (ADF&G 2009a:45, Ardizzone 2010, pers. comm.) parallel to this request. Black bear was added to the species list for furbearers in State wildlife regulations. No trapping season or harvest limit was adopted, and it will continue to be illegal to trap a black bear under State wildlife regulations (except in predator control areas [(ADF&G 2009e; 5 AAC 92.100, 5 AAC 92.115, and 5 AAC 92.125]). The effect of the change is that most parts of a legally harvested black bear may be sold (beginning July 1, 2010); however, the sale of black bear trophies and gall bladders will still be illegal.

[1] In 2001, this regulation was moved to §___26.(b)(10) (66 Fed. Reg. 33759 [June 25, 2001]).

The January 2010 State of Alaska Board of Game's action allowing the selling of black bear parts except black bear trophies and gall bladders applies to black bears legally harvested on Federal public lands, with the exception of National Parks. In National Parks, Federal subsistence wildlife regulations require that the hide and meat of black bear be salvaged for human use and cannot be sold.

Existing Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations

(a) Definitions

Furbearer means a beaver, coyote, arctic fox, red fox, lynx, marten, mink, weasel, muskrat, river (land) otter, red squirrel, flying squirrel, ground squirrel, marmot, wolf, or wolverine.

Trapping means the taking of furbearers within established trapping seasons and with a required trapping license.

§____. 25(j) Utilization of fish, wildlife, or shellfish

(2) If you take wildlife for subsistence, you must salvage the following parts for human use:

(iii) The hide and edible meat of a black bear.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.

(8) If you are a Federally qualified subsistence user, you may sell the raw fur or tanned pelt with or without claws attached from legally harvested furbearers.

§____.26 Subsistence taking of wildlife

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited . . .

(10) Using a trap to take ungulates or bear.

(17) Taking a bear cub or a sow accompanied by cub(s).

Proposed Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations

*Furbearer means a beaver, coyote, arctic fox, red fox, lynx, marten, mink, weasel, muskrat, river (land) otter, red squirrel, flying squirrel, ground squirrel, marmot, wolf, ~~or~~ wolverine**, or black bear in Units 12, 20, and 25**.*

Trapping means the taking of furbearers within established trapping seasons and with a required trapping license.

§____. 25(j) Utilization of fish, wildlife, or shellfish

(2) If you take wildlife for subsistence, you must salvage the following parts for human use:

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(10) Using a trap to take ungulates or bear.

(17) Taking a bear cub or a sow accompanied by cub(s). Existing State Regulation

Existing State Regulation

5 AAC 92.990 Definitions

(a) (20) "Furbearer" means a beaver, black bear[2], coyote, arctic fox, red fox, lynx, marten, mink, least weasel, short-tailed weasel, muskrat, land otter, red squirrel, flying squirrel, ground squirrel, Alaskan marmot, hoary marmot, woodchuck, wolf, or wolverine; "furbearer" is a classification of animals subject to taking with a trapping license.

5 AAC 92.200. Purchase and sale of game

(b) Except as provided in 5 AAC 92.031, a person may not purchase, sell, barter, advertise, or otherwise offer for sale or barter:

(1) any part of a bear, except an article of handicraft made from the fur of a bear.

Additionally, sealing is required for black bear taken in Units 12 and 20. Beginning in 2009, in Units 12 and 20, a black bear harvest ticket is required to hunt black bear.

Extent of Federal Public Land

Federal public land comprises approximately 58% of Unit 12 and consists of 82% National Park Service and 18% Fish and Wildlife Service lands (see **Unit 12 map**). The Federal public lands are primarily within the boundaries of Wrangell-St. Elias National Park and Preserve and Tetlin National Wildlife Refuge.

Federal public land comprises approximately 19% of Unit 20 and consists of 78% National Park Service, 21% Bureau of Land Management, and less than 1% Fish and Wildlife Service lands (see **Unit 20 map**). Unit 20 includes the Fairbanks North Star Borough. Federal public lands are primarily within Denali National Park and Preserve and Yukon-Charley Rivers National Preserve. Approximately half of the National Park land in Unit 20 is closed to subsistence uses.

[2] This regulation change will be in effect beginning July 1, 2010.

Federal public land comprises approximately 55% of Unit 25 and consists of 68% Fish and Wildlife Service, 29% Bureau of Land Management, and less than 4% National Park Service lands (see **Unit 25 Map**). Federal public lands exist primarily within the Arctic National Wildlife Refuge, Yukon Flats National Wildlife Refuge, White Mountains National Recreation Area, and Steese National Conservation Area.

Customary and Traditional Use Determination

In Unit 12 all rural residents are eligible to harvest black bear under Federal subsistence wildlife regulations.

In Unit 20, except Unit 20F, all Federally qualified rural residents are eligible to harvest black bear. Rural residents of Unit 20F, Stevens Village, and Manley have recognized customary and traditional uses of black bear in Unit 20F.

Rural residents of Unit 25D have recognized customary and traditional uses of black bear in Unit 25D. For the remainder of Unit 25, all rural residents are eligible to harvest black bear.

In order to engage in subsistence on lands designated as a National Park, the National Park Service additionally requires that subsistence users live within the park's resident zone (36 CFR 13.430) or have been issued a subsistence permit (36 CFR 13.440) by the park superintendent.

Regulatory History

While a more detailed history of regulations regarding the purchase and selling of black bear hides is in **Appendix A**, a few key points are covered below.

In 1908 it became illegal for the hide of animals classified as "game" to be purchased or sold in the Alaska Territory. However, black bear were not classified in harvest regulations until 1925 when they were added to the "land fur bearing animal" category.

- 1935—black bear re-classified as a "fur-bearing animal;" no restrictions on the purchase or selling of hides.
- 1938—black bear re-classified as a "game animal;" hides cannot be purchased or sold.
- 1939—black bear hides can be purchased and sold.
- 1949—black bear re-classified as a "big game animal;" hides cannot be purchased or sold.
- 1960—Statehood, black bear remains a "big game animal," but no specific prohibition against purchasing and selling of big game animal hides carries over from Federal to State law.
- 1971—black bear hides cannot be purchased or sold.
- 1998—black bear hides cannot be purchased or sold except as an article of handicraft made from the fur of a bear (5 AAC 92.200).

In 2002, Proposal WP02-01 requested that both black bear and brown bear be included in the definition of furbearer in Federal regulations. The Board rejected the proposal because "most of the cultural resource use information compiled during proposal analysis, the potential adverse biological impacts, most Regional Council recommendations, and the public comments did not support the request" (67 Fed. Reg. 125. 43711 [June 28, 2002]). In 2002, the Board adopted a regulation allowing the sale of handicrafts made from the fur of a black bear (§___.25(j)(6); 67 Fed. Reg. 125. 43711 [June 28, 2002]), and in 2004, the Board adopted a regulation allowing the sale of handicrafts made from the skin, hide, pelt, or fur, including claws, of a black bear (§___.25(j)(6); 69 Fed. Reg. 126. 40175 [July 1, 2004]).

In 2009, the Federal and State black bear hunting seasons in Units 12, 20, and 25 were open year round, and the harvest limit was 3 black bear per person each regulatory year.

Background

Andersen (1993) discusses the history of the fur trade in the Interior Region of Alaska (based on ethnographic work conducted by Clark [1974]; Janes [1974]; Morlan [1973]; Tanner [1966]; VanStone [1974]; and Webb [1985]). Used for food and clothing, furs were a commodity for trade between Athabascans and neighboring Eskimo groups. Russian and other Euroamericans established the first fur trading posts in the Interior before 1850. For example, the Hudson Bay Fort Yukon trading post was built in 1847. By about 1885, selling furs had become the distinguishing characteristic of the cash economy for Interior Alaska Athabascan culture. When the economic shift to gold occurred, many fur trading posts were abandoned and centers of trade shifted to mining communities, such as, Circle and Fairbanks (Andersen 1993).

Although information about the black bear fur trade is limited, early reports from fur dealers and agencies document the sale of black bear hides (Alaska Game Commission 1942, 1948, 1954; FWS 1950). Rural residents sold black bear hides along with the other furs (BIA 1949).

Biological Background

Black bears have low productive rates. The age of first reproduction for black bears has been documented at 5–7 years of age, a recruitment interval (time taken for separation of cubs from female) of 2.0–2.7 years, and a reproductive interval of 1–4 years (Bertram and Vivion 2002; Miller 1994). Although black bears often have 2 cubs, cub survival has been documented to be 45%–50% (Bertram and Vivion 2002; Miller 1994).

Black bears were monitored on the western Yukon Flats in Unit 25 between 1995 and 2001. Five female bears produced 10 litters between 1996 and 2001 and the survival rate estimate for cubs weaned to one year was 45% (Bertram and Vivion 2002). One adult female was documented giving birth to cubs during three consecutive years and losing her first 2 litters, but successfully raising the third litter to one year of age. Although mortality sources were largely unknown, Bertram and Vivion (2002) documented brown bear (grizzly) predation on two denned female black bears with cubs. In one case a brown bear killed an adult male black bear (Bertram and Vivion 2002).

For more on the biology of black bear in Units 12, 20, and 25 see **Appendix B**.

Harvest History

One source of black bear harvest information in Units 12, 20, and 25 is the State's sealing records. Until 2009, residents of Alaska were not required to obtain a harvest ticket in order to hunt black bear in these

units. Instead, black bear were sealed (5 AAC 92.165). Sealing means taking the skull and skin (with claws and evidence of sex attached) of a black bear to an officially designated sealing officer. A metal or plastic seal is locked on the hide and on the skull. The seal must remain on the skin until the tanning process begins and on the skull unless it is cleaned for display. Another source of harvest information is data obtained during household harvest surveys recorded in the Community Subsistence Information System (ADF&G 2009c). Data from both sources are described below.

Unit 12

According to ADF&G,

> In Unit 12 most black bears are taken by local residents in the spring and are an important meat source. It is estimated that meat is salvaged from over 90% of all black bears harvested by local residents. In the fall most black bears are harvested incidentally during hunts for other species (Bentzen 2008).

Based on sealing records, ADF&G reported that from 1995 to 2006 in Unit 12, a low of 22 black bear were harvested in 2003 and a high of 50 in 2006 (Bentzen 2008). From 1990 to 2006, Unit 12 residents including residents of Chisana, Northway, Tanacross, Tetlin, and Tok harvested a low of 10 black bear in 1991 and a high of 32 in 1996; in 2006, Unit 12 residents harvested 21 black bear.

Additionally, residents of Unit 12 reported harvesting black bear during household harvest surveys (ADF&G 2009c). During selected years between 1987 and 2004, the estimated harvest was a low of no black bear harvested in 1987 in Chisana and Tetlin, and none in 2004 in Tetlin, to a high of 42 black bear harvested in 2004 in Tok.

Units 20A, 20B, 20C, and 20F

According to ADF&G, from 2004 to 2006

> Most black bear taken in Units 20A, 20B, 20C, and 20F were taken in spring within the road-accessible portions of Unit 20B, an area that includes portions of the North Star Borough. Bait stations were more prevalent along the road system because of the difficulty of transporting heavy, bulky bait . . . . Other trends in harvest included hunters traveling farther away from the road system and from Fairbanks to hunt black bears, possibly to avoid crowding by other hunters (Seaton 2008).

In 2006, a reported 34 black bear were harvested in Unit 20A, 141 in Unit 20B, 31 in Unit 20C, and 40 in Unit 20F (Seaton 2008).

Additionally, residents of Units 20A, 20B, and 20F reported harvesting black bear during household harvest surveys (ADF&G 2009c) including residents of Anderson, Nenana, Manley, Minto, Rampart, and Tanana. During selected years between 1984 and 2004, the estimated harvest was a low of no black bear in 2004 in Manley to a high of 38 black bear harvested in 1987 in Tanana.

Unit 20D

In Unit 20D, ADF&G (Dubois 2008) reported that 56% of black bear killed by hunters from 2004 to 2006 were taken at bait stations. The reported harvest of black bear in Unit 20D, from 1994 to 2006, ranged from a low of 14 in 1995 to a high of 39 in 2000. From 1994 to 2006, Unit 20D residents including

residents of Delta Junction, Dot Lake, and Healy harvested a low of 10 black bear in 1991 and a high of 32 in 1996; in 2006, Unit 20D residents harvested 11 black bear.

Additionally, based on household harvest surveys (ADF&G 2009c), residents of Unit 20D reported harvesting black bear. Based on these surveys, the estimated harvest in Dot Lake in 1987 was one black bear and in 2004, 4 black bear. In Healy the estimated harvest was 7 black bear in 1987.

Unit 20E

In Unit 20E from 1999 to 2006, ADF&G (Gross 2008) reported in Gross 2004 that the reported harvest of black bear ranged from a low of 7 black bear in 2003 and 2006 to a high of 28 in 2004. Unit 20E residents including residents of Eagle harvested a low of 10 black bear in 1991 and a high of 32 in 1996; in 2006, Unit 20Eunit residents harvested 2 black bear.

Additionally, based on a household harvest survey (ADF&G 2009c), residents of the Unit 20E community of Eagle harvested an estimated 11 black bear in 2004.

Unit 25

The State does not require black bear harvested in Unit 25 to be sealed. Based on household harvest surveys (ADF&G 2009c), residents of Unit 25 communities: Circle, Beaver, Birch Creek, Chalkyitsik, Fort Yukon, and Stevens Village; during selected years between 1984 and 1997, harvested an estimated low of one black bear in Beaver in both 1995 and 1996; Chalkyitsik in both 1993 and 1997; Fort Yukon in 1995; and Stevens Village in 1997. The highest estimated harvest was 150 black bear in 1987 in Fort Yukon.[3]

Current Events

As noted, in January 2010, the State of Alaska Board of Game adopted a statewide regulation change (ADF&G 2009a:45, Ardizzone 2010, pers. comm.) parallel to this request. Black bear was added to the species list for furbearers in State wildlife regulations. No trapping season or harvest limit was adopted, and it will continue to be illegal to trap a black bear under State wildlife regulations (except in predator control areas [ADF&G 2009e; 5 AAC 92.100, 5 AAC 92.115, and 5 AAC 92.125]). The effect of the change is that most parts of a legally harvested black bear may be sold (beginning July 1, 2010); however, the sale of black bear trophies and gall bladders will still be illegal.

This new regulation will apply to black bears legally harvested on Federal public lands except within the boundaries of National Parks. In National Parks and Monuments, existing Federal subsistence wildlife regulations require that the hide and meat of black bear be salvaged for human use and cannot be sold.

Implications of the Proposed Regulation

Proposal WP10-87 adds black bear to the list of furbearers for Units 12, 20, and 25 in the general regulations for Federal subsistence wildlife management. If adopted, it would become legal to sell the hides of black bear legally harvested within the boundaries of National Parks in Units 12, 20, and 25.

If Proposal WP10-87 is adopted and also added to regulations that are specific to Units 12, 20, and 25, traps would become a legal harvest method for black bear in Units 12, 20, and 25 within the boundaries of

[3] Sumida and Andersen (1990) reported that not all were used for food and some were fed to dogs.

National Parks; however, this proposal did not include a trapping season and harvest limit. If this proposal is adopted, trapping black bear within the boundaries of National Parks would continue to be illegal. Additionally, it would become legal to sell the hides of black bear legally harvested in Units 12, 20, and 25 within the boundaries of National Parks.

In the future, if the Board adopts a black bear trapping season and harvest limit, black bear harvests in Units 12, 20, and 25 within the boundaries National Parks could increase. The harvest of cubs, sows with cubs, and ungulates could occur, which are not allowed under existing Federal and State wildlife regulations.

Effects of the Proposal

If Proposal WP10-87 is adopted, Federally qualified users would be allowed to sell the raw fur or tanned pelt of black bear legally harvested within the boundaries of National Parks in Units 12, 20, and 25. Nonsubsistence uses would not be affected.

If this proposal is not adopted, no effects are anticipated. However, beginning July 1, 2010, Federally qualified users will be allowed to sell the hide of black bears legally harvested within the State of Alaska except within the boundaries of National Parks under a recently adopted State wildlife regulation.

OSM CONCLUSION

Oppose Proposal WP10-87.

Justification

The effects of this proposed regulatory change would be on Federal public lands within the boundaries of National Parks in Units 12, 20, and 25 only. This is because the State of Alaska Board of Game adopted a parallel statewide regulation change that applies to all Federal public lands except National Parks. Because black bear hides would become an income source if this proposal were adopted, it is likely that the harvest of black bear in National Parks in Units 12, 20, and 25 would increase. However, black bears have low reproductive rates when compared to the other furbearing animals, and black bear populations in Units 12, 20, and 25 have not been well monitored. Population estimates, if they exist at all, are based on inexact data and in-season observations. Increasing the hunting pressure on black bear populations in National Parks due to commercialization of the hides, while simultaneously increasing hunting pressure on black bear populations outside the boundaries of National Parks in Units 12, 20, and 25, is not deemed compatible with good conservation practices.

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APPENDIX A: REGULATORY HISTORY

This section describes the regulatory history of both brown and black bear regulations in Alaska, with an emphasis on black bear. A 1908 Alaska game law defined brown bear (but not grizzly bear) as "game" (Title X, Chapter 1, Sec. 330 [Joint Committee on Territories of the Senate and House of Representatives 1913]). Significantly, this regulation made it unlawful for a person to sell hides or heads of "game" animals (Sherwood 1981). Concurrently, conservation measures were interspersed with periodic campaigns to exterminate bears in certain areas (Sherwood 1981, Thornton 1992). A 1925 game law established the Alaska Game Commission and, among other things, clarified the definition of "game animals" to include both "brown and grizzly bears" (Chapter III, Sec. 41 & 43 [Law Revision Board 1933]). It also specifically defined "black bear" as "land fur bearing animals." Under the auspices of the Alaska Game Commission 1925-59, regulations became more consistent and effective.

Statewide regulations issued in 1935 identified black bears as "fur-bearing animals" and provided a trapping season for this species. At that time, there was "no restriction on the sale of prime skins of fur animals" (Alaska Game Commission 1935). In 1938, black bears were reclassified as "game animals" (Sherwood 1981). The 1939 regulations allowed the purchase and sale of "hides or parts of hides . . . and articles manufactured from black bear . . . and the parka hood trimmings cut from the hides of grizzly bears into strips not to exceed 4 inches in width in fur districts 5 and 8 (Arctic Coast, Kotzebue, and Y-K Delta areas)" (Alaska Game Commission 1939). Regulations issued in 1949 identified black and brown bears as "big game animals"(Alaska Game Commission 1949). The 1949 regulatory requirements concerning this issue remained in place through June 30, 1960 (Alaska Game Commission 1959).

Prior to 1960, a number of areas had been established as bear reserves (e.g., Thayer Mountain, Anan Creek, McNeil River and Pack Creek). A number of National Wildlife Refuges, National Monuments and National Parks had been established to conserve and preserve bears and other wildlife (e.g., Kodiak NWR, Katmai National Monument, McKinley National Park).

The State of Alaska was established in 1959 and in 1960 the State listed both black and brown bears as "big game animals." However, prior Alaska Game Commission stipulations concerning the sale of bear hides were not addressed in the very first state regulations (State of Alaska 1960).

In 1961, the "purchase, sale and barter of grizzly and brown bears" were prohibited (State of Alaska 1961). In 1964, the "purchase, sale and barter of blue or glacier bears" (color phase of the black bear) were prohibited (State of Alaska 1964). In 1971, the "purchase, sale and barter of black bears and its various color phases" were prohibited (State of Alaska 1971). In 1985, the "purchase, sale, or barter of skin or any other part of black bear, in various color phases, the skin or any other part of brown or grizzly bear" were prohibited (State of Alaska 1985). In 1998 (State of Alaska 1998; 5 AAC 92.200(b)(2) and 92.990(57)), the sale of "an article of handicraft made from the fur of black bear" was allowed with "handicraft" defined as: "a finished product in which the shape and appearance of the natural material has been substantially changed by skillful use of hands, such as sewing, carving, etching, scrimshawing, painting, or other means and which has substantially greater monetary, and aesthetic value than the unaltered natural material alone."

APPENDIX C: BIOLOGICAL BACKGROUND

Unit 12

According to Bentzen (2008), the State management objective for black bear in Unit 12 is to manage for a harvest of black bear that maintains 55% or more males in the combined harvests during the most recent 3 years. Based on limited radiotelemetry data collected in Unit 12 and on more rigorous data collected in Unit 20A, estimated black bear density in Unit 12 was 16–22 bears/100 mi2 of black bear habitat, and the estimated population was 700–1,000 bears in 2007. Few data were available on the composition of the population. Productivity appeared adequate based on the animals harvested and on numerous sightings of sows with cubs. Approximately one half of Unit 12 is suitable black bear habitat, and black bear are distributed throughout these forested areas, approximately 4,500 mi2. In 2004 wildfires burned 434 mi2 of black bear habitat in Unit 12. These fires initially reduced habitat availability, but likely will result in long-term positive effects on black bear habitat.

Units 20A, 20B, 20C, and 20F

According to Seaton (2008), the State management objectives for black bear in Unit 20A, 20B, 20C, and 20F are to (1) maintain a black bear population that sustains a harvest of at least 55% males in the combined harvests for the most recent 3 years in all units, and (2) minimize human-bear conflicts by providing information and assistance to the public and to agencies. The most current estimates (2007) for the number of black bear in the area include 500–700 bears in the Tanana Flats in Unit 20A, 750–1,200 bears in Unit 20B, 700–1,000 in the portion of Unit 20C outside Denali National Park, and 400–700 in Unit 20F. Estimates are based on a density estimate of 12–18 black bears/100 mi2. No composition estimates are available.

Unit 20D

According to Dubois (2008), the State management objective for black bear in Unit 20D is for a sustained yield of black bears with harvest not to exceed 15 black bears south of the Tanana River and 35 black bears north of the Tanana River. The estimated population of black bear was 750 animals based on a density estimate of 17.5 adult black bears/100 mi2 in adjacent Unit 20A. In 2007 black bears were assumed to be numerous throughout the area. Black bears are distributed throughout Unit 20D except in the most heavily human populated areas and in treeless alpine habitat.

Unit 20E

According to Gross (2008), the State management objective for black bear in Unit 20E is for a harvest of black bear that maintains 55% or more males in the combined harvests of the most recent 3 years. The black bear population in 2007 was estimated to be 1,000–1,500 animals based on population data collected in adjacent Unit 12 during the early 1980s. The composition of the population is unknown. Black bear habitat is extensive in Unit 20E. Only treeless habitat, generally above elevations of 4,000 feet, is not black bear habitat. Berries are widely available.

Unit 25

According to ADF&G (2002) and Bertram and Vivion (2002), black bear are abundant in Unit 25 but there is uncertainty over accurate population numbers for much of the unit. Based on high capture rates and low hunting pressure, black bear densities are suspected to be within the range of 0.2-0.7/mi2 (86–

265/1,000 km2), which has been previously reported in Alaska (Hechtel 1991, Schwartz and Franzmann 1991, and Miller 1994 cited in Bertram and Vivion 2002). The total population of black bear in Unit 25D, based on an assumed density of 1 black bear per 5–10 square miles, is 1,750–3,500 black bear (ADF&G 2002).

REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-87. There was testimony at the meeting that the ADF&G has plans to submit a trapping proposal at the November Board of Game meeting. Recent action by the State Board of Game defined black bears as furbearers statewide to allow sale of hides and other parts (except gall bladders). The Council determined that supporting this proposal would align Federal and State regulations and would benefit subsistence users.

SOUTHCENTRAL REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-87. If adopted by the Board, the proposed regulation will create further confusion among subsistence users in Units 12, 20, and 25. The Alaska Board of Game adopted a parallel statewide regulation change that applies to all Federal public lands except National Parks to classify black bear as a furbearer.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-87

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-87
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-87: This proposal requests that black bears be added to the list of animals defined as furbearers in Game Management Units 12, 20, and 25.

Introduction: The proponent requests black bears be listed as furbearers in federal subsistence regulations for Units 12, 20, and 25 to allow federal subsistence users to sell hides from harvested animals.

Impact on Subsistence Users: If adopted, federal subsistence users could sell hides and claws from black bears harvested under federal subsistence regulations from Units 12, 20, and 25, including part of Denali National Park and part of Wrangell-St. Elias National Park. Because harvest of black bears from these park lands is very low, the effect of the regulation will have be negligible.

Opportunity Provided by State: The Alaska Board of Game reclassified black bears as furbearers and allowed sale of hides, and all bear parts except gall bladders and trophies, including all black bears taken under hunting and trapping regulations. The regulation will go into effect July 1, 2010. Hunting regulations for black bears in Units 12, 20, and 25, as in most other areas of Interior Alaska, are no closed season and a bag limit of 3 (no cubs or females with cubs), with an additional provision for community harvest permits in Unit 25.

Conservation Issues: The Department and the Alaska Board of Game do not expect conservation issues by allowing sale of black bear hides and parts. The total value of all black bear parts are worth less than some other furbearers (e.g. wolves, wolverines).

Enforcement Issues: Because the sale of black bear hides and parts, except gall bladders are now under one, uniform, statewide regulation, no enforcement issues are expected. Sale of black bear hides and parts, except gall bladders are legal in Idaho, Maine, and all Canadian provinces.

Other Comments: Adoption of this proposal is not necessary to provide the federal subsistence needs for use of black bear.

Recommendation: Neutral.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-87. With only a few units being affected, there is a risk that people would illegally try to sell hides from outside the region under the proposed provisions. SRC members also expressed concerns about not disturbing bears during the winter and that snaring or trapping of bears could be hazardous for both the trappers and others who might be in the area.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-87. We do not support WP10-87 to add black bear to the definition as a furbearer in Unit 12. This will enable black bears to be trapped in the winter trapping season. It is not a practice of the Ahtna people to trap black bear during the winter months. While we support predator control management, we do not support this method in Unit 12 for black bears.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-88 Executive Summary	
General Description	Proposal WP10-88 requests that all edible meat of the front quarters, hind quarters, and ribs from moose harvested in Unit 25 must remain on the bones until the meat is removed from the field or is processed for human consumption. *Submitted by the Eastern Interior Regional Advisory Council*
Proposed Regulation	*See analysis for regulatory language.*
OSM Preliminary Conclusion	**Support** Proposal WP10-88 **with modification** to apply the new regulation only before October 1. The modified regulation should read: **§____.25(h) Removing harvest from the field** *You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 and Unit 25 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.*
OSM Conclusion	**Oppose.** *See analysis Addendum*
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-88

ISSUES

Proposal WP10-88, submitted by the Eastern Interior Regional Advisory Council (Council), requests that all edible meat of the front quarters, hind quarters, and ribs from moose harvested in Unit 25 must remain on the bones until the meat is removed from the field or is processed for human consumption.

DISCUSSION

The Council is requesting this action because it believes that there is a need to reduce the spoilage and waste of the meat of moose harvested in Unit 25, and that this action will result in less meat being left in the field.

The Council has submitted a parallel proposal to the State of Alaska Board of Game to consider at its meeting Feb. 26–Mar. 7, 2010 (ADF&G 2010:158; EISRAC 2009a:220 and 2009b:327).

Existing Federal Regulation

36 CFR Part 242.25(a) and 50 CFR Part 100.25(a) Definitions

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

§__.25(h) Removing harvest from the field

You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.

§__.25(j) Utilization of fish, wildlife, or shellfish.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan . . . .

(5) Failure to salvage the edible meat may not be a violation if such failure is caused by circumstances beyond the control of a person, including theft of the harvested fish, wildlife, or shellfish, unanticipated weather conditions, or unavoidable loss to another animal.

Proposed Federal Regulation

§__100.25(a) Definitions

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

§__.25(h) Removing harvest from the field

You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.

All edible meat of the front quarters, hind quarters, and ribs from moose harvested in Unit 25 must remain on the bones until the meat is removed from the field or is processed for human consumption.

§__.25(j) Utilization of fish, wildlife, or shellfish.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan . . . .

(5) Failure to salvage the edible meat may not be a violation if such failure is caused by circumstances beyond the control of a person, including theft of the harvested fish, wildlife, or shellfish, unanticipated weather conditions, or unavoidable loss to another animal.

Existing State Regulation

5 AAC 92.220. Salvage of game meat, furs, and hides

(d) A person taking game not listed in (a) of this section shall salvage for human consumption all edible meat, as defined in 5 AAC 92.990. In addition,

(1) for moose and caribou taken before October 1 in Unit 9(B), Unit 17, Unit 18, those portions of Unit 19(A) within the Holitna/Hoholitna Controlled Use Area, Unit 19(B), and Unit 23, the edible meat of the front quarters and hindquarters must remain naturally attached to the bone until the meat is transported from the field or is processed for human consumption;

(2) for caribou taken before October 1 in Unit 21(A), the edible meat of the front quarters and hindquarters must remain naturally attached to the bone until the meat has been transported from the field or is processed for human consumption;

(3) for moose taken before October 1 in Units 21 and 24, and for caribou taken before October 1 in Unit 24, the edible meat of the front quarters, hindquarters, and ribs must remain naturally attached to the bone until the meat has been transported from the field or is processed for human consumption.

5 AAC 92.990. Definitions

(17) "edible meat" means, in the case of a big game animal, except a black bear, the meat of the ribs, neck, brisket, front quarters as far as the distal joint of the radius-ulna (knee), hindquarters as far as the distal joint of the tibia-fibula (hock), and the meat along the backbone between the front and hindquarters . . . ; however, "edible meat" of big game or wild fowl does not include meat of the head, meat that has been damaged and made inedible by the method of taking, bones, sinew, incidental meat reasonably lost as a result of boning or a close trimming of the bones, or viscera.

Extent of Federal Public Land

Federal public land comprises approximately 55% of Unit 25 and consists of 68% U.S. Fish and Wildlife Service, 29% Bureau of Land Management, and less than 4% National Park Service lands (see **Unit 25 Map**). Federal public lands exist primarily within the Arctic National Wildlife Refuge, Yukon Flats National Wildlife Refuge, White Mountains National Recreation Area, and Steese National Conservation Area.

Customary and Traditional Use Determination

The customary and traditional use determination for moose in Unit 25A is residents of Units 25A and 25D; in Units 25B and 25C, all rural residents; in Unit 25D west, residents of Unit 25D west; and in Unit 25D remainder, residents of the remainder of Unit 25.

Background

At the winter and fall 2009 Council meetings, the Council heard that spoilage of moose meat in the field is a problem. A Council member said:

> We've heard a fair amount of testimony here from the public concerning seeing these aircraft flying in and out of the airport here with antlers and what appears to not be a lot of meat. Now, where I hunt, this is what the regulation is, you have to leave the meat on the bone of the front quarters, hindquarters, ribs and the brisket . . . . I own a meat processing business, and I see a lot of meat wasted when hunters bone the meat and bring it in, because they expose the meat to contamination. When you bone it, you expose all the meat to contamination. And so many times what ends up happening is the meat is not fit for human consumption by the time that people get it to the place of processing (EISRAC 2009b:329).

At these meetings, Council members talked extensively about the need to educate hunters to properly cut and process meat of harvested animals, and about the effects on rural communities of nonrural residents hunting in the traditional hunting territories of Athabascan villages. The Council understood that current Federal and State regulations have salvageable meat requirements.

The Council at its meeting in October 2009 directed the Office of Subsistence Management staff to write a letter to ADF&G asking it to collaborate with villages in educational and outreach programs and to include instructions for salvaging meat.

The Council also drafted a proposal to the Alaska Board of Game requesting that all edible meat of the front quarters, hind quarters, and ribs from moose harvested in Unit 25 must remain on the bones until the meat is removed from the field or is processed for human consumption. The Council believes that the proposed regulation to the Alaska Board of Game would make enforcement of the salvage statutes easier. Several Council members suggested submitting a parallel proposal to the Federal Subsistence Board, because much of the land in Unit 25 is within the boundaries of U.S. Fish and Wildlife Service National Wildlife Refuges.

Current Events

The Council submitted a parallel proposal to the State of Alaska Board of Game to consider at its meeting Feb. 26–Mar. 7, 2010 (ADF&G 2010:158; EISRAC 2009a:220 and 2009b:327). The Board of Game did not adopt the proposed regulation change because it could find no evidence of a problem with wanton waste of moose in Unit 25, and it was concerned that the proposed regulation change would put an undue burden on hunters (Ardizzone 2010, pers. comm.).

Effects of the Proposal

If this proposal is adopted, the regulation would apply only to Federally qualified users hunting moose with a Federal permit in Unit 25. Currently, a Federal permit is required in one area, the Federal public lands in Unit 25D west. Federally qualified users hunting on Federal public lands in Unit 25D west would be required to follow the new regulation and leave the edible meat of the front quarters, hind quarters, and ribs from moose on the bones until the meat was removed from the field or was processed for human consumption. There would be no effect on any hunter in other areas of Unit 25.

There would be no affect on non-Federally qualified users.

If this proposal is not adopted, for moose harvested in Unit 25, no hunter would be required to leave the edible meat of the front quarters, hind quarters, and ribs on the bones until the meat was removed from the field or was processed for human consumption. However, existing salvage requirements in Federal and State regulations, presented above, would apply.

OSM PRELIMINARY CONCLUSION

Support Proposal WP10-88 **with modification** to apply the new regulation only before October 1.

The modified regulation should read:

> **§____.25(h) Removing harvest from the field**
>
> *You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 and Unit 25 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and*

moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.

Justification

This proposed regulation would affect only Federally qualified subsistence users hunting moose in Unit 25D west on Federal public lands, and would not affect non-Federally qualified users hunting moose anywhere in Unit 25. Federal wildlife regulations would be more restrictive than State regulations concerning hunters ability to remove the moose meat from the field. When making this recommendation, the Council indicated its intent was to address the problem of the spoilage of moose harvested by both non-Federally qualified hunters as well as Federally qualifed hunters, and this proposed regulation change would not affect non-Federally qualified moose hunters.

Moose meat spoiling in the field occurs with both Federally qualified and non-Federally qualified users of moose in Unit 25. The modified regulation would apply only before October 1 when warmer daytime temperatures contribute to meat spoiling. The State Board of Game at its meeting in February and March 2010 may adopt a similar proposal into State regulations. Leaving meat on the bone until it is removed from the field is an accepted method of enforcing salvage regulations.

ANALYSIS ADDENDUM

Current Events

The Council submitted a parallel proposal to the State of Alaska Board of Game to consider at its meeting Feb. 26–Mar. 7, 2010 (ADF&G 2010:158; EISRAC 2009a:220 and 2009b:327). The Board of Game did not adopt the proposed regulation change (Ardizzone 2010, pers. comm.). However, the Council had already met and supported the OSM modified regulation, described above, anticipating that the Board of Game would adopt a similar regulation.

OSM CONCLUSION

Oppose Proposal WP10-88.

Justification

This proposed regulation would affect only Federally qualified subsistence users hunting moose in Unit 25D west on Federal public lands, and would not affect non-Federally qualified users hunting moose anywhere in Unit 25. Federal wildlife regulations would be more restrictive than State regulations concerning hunters ability to remove the moose meat from the field. When making this recommendation, the Council indicated its intent was to address the problem of the spoilage of moose harvested by both non-Federally qualified hunters as well as Federally qualified hunters, and this proposed regulation change would not affect non-Federally qualified moose hunters. Additionally, the Board of Game decision to not adopt a similar regulation that would have applied to non-Federally qualified users occurred after the Council meeting. It is assumed here that the Council would not have supported this proposed regulation change if it knew the Board of Game was not going to adopt a similar action.

LITERATURE CITED

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-88**.** The Council supported the proposal. This action will promote better meat quality, reduce spoilage and reduce waste of a valuable food source. This proposal will aid enforcement of harvest limits because it will become more difficult to hide meat from an illegal animal with a legally harvested moose.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-88

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-88
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-88: This proposal would require that all edible meat of the front quarters, hind quarters, and ribs from moose harvested under federal subsistence regulations in Unit 25 remain on the bones until meat is removed from the field or processed for human consumption.

Introduction: Leaving moose meat on the bones until it is removed from the field and/or until it is consumed by humans is widely-practiced by state and federal subsistence users in Unit 25. However, many other hunters, including some federal subsistence users, remove the meat from the bone at the kill site. The meat can be successively salvaged for human consumption if proper procedures are followed when using the "boning" technique. The state has no quantifiable data from Unit 25 concerning the incidence of wasted meat resulting from improperly "boning" moose meat and suggests it rarely occurs. The proposal offers the alternative of adopting state meat-on-the-bone salvage requirement regulations for moose taken in Unit 25 under federal subsistence regulation, and federal subsistence regulations already adopt nonconflicting state regulations by reference**.**

Impact on Subsistence Users: If this proposal is adopted, successful federal subsistence moose hunters in Unit 25 will be required to transport the meat attached to the bones out of the field, resulting in more trips or heavier loads per trip.

Opportunity Provided by State: State regulations currently do not require that moose meat remain on the bone in Unit 25. The department assumes the proponent intended to reference other near by Game Management Units with meat-on-the-bone state regulation requirements (Units 9B, 13, 17, 18, 19A, 19B, 21, 23, and 24).

Conservation Issues: None.

Enforcement Issues: State enforcement officials generally acknowledge that meat-on-the-bone requirements make it easier to enforce meat salvage requirements. Adoption of this proposal may introduce confusion in Unit 25 because the state hunting regulations do not presently require meat on bone salvage requirements for moose.

The Eastern Interior Regional Advisory Council submitted a parallel proposal (#106) to the Alaska Board of Game. Proposal 106 was voted down by the Alaska Board of Game on March 2, 2010, because there was no supporting evidence to indicate a problem with wanton waste and adoption would place an unnecessary burden on users.

Recommendation: Oppose.

WP10-89 Executive Summary	
General Description	Proposal WP10-89 requests the exclusion of residents of Fort Greely from the customary and traditional use determination for caribou in Units 20D and 20E and for moose in Unit 20D. Fort Greely is located in Unit 20D. *Submitted by the Eastern Interior Regional Subsistence Advisory Council*
Proposed Regulation	**Customary and Traditional Use Determination** **Caribou** **Unit 20 D and 20 E** *Rural residents of Unit 12 (north of Wrangell-St. Elias National Preserve), 20D* ***(excluding residents of Fort Greely****) and 20E.* **Moose** **Unit 20 D** *Residents of Unit 20D* ***(excluding residents of Fort Greely****) and Tanacross*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**2 Support** **1 Oppose**

STAFF ANALYSIS
WP10-89

ISSUES

Proposal WP10-89, submitted by the Eastern Interior Regional Subsistence Advisory Council (Council), requests the exclusion of residents of Fort Greely from the customary and traditional use determination for caribou in Units 20D and 20E and for moose in Unit 20D. Fort Greely is located in Unit 20D.

DISCUSSION

The proponent requests the exclusion of residents of Fort Greely because of the "temporary nature of their residence" on Fort Greely, which, "does not allow for the establishment of a long term consistent pattern of use." The existing customary and traditional use determinations for caribou in Unit 20D and 20E and moose in Unit 20D include all residents of Unit 20D, including Fort Greely residents (see **Unit 20 Map**).

Under Federal subsistence management regulations, only those Fort Greely residents who have lived in Alaska for a year qualify for a State hunting license and are eligible to harvest caribou and moose under Federal subsistence management regulations.

Those who have not lived in Alaska for a year would be required to harvest caribou in Units 20D and 20E and moose in Unit 20D under State regulations for nonresidents.

Existing Federal Regulation

Customary and Traditional Use Determination

Caribou

Unit 20 D and 20 E

Rural residents of Unit 12 (north of Wrangell-St. Elias National Preserve), 20D, and 20E.

Moose

Unit 20 D

Residents of Unit 20D and Tanacross

Proposed Federal Regulation

Customary and Traditional Use Determination

Caribou

Unit 20 D and 20 E

Rural residents of Unit 12 (north of Wrangell-St. Elias National Preserve), 20D ***(excluding residents of Fort Greely****) and 20E.*

Moose

Unit 20 D

Residents of Unit 20D ***(excluding residents of Fort Greely****) and Tanacross*

Extent of Federal Public Lands/Waters

Federal public lands comprise less than 2% of Unit 20D, including Bureau of Land Management Lands (1.5%) and a small portion of the Yukon-Charley Rivers National Preserve, National Park Service (.5%). The small percentage of Federal public lands in Unit 20D has resulted in "no Federal open season" for moose and caribou in Unit 20D.

Federal public lands comprise 24% of Unit 20E, including Bureau of Land Management Lands (4%), primarily the Forty Mile Wild and Scenic River, and National Park Service Lands (20%), the Yukon-Charley Rivers National Preserve.

Regulatory History

When the Federal Subsistence Board (Board) assumed management of subsistence wildlife resources on Federal public lands in 1990, it adopted State of Alaska customary and traditional use determinations, including the existing customary and traditional use determinations for caribou in Units 20D and 20E and moose in Unit 20D. Fort Greely was not excluded from these customary and traditional use determinations. While some customary and traditional use determinations adopted from the State (i.e., Unit 13B caribou) do specifically exclude residents of military installations, the Board has not made it a practice to specifically exclude residents of military installations from customary and traditional use determinations. For example, residents of the Coast Guard bases in Units 4 and 8 are not excluded from any of the customary and traditional use determinations in Units 4 and 8.

Rural Status

During the review in 2006 of the rural/nonrural status of communities, as required by Federal subsistence regulations, four census designated places (referred to as the Delta Junction vicinity), Delta Junction, Big Delta, Deltana and Fort Greely, were reviewed to determine if these places should be considered as a group and if the group should be determined to be rural or nonrural. The Council heard extensive testimony from area residents in opposition to the inclusion of Fort Greely as part of this grouping (EISRAC 2006:110–126). Much of this testimony focused on the perceived "separateness" of Fort Greely from the other communities. Residents of the Delta Junction vicinity testified that the Fort has its own post office and the people at the Fort are mostly temporary with permanent residency in other states (EISRAC 2006a: 110–126). The Board voted to retain Fort Greely as part of this grouping because the community fulfilled the three guidelines for grouping. The Board also voted for this area, referred to as the Delta Junction vicinity, to retain its rural status.[1] The result of the Board's decision is that Fort Greely is considered a rural place under Federal subsistence management regulations. With a designation as a rural place, Fort Greely residents are eligible to harvest wild resources under Federal regulations as long as permanent residency is established.

[1]The three guidelines for grouping: (1) all four census designated places (CDPs) are road connected and proximal; (2) the majority of the high school-aged students from Big Delta, Deltana and Fort Greely attend high school in Delta Junction; and in the two outlying CDPs, over 30% of the workers commute within the vicinity (41% of the workers living in Big Delta commute either to Delta Junction, Deltana or Fort Greely, or to a remainder area within the Southeast Fairbanks Census area and 45% of the workers in Deltana commute to Delta Junction or Fort Greely (Federal Register 2007:25694).

Community Characteristics

Fort Greely is an U.S. Army base located near Delta Junction, Alaska in Unit 20D. The 2009 resident population was approximately 700 people and the total workforce including military, civilian, and contractors is approximately 1,400 people (U.S Army Alaska 2009:13). It is likely that a small number of civilian employees claim Fort Greely as their permanent residence, although the actual number is not known.

The U.S. Army has a long history in the Fort Greely area. According to the Division of Community and Regional Affairs (DCRA) community database, the U.S. Army Signal Corps completed the McCarthy Telegraph Station in this area in 1904. In 1942, at the same time as the construction of the Alaska Highway, military airfields were built in the Fort Greely area. In 1997, Fort Greely was listed for closure under the Department of Defense Base Realignment and Closure program. While in the process of being down-sized," the fort was identified as a potential missile defense site and became the site of U. S. missile complex in 2004 (DCRA 2010).

Today, Fort Greely provides logistical and security support to the U.S. Ground-based Midcourse Defense System operations at Fort Greely. It also provides support services to the Army's Cold Regions Test Center and the Northern Warfare Training Center based at Fort Wainwright near Fairbanks. Fort Greely also provides services such as roads, sewer and waste disposal, drinking water, and police and fire protection. The Fort provides housing, dining, transportation, recreation, and education programs and facilities for personnel living and working on Fort Greely (City of Delta Junction 2010).

No specific studies on the use of subsistence resources by Fort Greely residents have ever been conducted. The nature of Fort Greely has changed since the downsizing of the Fort in 1997.

Harvest History

Residents of Fort Greely do not qualify to harvest caribou or moose under Federal subsistence regulations unless Alaska has been their permanent, primary home for the previous year. If they have been absent, they must declare their intention to return to their home at Fort Greely.

Harvest data indicate that residents of Fort Greely have harvested caribou in Units 20D and 20E and moose in Unit 20E since recording began in 1983. Caribou and moose harvests in these units are administered by a joint State/Federal permit.

The Fortymile Caribou Herd Harvest Plan, 2006–2012, was developed by a wide array of stakeholders including ADF&G, ADF&G advisory committees, the Eastern Interior Regional Subsistence Advisory Council, the Federal Subsistence Board and Canadian First Nations and national government entities. One of the management aspects of the Fortymile Caribou Herd Harvest Plan, 2006–2012, is the use of a single State/Federal registration permit. This permit provides data necessary for timely management of hunts with harvest quotas which is the case with both caribou and moose in this area. **Tables 1–3** show the harvests of Fort Greely residents of moose and caribou for 1983–2004 with several annual gaps in data (ADF&G 2010).

Table 1: Unit 20D Caribou Fort Greely Permit/Harvests.

Year	# of Permits	Attempted	Harvested
2004	1	1	0
2000	4	4	0
1998	8	8	2
1997	3	3	0
1991	21	21	5
1990	17	17	6
1989	2	2	2
1988	3	3	3
1983	2	2	0
Total	61	61	18

Table 2: Unit 20E Caribou
Fort Greely Permit/Harvests.

Year	# of Permits	Attempted	Harvested
2004	4	4	1
2000	1	1	0
1999	3	3	0
1998	1	1	0
1995	5	5	1
1994	12	12	0
1993	21	21	0
1992	13	13	2
1991	40	40	8
1990	26	26	10
1989	5	5	0
1983	3	3	0
Total	134	134	22

Table 3: Unit 20D Moose
Fort Greely Permit/Harvests.

Year	# of Permits	Attempted	Harvested
2004	2	2	0
2000	2	2	1
1999	11	11	2
1998	10	10	4
1997	13	13	5
1996	15	15	1
1995	12	12	3
1994	23	23	2
1993	32	32	2
1992	37	37	6
1991	63	63	14
1990	60	69	13
1989	76	76	8
1988	59	59	17
1987	62	62	11
1986	46	46	9
1985	40	40	4
1984	70	70	5
1983	70	70	11
Total	703	703	118

Effects of the Proposal

If this proposal is adopted, it would exclude the permanent residents of Fort Greely from being able to harvest caribou in Units 20D and 20E and moose in Unit 20D under Federal subsistence management regulations. This would have no effect for moose or caribou harvests in Unit 20D because there are no Federal open seasons and virtually no Federal public lands.

If this proposal is adopted, Fort Greely residents who qualify for a State hunting license (residency of one year) would continue to be eligible to harvest moose and caribou in Unit 20D and 20E under State hunting regulations.

If this proposal is not adopted, Fort Greely residents who have established residency would continue to be Federally qualified to hunt under Federal regulations for caribou in Unit 20D and 20E and for moose in Unit 20D. As noted, however, the lack of Federal public lands in Unit 20D has created a “no Federal open season” in Unit 20D for moose and caribou. A Federal season is only open for harvesting caribou in Unit 20E.

Whether the proposal is adopted or not, those Fort Greely residents who have not established residency would continue to be eligible to harvest moose and caribou under State regulations for nonresidents for specific hunt areas for caribou in Unit 20D and 20E and for moose in Unit 20D.

OSM CONCLUSION

Oppose Proposal WP10-89.

Justification

Fort Greely is considered part of the rural grouping of the communities in the Delta Junction vicinity due to the integration of these communities. With a designation as a rural community, Fort Greely residents are eligible to harvest wild resources under Federal subsistence management regulations, as long as a one year residency is established, and the customary and traditional use determination includes that

community for a particular species. The existing customary and traditional use determinations for caribou in Unit 20D and 20E and moose in Unit 20D include all residents of Unit 20D, including Fort Greely residents.

The data indicate that Fort Greely residents have a history of caribou harvest in Units 20D and 20E and moose in Unit 20D, thus, there is no evidence to support exclusion of permanent residents of Fort Greely from the existing customary and traditional use determination for caribou in Units 20D and 20E and moose in Unit 20D.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-89. The residents of Fort Greely do not demonstrate characteristics of communities with subsistence use of fish and wildlife. Fort Greely is now a missile base with transient workers. Residents working on the base generally do not live on the Fort but live in nearby communities. Fort Greely has been determined to not have customary use of moose in 13B.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-89

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-89. I agree that Ft. Greely Residents should be excluded from the eligibility to participate in the federal subsistence hunt for caribou and moose in GMU 20D and 20E, for the reasons stated in the proposal.

Don Quarberg, Delta Junction, Alaska

Oppose Proposal WP10-89. Residents of Fort Greely cannot receive subsistence permits anyway. Also commented that the housing on Fort Greely has changed since the post was an active Army installation as regular public individuals are now allowed to rent housing and many people are regular community citizens now.

Delta Junction Advisory Committee

Support Proposal WP10-89. We positively support WP10-89 to "exclude Fort Greely from a positive C&T determination." We agree whole heartedly that residents of Fort Greely are transients, and live on the military base as long as the military requires them to be there, and then they move elsewhere. They do not meet the 8 criteria of C&T determinations. They do not have a long-term, historical use of the resources; practice an accustomed customary & traditional use lifestyle, such as the local long-term residents of Unit 12, Unit 20D and 20E.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Comments WP10-89
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-89: This proposal, submitted by the Eastern Interior Regional Subsistence Advisory Council, requests exclusion of residents of Fort Greely from the customary and traditional use determination for caribou in Game Management Units (GMU) 20D and 20E and for moose in Unit 20D. Fort Greely is located in Unit 20D.

Customary and Traditional Determination: Fort Greely, Delta Junction, and the greater Delta area are located within the Fairbanks Nonsubsistence Area established by the Joint Boards of Fisheries and Game as an area in which customary and traditional uses of wild resources is not a principle characteristic of the economy and culture. Documented use by residents of nonsubsistence areas under state regulations does not necessarily translate into customary and traditional patterns of use of 20D and 20E caribou and GMU 20D moose in and around GMUs 20, 12, and 13 communities. Other than the data reviewed by the Joint Boards in 1992 (ADF&G Subsistence TP 335), no specific studies have been conducted on the wild resource use patterns of Delta Junction area residents, including Fort Greely, as noted in the federal staff analysis. In addition, there is no discussion of customary and traditional uses by residents of Fort Greely in relation to the eight federal regulatory factors to determine whether or not residents of the community or area "generally exhibit" in a holistic manner the patterns of use of caribou and moose populations to be excluded or retained as a positive customary and traditional determination.

Recommendation: Oppose.

WP10-90 Executive Summary	
General Description	Proposal WP10-90 requests the addition of some of the residents of Unit 12: the Tok Cutoff Road, (mileposts 79-110 Mentasta Pass) to the list of those communities and residents with a customary and traditional use determination for caribou in Units 13B and 13C. *Submitted by the Eastern Interior Regional Subsistence Advisory Council*
Proposed Regulation	**Unit 13B—Caribou** *Residents of Units 11, 12 (along the Nabesna Road* ***and Tok Cutoff Road, mileposts 79-110 Mentasta Pass****), 13, residents of Unit 20 except Fort Greely, and the residents of Chickaloon.* **Unit 13C—Caribou** *Residents of Units 11, 12 (along the Nabesna Road* ***and Tok Cutoff Road, mileposts 79-110 Mentasta Pass****), 13, Chickaloon, Dot Lake and Healy Lake.*
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP10-90

ISSUES

Proposal WP10-90, submitted by the Eastern Interior Regional Subsistence Advisory Council, requests the addition of some of the residents of Unit 12: the Tok Cutoff Road, (mileposts 79-110 Mentasta Pass) to the list of those communities and residents with a customary and traditional use determination for caribou in Units 13B and 13C.

DISCUSSION

The proponent states that the subsistence patterns of the residents of Tok Cutoff Road (mileposts 79-110 Mentasta Pass, referred to in this analysis as the proposal area), have subsistence patterns similar to those of Slana and Mentasta Lake (see **Map 1**). Further, the proponent states that residents of this area harvest other subsistence resources in the Copper Basin and find it confusing to have a customary and traditional use determination for moose in this area, but not for caribou. The proponent also asserts that residents of the area in question were inadvertently omitted from the current customary and traditional use determination for caribou.

Existing Federal Regulation

Customary and Traditional Use Determination

Unit 13B—Caribou

Residents of Units 11, 12 (along the Nabesna Road), 13, residents of Unit 20 except Fort Greely, and the residents of Chickaloon.

Unit 13C—Caribou

Residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, Dot Lake and Healy Lake.

Proposed Federal Regulation

Unit 13B—Caribou

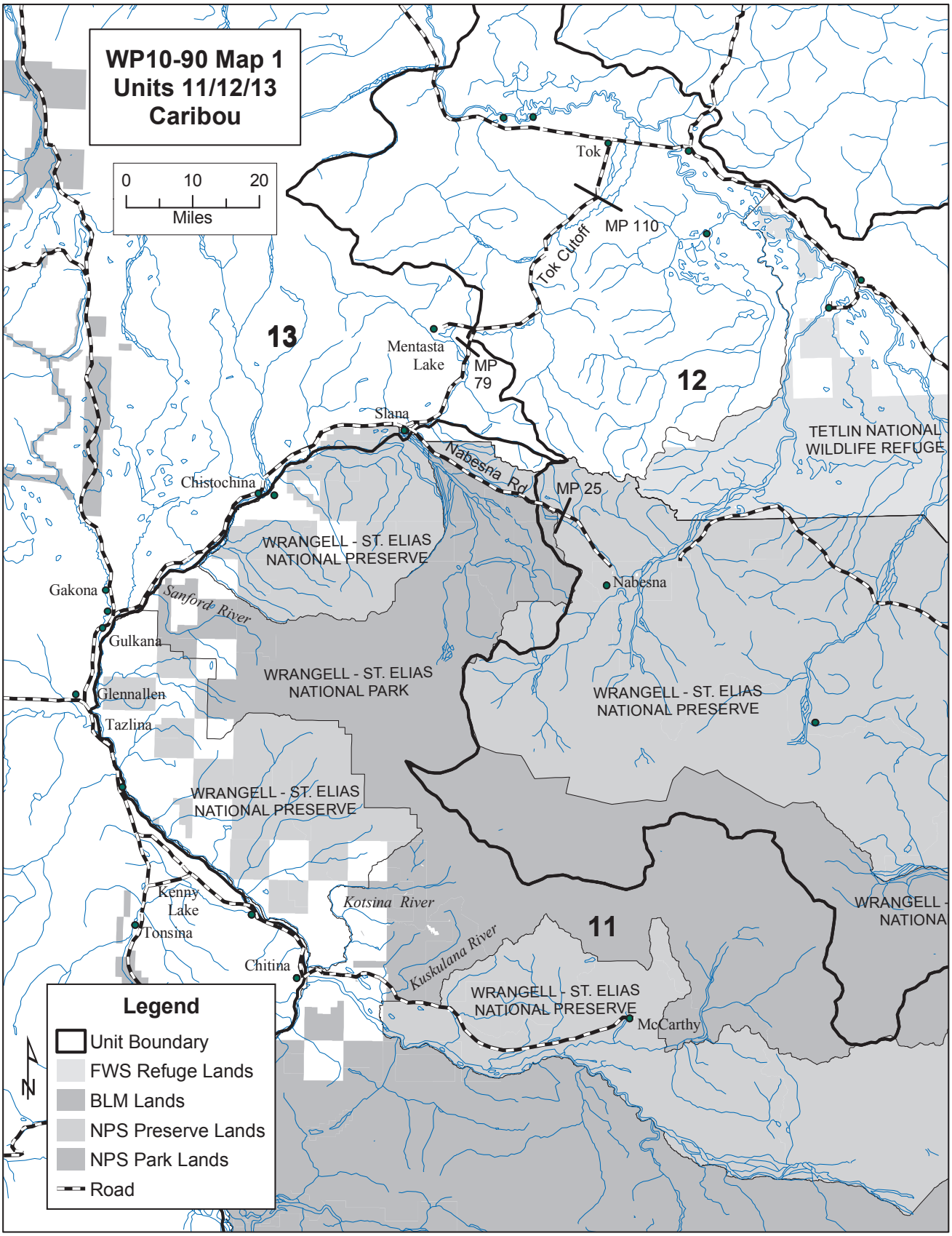
Residents of Units 11, 12 (along the Nabesna Road ***and Tok Cutoff Road, mileposts 79-110 Mentasta Pass****), 13, residents of Unit 20 except Fort Greely, and the residents of Chickaloon.*

Unit 13C—Caribou

Residents of Units 11, 12 (along the Nabesna Road ***and Tok Cutoff Road, mileposts 79-110 Mentasta Pass****), 13, Chickaloon, Dot Lake and Healy Lake.*

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 7% of Unit 13B, managed by the Bureau of Land Management, primarily the Delta and Gulkana Wild and Scenic Rivers.


WP10-90 Map 1
Units 11/12/13
Caribou
0 10 20
Miles
Tok
MP 110
Tok Cutoff
13
Mentasta Lake
MP 79
12
Slana
Nabesna Rd
MP 25
TETLIN NATIONAL WILDLIFE REFUGE
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Nabesna
Gakona
Sanford River
Gulkana
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Glennallen
Tazlina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Kenny Lake
Kotsina River
Tonsina
11
WRANGELL - NATIONA
Chitina
Kuskulana River
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
Legend
Unit Boundary
FWS Refuge Lands
BLM Lands
NPS Preserve Lands
NPS Park Lands
Road
N

Federal public lands comprise less than 1% of Unit 13C, managed by the National Park Service, Wrangell St. Elias National Preserve.

Regulatory History

When the Federal Subsistence Board (Board) assumed management of subsistence wildlife resources on Federal public lands in 1990, it adopted State of Alaska customary and traditional use determinations which had been made by herd, rather than by Unit. When the Board was subsequently asked to revise its customary and traditional use determinations for caribou, it based its customary and traditional use determinations on Unit, rather than on herd, with the rationale that caribou herds move across Units (FWS 1997:99; FSB 1997:45; SCSRAC 1997:86).

To explain, the State of Alaska customary and traditional use determination for Units 13 and 14B was for the Nelchina Caribou Herd and those eligible to hunt caribou under State subsistence regulations were the residents of Unit 11, Unit 12 [only those] along the Nabesna Road, and Unit 13. The Federal subsistence program adopted this same determination by herd for Units 13 and 14B. However, in 1997, the Board revised the customary and traditional use determination to reflect use of caribou by Unit so that the revised determination for caribou in Units 13B and 13C include the same group of residents, with a few additions, from the original determinations: residents of Unit 11, Unit 12 [only those] along the Nabesna Road, and Unit 13.

In 1997, research was conducted by the National Park Service to address numerous backlogged and new customary and traditional use proposals for Units 11, 12, 13 and 20 (FWS 1997:36-158, NPS 1995, NPS 1994). There were eight proposals for customary and traditional use of caribou in these units (FWS 1997:81-39). Proposal WP97-24A requested revision of the customary and traditional use determination for caribou in Units 11, 12, 13 to make them consistent in the three units (FWS 1997:84). This proposal was rejected by the Board (FSB 1997:49) because the Board did not find evidence to support the proposal.

In 1998, the Board adopted Proposals 34 and 35 with modification to include Dot Lake and Healy Lake (both in Unit 20 D) to the list of residents with customary and traditional uses of caribou in Units 13B and 13C (FSB 1998:251, 257). The inclusion of these communities was based on harvest history in and kinship ties with Unit 13B and 13C communities (FWS 1998:182; SCSRAC 1998:143, 148).

Community Characteristics

The settlement patterns of the Upper Tanana and Copper Basin areas are diverse; some residents live in "recognized" communities and many households are dispersed along the road system between communities (Cellarius 2010, pers. comm.). It is difficult to describe the community characteristics of Tok Cutoff Road (Mentasta Pass) because it is not a community per se. It is not listed in the State of Alaska Division of Community and Regional Affairs community database. It is not a census designated places (US Census 2000). Additionally, it is difficult to determine harvest estimates based on the ADF&G harvest ticket data because residents can get their mail at one of several post offices in the area and their mailing address does not necessarily indicate where they actually live. [1]

[1] For example: Nabesna Road residents are on a rural delivery route that have a Gakona Address and a Gakona zip code. The same zip code is also used to deliver mail to the Slana post office although mail for Slana has "Slana" on the address rather than "Gakona" (Cellarius 2010, pers. comm.).

Tok Cutoff Road or Mentasta Pass

For the purposes of this analysis, the area of milepost 79-110 of the Tok Cutoff Road was designated by the proponent because this segment of the road extends north from the boundary of Units 12 and 13. The Mentasta Pass area of the Tok Cutoff Road was described as "homesites along the Tok Cutoff from milepost 79-110" (McMillan and Cuccarese 1988:127; NPS 1995:323).

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 11 households in the Tok Cutoff area with an estimated population of 26 people (ADF&G 2010).[2] In 1987, these households harvested an estimated 187 pounds of subsistence resources per person or approximately 4,962 pounds for the Tok Cutoff Road area (ADF&G 2010). At the Fall 2009 EISRAC meeting, one member stated, "…the community around the Tok Cutoff, it is where I live, I know, but I can tell you that the surrounding area from Mentasta on the Tok Cutoff Road and Nabesna Road, we're like all one. We all kind of do the same thing. So I just wanted to align the people where we live" (EISRAC 2009:322). No ADF&G Subsistence Division studies have been conducted on Mentasta Pass since 1987 and there is no specific census data for this area, thus it is unknown how many residents live in this area today nor what their subsistence uses are.

Mentasta Lake

The proponent stated that the subsistence harvest patterns of the residents of the Tok Cutoff Road (mileposts 79-110, Mentasta Pass), located in Unit 12, is similar to those of Mentasta Lake and Slana, both located in Unit 13. For this reason, the characteristics of these two communities are reviewed here.

Not to be confused with Mentasta Pass, Mentasta Lake, also referred to as Mentasta, is a distinct community and a census designated place located in Unit 13. According to the Alaska Division of Community and Regional Affairs Community database, the current 2010 population is approximately 112 and it is located 6 miles off the Tok Cutoff Road on the west side of Mentasta Pass. Mentasta Lake is further described as "primarily Athabascan and subsistence activities are important…the families in Mentasta Lake come from Nabesna, Suslota, Slana and other villages with the area" (DCRA 2009). According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 25 households in this area with an approximate population of 77 people (ADF&G 2010). In 1987, these households harvested approximately 125 pounds of subsistence resources per person or a total community harvest of 9,672 pounds (ADF&G 2010). Mentasta Lake is situated on the northern border between the Ahtna Athabascan (Copper Basin) communities or territory and the Upper Tanana Athabascan communities or territory (Map in Haynes and Simeone 2007:9). This border also bisects the Nabesna Road as does the border between Units 11 and 12.

Slana

Slana, according to DCRA, has a current 2010 population of 107 people, "the community is comprised primarily of homesteaders…it stretches along the Nabesna Road" (to approximately mile 4) (DCRA 2009). Slana has also been described as "a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads (McMillan and Cuccarese 1988:142). According to ADF&G Subsistence Division surveys, conducted in 1987, there were approximately 25 households in this area with an approximate population of 57 people (ADF&G 2010). In 1987, these households harvested approximately

[2]The Mentasta Pass or Tok Cutoff Road survey unit for the 1987 study was the area between mileposts 79-110 (McMillan and Cuccarese 1988:127).

249 pounds of subsistence resources per person or a total community harvest of 14,185 pounds (ADF&G 2010).

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) a pattern of use recurring in specific seasons for many years; (3) a pattern of use consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, conditioned by local characteristics; (4) the consistent harvest and use of fish or wildlife as related to past methods and means of taking: near, or reasonably accessible from the community or area; (5) a means of handling, preparing, preserving, and storing fish or wildlife which has been traditionally used by past generations, including consideration of alteration of past practices due to recent technological advances, where appropriate; (6) a pattern of use which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation; (7) a pattern of use in which the harvest is shared or distributed within a definable community of persons; and (8) a pattern of use which relates to reliance upon a wide diversity of fish and wildlife resources of the area and which provides substantial cultural, economic, social, and nutritional elements to the community or area.

The Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who generally exhibit the eight factors. The Board does not use such determinations for resource management or restricting harvest. If a conservation concern exists for a particular population, the Board addresses that concern through the imposition of harvest limits or season restrictions rather than by limiting the customary and traditional use determination.

Specific information on each of the eight factors is not required because a community or area seeking a customary and traditional use determination only has to "generally exhibit" the eight factors (50 CFR 100.16(b) and 36 CFR 242.16(b)).

The Board previously determined that the residents of Unit 12 generally exhibit the eight factors for caribou and has made positive customary and traditional use determinations for the residents of Unit 12— which includes the residents of the proposal area— for caribou in Unit 12, Unit 11 north of the Sanford River, and Units 20D and 20E. The question for this analysis is not whether a customary and traditional pattern of use of caribou occurred, but rather whether or not the residents of the proposal area have a pattern of use harvesting caribou in Units 13B and 13C as well. As such, it is a question of where the use occurs, not if the use occurs. Thus a full analysis of the eight factors is not necessary because an analysis of the eight factors has been conducted previously (FWS 1997 36-261; FSB 1997, FWS 1998:182, 192, 196; SCSRAC 1998:144, 148; FSB 1998:252; NPS 1994, NPS 1995).

Mentasta Lake and Slana, in Unit 13, are in close proximity to the proposal area (**Map 1**). Menatasta Lake is located only 6 miles to the west of the Tok Cutoff Road. Slana is a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads. Slana is in Unit 13 on the border between Units 11 and 13 and close to the border of Unit 12. Mentasta Lake also is in Unit 13, but close to the border of Unit 12. The proposal area of the Tok Cutoff Road is in Unit 12. The proponent states that the residents of the proposal area share similar subsistence patterns with the residents of Slana and Mentasta (Unit 13), which are both included in the positive customary and traditional use determinations for caribou in Units

13B and 13C. In addition, the residents of Nabsena Road in Unit 12 are included in the caribou customary and traditional use determinations for Units 13B and 13C. The Nabesna Road also is in close proximity to the Tok Cutoff Road (see **Map 1).**

The record indicates that when the Board was addressing customary and traditional uses of Unit 12 residents, it carefully reviewed the information provided in staff analyses, council recommendations, and public comment (FWS 1997 36-261; FSB 1997, FWS 1998:182, 192, 196; SCSRAC 1998:144, 148; FSB 1998:252; NPS 1994, NPS 1995). However, the Board did not specifically discuss the uses of the residents residing along the Tok Cutoff Road (mileposts 79-110, Mentasta Pass). Because the Board looked at Unit 12 in a holistic manner and did not distinguish the pattern of use of the residents of the proposal area from the Upper Tanana region, it did not specifically address the pattern of use of the residents of the Tok Cutoff Road, concluding that the information available did not indicate a customary and traditional use of caribou in Unit 13B and 13C by Unit 12 residents. The Board's decision was based on the premise that the Unit 12 boundary is not only a boundary of management units, but also a boundary between Native cultures and harvest areas.

Unit 12 residents, however, are not limited to Athabascan residents. In the early 1980s, Reckord noted:

> *Subsistence resources have played a major role in the history of white people in the Copper River Valley. From the very first visit of Russian-Aleut explorers in 1848 through the gold rush and mining period at the turn of the century and into the present, subsistence resources have contributed to the diet of the residents of the valley…Over the years an indigenous white culture developed which highly valued the use of subsistence foods such as moose, caribou, sheep and fish. At first some of the white settlers learned from the Native people; they were educated by young Natives in the local species and where these species could be taken… the use of subsistence resources by white people in the region extends beyond mere recreation (1983:166).*

Further, Reckord described the Tok Cutoff area:

> *The people living along the Tok Cutoff often live several miles from their nearest neighbors…The Tok Cutoff people are often oriented to businesses serving the tourists and hunters who regularly travel this route between the Copper River Valley and the Alaska Highway. Homesteaders, retired people, and guides are also found living along the road. Some of these residents have lived here for 20 or 30 years and suddenly find the area developing around them…Most of the permanent residents along the Tok Cutoff utilize a number of subsistence species each year. Most people are oriented to the highway…It is obvious when talking to the Tok Cutoff residents that it is the bush lifestyle that has brought them to this place (1983:256-257).*

There is no new information on caribou harvests by residents of the proposal area in Units 13B and 13C. The ADF&G harvest ticket database was searched for new harvest information for the proposal area, but the database does not accurately reflect harvests for the areas of consideration in this proposal because of the difficulties in identifying location of hunter residence by mailing address. Residents in the proposal area get their mail in communities near the area, so there is no way to distinguish their harvests from others in these communities. Queries conducted in 2010 of the ADF&G Subsistence Division's Community Subsistence Information System (ADF&G 2010) also did not reveal any new information regarding the caribou harvests of residents of the proposal area in Unit 13B or 13C.

The people living in proposal area in close proximity to Slana and Mentasta Lake should not be excluded from being eligible to hunt in the same hunt areas that Slana and Mentasta Lake use just because they live along a road and not in Slana or Mentasta Lake. Therefore, the residents of the proposal area should be

included in the customary and traditional use determination for caribou for Unit 13B and 13C, the same as Slana and Mentasta.

Effects of the Proposal

If this proposal is adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79-110, Mentasta Pass), would have a customary and traditional use determination for caribou in Units 13B and 13C. This would allow the residents of the proposal area to hunt for caribou while also hunting for moose in Unit 13B. The effect of adopting the proposal is expected to be minimal on other subsistence users or on caribou because the number of people who would be added to the pool of users is anticipated to be quite small as there are only an estimated eleven households. In addition, only 7% of Unit 13B has Federal public lands and less than 1% of Unit 13C has Federal public lands. The only area where residents of the proposed area would be likely to hunt for caribou would be in the Delta and Gulkana Wild and Scenic Rivers in Unit 13B.

OSM CONCLUSION

Support Proposal WP10-90.

Justification

The Federal Subsistence Board previously determined that the residents of Unit 12 generally exhibit the eight factors for caribou and made positive customary and traditional use determinations for the residents of Unit 12—which includes the residents of the Tok Cutoff Road (mileposts 79 -110, Mentasta Pass) — for caribou in Unit 12, Unit 11 north of the Sanford River, and Units 20D and 20E. The Federal Subsistence Board also has previously addressed the customary and traditional use determinations for caribou in Units 13B and 13C, however, the Board has not specifically addressed the Tok Cutoff Road in Unit 12.

The proponent states that the residents of the proposal area have subsistence use patterns similar to those of Slana and Mentasta. While there is no new information regarding the customary and traditional uses of the residents of the proposal area, this area is in close proximity to Slana and Mentasta Lake, which are included in the customary and traditional use determinations for caribou in Units 13B and 13C. People living along a road close to a community should be included in the customary and traditional use determinations of the closest community or communities.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR REGIONAL ADVISORY COUNCIL

Support Proposal WP10-90. The Council determined that residents of this area have the same characteristics of the nearby communities of Slana and Mentasta Lake. Simply because some people reside near a road should not preclude them from the subsistence use of caribou. Harvest records are tabulated by address and many residents of this section of the highway have mailing addresses in Tok, Mentasta or Gakona.

SOUTHCENTRAL REGIONAL ADVISORY COUNCIL

Support Proposal WP10-90. The information provided supports the proposal to recognize customary and traditional use of caribou in Units 13B and 13C by some residents of Unit 12.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-90

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-90
April 30, 2010; Page 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-90: Submitted by the Eastern Interior Regional Subsistence Advisory Council, this proposal requests a positive finding of customary and traditional use of caribou in Game Management Units 13B and 13C by residents of Unit 12 along the Tok Cutoff Road from mileposts 79 through 110, known as Mentasta Pass.

Customary and Traditional Determination: Residents along the Tok Cutoff Road miles 79-110 Mentasta Pass live outside established nonsubsistence areas established by the Joint Boards of Fisheries and Game and have a well-established customary and traditional pattern of use and sharing of caribou harvested in Unit 13. The Department's Division of Subsistence finds sufficient evidence of use by these residents of Unit 12 that "holistic application" and "generally exhibit" the eight federal regulatory factors, also documented in discussion of evidence for all eight regulatory factors in previous federal determinations, to support the proposal to include residents of this additional area in the existing positive finding of a federal determination of customary and traditional use of caribou in Unit 13B and 13C caribou.

Recommendation: Support

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-90 for the reasons stated in the justification for the OSM Conclusion.

Wrangell-St. Elias National Park Subsistence Resource Commission

Support Proposal WP10-90. We support WP10-90 to grant a positive C&T determination to the residents of Tok Cutoff Road milepost 79–110 Mentasta Pass, with the exclusion of Fort Greely. They have used the resources and meet the 8 criteria of the C&T determination.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-91 Executive Summary	
General Description	Proposal WP10-91 requests that the Unit 25 brown bear/grizzly bear (*Ursus arctos*) harvest limit be increased from 1 to 2–3 bears. *Submitted by Phillip Solomon of Fort Yukon*
Proposed Regulation	**Unit 25—Brown Bear** *Unit 25A and 25B — ~~1~~ **3** bear**s*** — *Aug. 10–June. 30* *Unit 25C — ~~1~~ **3** bear**s*** — *Sept. 1–May 31* *Unit 25D — ~~1~~ **3** bear**s*** — *July 1–June 30* *Note: The hide, skull and edible meat of a brown bear must be salvaged for human use*
OSM Conclusion	**Support** Proposal WP10-91 **with modification** to increase the harvest limit to two bears.
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-91 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	Another option the Interagency Staff Committee identified would be to defer this proposal until the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, ADFG, CATG and Yukon Flats villages) has addressed this issue for Unit 25.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-91

ISSUES

Proposal WP10-91, submitted by Phillip Solomon of Fort Yukon, requests that the Unit 25 brown bear/ grizzly bear (*Ursus arctos*) harvest limit be increased from 1 to 2–3 bears.

DISCUSSION

The proponent claims that the current harvest limit of 1 bear is too low to meet needs for traditional subsistence uses and that there is a high number of brown bears. The proponent advocates that an increase in the harvest limit to 2–3 bears will also help compensate for low moose and salmon numbers when trying to meet subsistence needs.

Note: Clarification was provided by the proponent as to exactly how many brown bears should be proposed for the harvest limit after the proposal was distributed for public comment. The proponent would like the harvest limit to be set at 3 bears for Unit 25.

Existing Federal Regulation

Unit 25—Brown Bear

Unit 25A and 25B — 1 bear	*Aug. 10–June. 30*
Unit 25C — 1 bear	*Sept. 1–May 31*
Unit 25D — 1 bear	*July 1–June 30*

Note: The hide, skull and edible meat of a brown bear must be salvaged for human use

Proposed Federal Regulation

Unit 25—Brown Bear

*Unit 25A and 25B — ~~1~~ **3** bear**s***	*Aug. 10–June. 30*
*Unit 25C — ~~1~~ **3** bear**s***	*Sept. 1–May 31*
*Unit 25D — ~~1~~ **3** bear**s***	*July 1–June 30*

Note: The hide, skull and edible meat of a brown bear must be salvaged for human use

Existing State Regulations

Units 25A and 25B—Brown/Grizzly Bear

Residents and Nonresidents—1 bear every regulatory year	*Aug. 10–June 30*

Unit 25C—Brown/Grizzly Bear

Residents and Nonresidents — 1 bear every regulatory year	*Sept. 1–May 31*

Unit 25D—Brown/Grizzly Bear

Resident — 1 bear every regulatory year	*July 1–Nov. 30*
Or	
Resident — 1 bear every regulatory year	*Mar. 1–June 30*
Nonresident — 1 bear every regulatory year	*Sept. 1–Nov. 30*
Or	
Nonresident — 1 bear every regulatory year	*Mar. 1–June 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 25 and consists of U.S. Fish and Wildlife Service (37%), Bureau of Land Management (16%), and National Park Service (2%) lands (see **Map 1**).

Customary and Traditional Use Determinations

Residents of Unit 25D have a positive customary and traditional use determination for hunting brown bear in Unit 25D.

Residents of Unit 25 and Eagle have a positive customary and traditional use determination for hunting brown bear in Unit 25 Remainder.

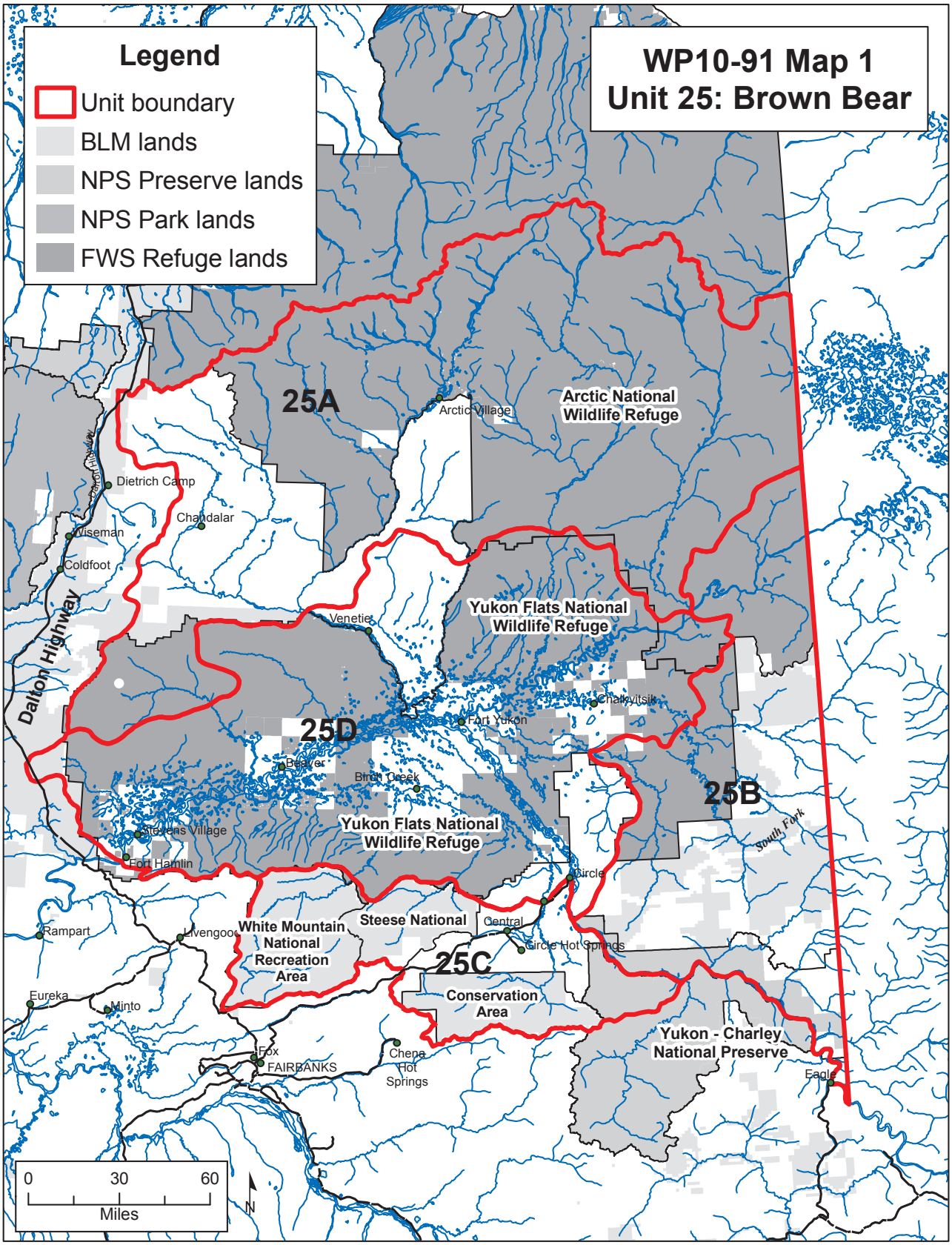
Regulatory History

There was no Federal open season for brown bears in Unit 25 during the 1990–1991 through 1998–1999 regulatory years. In 1999, the Federal Subsistence Board (Board) adopted WP99-57 and WP99-58 to open a year-round brown bear season with a 1 bear harvest limit in Unit 25D due to adequate abundance and expected low harvest levels. In 2001, the Board adopted WP01-36 to open a September 1–May 31 brown bear season with a 1 bear harvest limit in Unit 25 Remainder. Brown bear abundance was determined to be adequate; anticipated harvest was expected to be minimal; and harvest quotas were not being met under the State regulations.

The State regulations have had a brown bear harvest for Unit 25 before the inception of the Federal Subsistence program in 1990. Under the State regulations, harvest limits were set at one brown bear every four years up until regulatory year 1998–1999 for Unit 25D and 2004–2005 for all of Unit 25. The State harvest limit was then increased to one brown bear every regulatory year starting in regulatory year 1998–1999 for Unit 25D and 2004–2005 for all of Unit 25.

Biological Background

Brown bears are widely distributed in northeastern Alaska. The brown bear population for Unit 25 declined in the 1960s primarily from aircraft-supported hunting associated with guiding. As a result, regulations were implemented to limit harvest starting in 1971. As the population recovered, regulations


Legend
Unit boundary
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
WP10-91 Map 1
Unit 25: Brown Bear
25A
25B
25C
25D
Arctic National Wildlife Refuge
Arctic Village
Yukon Flats National Wildlife Refuge
Venetie
Chalkyitsik
Fort Yukon
Beaver
Birch Creek
Stevens Village
Fort Hamlin
Circle
Central
Circle Hot Springs
Steese National Conservation Area
White Mountain National Recreation Area
Rampart
Livengood
Eureka
Minto
Fox
FAIRBANKS
Chena Hot Springs
Yukon - Charley National Preserve
Eagle
South Fork
Dalton Highway
Dietrich Camp
Chandalar
Wiseman
Coldfoot
0
30
60
Miles
N

were gradually liberalized. Population trend data for Unit 25 are currently sparse; however, there is a possibility that the population has increased or expanded into new habitat because local residents on the Yukon River reported seeing more brown bears recently compared to years prior to 2000 (Lenart 2007).

The current population estimate of brown bears in Units 25A, 25B, and 25D is based on the 1993 estimate of approximately 1,200 brown bears (2.4 bears/100 mi^2) (Lenart 2007) and estimated densities and population size slightly varies between the units (**Table 1**). In the mountainous portion of Unit 25C, Eagan (1995) (*cited* in Young 2007) determined that there was a medium density (1.3–2.6 bears/100 mi^2).

In northern Alaska, female brown bears do not successfully reproduce until they are older than 5 years (Reynolds 1987). The delay in reproduction, as well as small litter sizes (1.6 cubs/litter), long intervals between successful reproductive events and short potential reproductive periods cause the low rates of successful production in brown bears in northern Alaska (U.S. Fish and Wildlife Service 1982). In addition, female brown bears exhibit high fidelity to home ranges and little emigration or immigration (Reynolds 1993 *cited* in Lenart 2007). Therefore, brown bears are often managed conservatively.

Brown bears in Unit 25D have been identified as a significant predator on moose calves that contributes to maintaining a low density of moose. In their moose mortality study, Bertram and Vivion (2002) found that predation was responsible for 97% of known calf mortality, with brown bears causing 39% of it, second only to black bear at 45%. As a result, the *Yukon Flats Cooperative Moose Management Plan* (ADF&G 2002) prescribes increasing brown bear harvest.

Harvest History

The Alaska Department of Fish and Game (ADF&G) management objectives for Unit 25 brown bear includes: Managing a population capable of sustaining mean annual harvest of 30 bears in Unit 25A and 29 bears in Units 25B and 25D, with a minimum of 60% males in the harvest (Lenart 2007); and manage for a 3-year mean annual human-caused bear (≥2 years of age) mortality of 6 from Unit 25C (Young 2007). The harvestable surpluses for Unit 25A and Units 25B and 25D are based on the conservative assumption that 5% of the total population can be harvested on a sustainable basis. The ADF&G also wants to manage for a temporary reduction in brown bear numbers and predation on moose in Unit 25D until moose populations recover (Lenart 2007).

Based on reported harvest, brown bear management objectives were generally met in Unit 25 (Lenart 2007, Young 2007). Each year, the total reported harvest was below the allowable harvest for each unit and most often the ratio of harvest was 60+% male for each year (**Tables 1 and 2**). Non-Federally qualified subsistence users and nonresidents account for the majority of the reported harvest, while Federally qualified subsistence users often account for <8% of the reported harvest each year for Unit 25A (**Table 3**). In Units 25B and 25D, reported harvest is usually <7 bears each year for all hunter groups (**Table 4**).

Table 1. Units 25A, 25B, 25C, and 25D estimated brown bear population and allowable sustainable harvest (Lenart 2007, Young 2007).

Unit	Area (mi^2)	Estimated Density/100 mi^2	Estimated Population Size	Allowable Harvest
25A	21,280	2.8	596	30
25B and 25D	26,660	2.2	587	29
25C	-	medium (1.3–2.6)	-	6

Table 2. Unit 25A, 25B, 25C, and 25D brown bear mortality (Lenart 2007, Thomas 2006, Young 2007).

Regulatory Year	Unit 25A		Unit 25B and 25D			Unit 25C	
	Mortality	% Male	Mortality	% Male	[a]Household Survey Data Mortality	Mortality	% Male
1995–1996	15	67	2	100	1	2	100
1996–1997	21	55	4	75	0	3	33
1997–1998	15	47	0	0	1	1	100
1998–1999	13	67	2	100	0	1	0
1999–2000	13	85	6	67	-	1	100
2000–2001	7	57	1	100	-	3	67
2001–2002	14	79	1	100	-	5	60
2002–2003	23	65	11	64	5	3	0
2003–2004	26	48	2	100	-	1	0
2004–2005	24	50	3	100	22	5	100
2005–2006	24	50	1	100	-	6	80
2006–2007	-	-	-	-	37	-	-
2007–2008	-	-	-	-	17	-	-
2008–2009	-	-	-	-	22	-	-

[a]Househhold survey data does not include nonlocal harvest of brown bears.

Table 3. Unit 25A residency of successful brown bear hunters, regulatory years 1995–2006 (Lenart 2007).

Regulatory Year	Local resident (%)	Nonlocal resident (%)	Nonresident (%)	Total Successful Hunters
1995–1996	0 (0)	4 (29)	10 (71)	14
1996–1997	0 (0)	2 (10)	18 (90)	20
1997–1998	0 (0)	3 (23)	10 (77)	13
1998–1999	1 (8)	3 (23)	9 (69)	13
1999–2000	0 (0)	4 (29)	10 (71)	14
2000–2001	0 (0)	1 (14)	6 (86)	7
2001–2002	0 (0)	6 (50)	6 (50)	12
2002–2003	1 (4)	11 (48)	11 (48)	23
2003–2004	1 (4)	5 (20)	19 (76)	25
2004–2005	0 (0)	12 (50)	12 (50)	24
2005–2006	0 (0)	7 (29)	17 (71)	24

There is no requirement for a resident brown bear tag for GMU's 25B and 25D, thus household surveys provide the best means to monitor harvest. Household surveys conducted in 2005, 2007, 2008, and 2009 indicate brown bear harvests by federally qualified users as 22, 37, 17 and 22 brown bears, respectively (Table 2). The Council of Athabascan Tribal Governments conducted bear harvest interviews with local hunters in villages within Unit 25D and found that 37 brown bears were taken in 2006 (Thomas 2008). It is suspected that many bears were not reported because of the difficulty of sealing a bear in remote areas (Lenart 2007). Household survey harvest data for all other years has been below the ADF&G allowable harvest limit of 29, but only considered Federally qualified subsistence users and did not take into account other hunter groups (**Table 2**). Although the harvest amount exceeded the ADF&G allowable harvest, it

Table 4. Units 25B and 25D residency of successful brown bear hunters, regulatory years 1995–1996 (Lenart 2007).

Regulatory Year	Local resident (%)	Nonlocal resident (%)	Nonresident (%)	Total Successful Hunters
1995–1996	0 (0)	1 (50)	1 (50)	2
1996–1997	1 (33)	0 (0)	2 (67)	3
1997–1998	0 (0)	0 (0)	0 (0)	0
1998–1999	1 (50)	0 (0)	1 (50)	2
1999–2000	4 (80)	0 (0)	1 (20)	5
2000–2001	1 (100)	0 (0)	0 (0)	1
2001–2002	0 (0)	1 (100)	0 (0)	1
2002–2003	7 (70)	1 (30)	0 (0)	10
2003–2004	1 (100)	0 (0)	0 (0)	1
2004–2005	2 (100)	0 (0)	0 (0)	2
2005–2006	0 (0)	1 (100)	0 (0)	1

helped address the ADF&G management objective for a temporary reduction of brown bears in Unit 25D to decrease predation on moose (Lenart 2007).

Effects of the Proposal

If the brown bear harvest limit were increased from one to three per every regulatory year in Unit 25, overall harvest is likely to increase. An increase of this magnitude may lead to exceeding the ADF&G allowable harvest limits of 30 bears in Unit 25A and 29 bears in Units 25B and 25D.

Diverse land ownership patterns on the Yukon Flats (Units 25B and 25D) have led to complicated game regulations, often resulting in conflicting regulations between private lands managed by the State and Federal lands (**Map 1**). Adoption of this proposal will further complicate regulations, and enforcement of them, by creating an annual 2 bag limit for brown bears on Federal lands only; State regulations and a bag limit of 1 bear will still apply to private lands surrounding villages.

Adoption of this proposal will also complicate current planning actions that are underway by the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, ADFG, CATG and Yukon Flats villages). The current focus of the committee is to align seasons for game between State and Federal managed lands in GMU 25D.

Other Alternative Considered

The other alternative considered was to oppose the proposal. Harvest under the current regulations may already be allowing harvest to be close to or exceeding the allowable harvest limit set by the State. Although reported harvest has consistently been below, the ADF&G allowable harvest limit, household survey data indicates that the actual harvest may be much higher for Unit 25. The Yukon Flats and Arctic National Wildlife Refuges share this concern and believe that adoption of the proposal will confound both enforcement of regulations by State and Federal officers and increase confusion of Federally qualified users.

Current conservative management of brown bears may be warranted given the species' low reproductive rate.

OSM CONCLUSION

Support Proposal WP10-91 **with modification** to increase the harvest limit to two bears.

The proposed regulations would read:

Unit 25—Brown Bear

*Unit 25A and 25B—~~1~~ **2** bear**s***	*Aug. 10—June. 30*
*Unit 25C—~~1~~ **2** bear**s***	*Sept. 1–May 31*
*Unit 25D—~~1~~ **2** bear**s***	*July 1–June 30*

Note: The hide, skull and edible meat of a brown bear must be salvaged for human use

Justification

Federally qualified subsistence users account for a small amount of the annual brown bear harvest. Harvest data indicates that non-Federally qualified subsistence users and nonresidents account for the majority of the reported harvest, while Federally qualified subsistence users often account for less than 8% of brown bears harvested annually in Unit 25A. In Units 25B and 25D, reported harvest is usually less than 7 bears annually for all user groups.

An increase in the harvest limit will provide Federally qualified subsistence users more opportunity for subsistence uses of brown bear, consistent with the proponent's request, while limiting the increase from 1 to 2 bears will balance conservation considerations. The existing salvage requirement in regulation should assure that bears harvested will be fully utilized for human use.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-91 **with modification** as described in the OSM Conclusion. There are sufficient brown bears in this area to support the additional small harvest. Brown bears in this area are considered good food and this type of management action is practiced in other areas of the State.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-91

Another option the Interagency Staff Committee identified would be to defer this proposal until the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, ADF&G, CATG and Yukon Flats villages) has addressed this issue for Unit 25. The current focus of the planning committee is to align hunting season dates and harvest limits for both State and Federal managed lands in GMU 25D.

Comments WP10-91
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-91: Increase the bag limit for grizzly bears in Unit 25 from 1 bear to 2–3 bears.

Introduction: The proponent requests the harvest limit for grizzly bear be raised because the current federal subsistence harvest limit of one bear per year does not meet the traditional subsistence uses and user needs. Residents of Unit 25D have previously requested higher grizzly bear bag limits in state proposals for 2 reasons: 1) to help reduce predation on moose and 2) some hunters would take and utilize more than 1 bear annually.

Impact on Subsistence Users: Adoption of this proposal will provide the opportunity for federal subsistence grizzly bear hunters to harvest more animals per year. Communities in Unit 25 engage in "primary hunter" practices, where specific community hunters often harvest for multiple families.

Opportunity Provided by State: The current state bag limit Unit 25 is 1 grizzly bear every regulatory year, and no resident tag fee is required.

Conservation Issues: None. The additional harvest would be low because only federally qualified users would be able to take more than 1 grizzly bear per year and only on federal public land. In Unit 25D, grizzly bears are abundant and their population and distribution has increased markedly in the last 30 years, judging from traditional knowledge and observations by department biologists. One to 5 bears are reported harvested in Unit 25D annually. Harvest by local residents is not reported, and they may take an estimated additional 5–8 bears annually. Increasing harvest of bears on the Yukon Flats to improve moose calf survival is consistent with the Yukon Flats Cooperative Moose Management Plan.

Enforcement Issues: This regulation could cause enforcement issues because of land ownership patterns. Hunters would need to know that they are on federal land if they intend to take more than 1 grizzly bear annually. Unit 25 has a complicated patchwork of land ownership making it difficult for hunters to know when they are on federal public lands or on non-federal lands. If the Federal Subsistence Board approves this regulation, the department will recommend to the Alaska Board of Game to adopt the increased bag limit for Game Management Unit 25D at the November board meeting to alleviate enforcement problems.

Recommendation: Neutral.

WP10-92 Executive Summary	
General Description	Proposal WP10-92 requests that the annual harvest limit for black bear (*Ursus americanus*) in Unit 25 be increased from 3 to 3–5 bears per year. *Submitted by Phillip Solomon of Fort Yukon*
Proposed Regulation	**Unit 25—Black Bear** *Unit 25—~~3~~ **5** bear* — *July 1–June. 30* *Unit 25D—~~3~~ **5** bear or ~~3~~ **5** bear by State community harvest permit* — *July 1–June 30* *Note: The hide, skull and edible meat of a black bear must be salvaged for human use.*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Defer**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-92

ISSUE

Proposal WP10-92, submitted by Phillip Solomon of Fort Yukon, requests that the annual harvest limit for black bear (*Ursus americanus*) in Unit 25 be increased from 3 to 3–5 bears per year.

DISCUSSION

The proponent claims that the residents of the Yukon Flats area eat a lot of black bears and that there are enough black bears to support increasing the harvest limit, which would not hurt the population. The proponent states that an increase in the harvest limit will also help compensate for low moose and salmon numbers along with a changing climate when trying to meet subsistence needs.

Note: Clarification was provided by the proponent as to exactly how many black bears should be proposed for the harvest limit after the proposal was distributed for public comment. The proponent would like the harvest limit to be set at 5 bears for Unit 25.

Existing Federal Regulation

Unit 25—Black Bear

Unit 25—3 bear	*July 1–June. 30*
Unit 25D—3 bear or 3 bear by State community harvest permit	*July 1–June 30*

Note: The hide, skull and edible meat of a black bear must be salvaged for human use.

Proposed Federal Regulation

Unit 25—Black Bear

*Unit 25—~~3~~ **5** bear*	*July 1–June. 30*
*Unit 25D—~~3~~ **5** bear or ~~3~~ **5** bear by State community harvest permit*	*July 1–June 30*

Note: The hide, skull and edible meat of a black bear must be salvaged for human use.

Existing State Regulations

Units 25A, 25B, 25C—Black Bear	
Residents and Nonresidents—3 bears	*No closed season*
Unit 25D—Black Bear	
Resident—3 bears	*No closed season*

Or	
*Resident—3 bears by Community permit**	*No closed season*
Nonresident—3 bears	*No closed season*

* See Regulatory History

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 25 and consists of U.S. Fish and Wildlife Service (37%), Bureau of Land Management (16%), and National Park Service (2%) lands (See **Unit 25 Map**).

Customary and Traditional Use Determinations

Residents of Unit 25D have a positive customary and traditional use determination for hunting black bears in Unit 25D.

All rural residents have a positive customary and traditional use determination for hunting black bears in Unit 25 Remainder.

Regulatory History

The harvest limit for black bear in Unit 25 has been three bears since the inception of the Federal Subsistence program in 1990. State regulations have also allowed the harvest of three black bears since 1990.

In 2003, the Federal Subsistence Board (Board) adopted WP03-42 to allow fall baiting of black bear and to establish a community harvest limit of 3 bears. These changes also aligned Federal regulations with State regulations.

In March 2002, the Board of Game established a community harvest permit program for black bear in Unit 25. The program allows people in a community or other group to pool their individual harvest limits (3 bears) so that one hunter may harvest more than 3 bears each year for use by the community or group. The program requires a hunt administrator who signs up participants, distributes harvest permits to participating hunters and monitors and reports harvest to the ADF&G. The program is not likely to increase harvest, and is intended to better accommodate traditional hunting and sharing practices and improve harvest reporting. Participants are required to have a valid community harvest permit for each bear taken (ADF&G 2002). To date, local users have not utilized this program for black bear (Lenart, 2010, pers. comm.).

Biological Background

Black bears are abundant in Unit 25 (ADF&G 2002, Bertram and Vivion 2002), but there is uncertainty over accurate population numbers for much of the unit. Based on high capture rates and low hunting pressure, black bear densities are thought to be within the range of 0.2–0.7/mi^2 (86–265/1,000 km^2), which has been previously reported in Alaska (Hechtel 1991, Schwartz and Franzmann 1991, Miller 1994 *cited in* Bertram and Vivion 2002). The total population of black bear in Unit 25(D), based on an assumed density of 1 black bear per 5–10 square miles, is 1,750–3,500 black bears (ADF&G 2002).

Black bears have low productive rates. The age of first reproduction for black bears has been documented at 5–7 years of age (Miller 1994), recruitment interval (time taken for separation of cubs from female) 2.0–2.7 years, and a reproductive interval of 1–4 years (Bertram and Vivion 2002, Miller 1994). Although, black bears often have 2 cubs (Miller 1994), cub survival has been documented to be 0.45–0.50 (Bertram and Vivion 2002, Miller 1994). Annual recruitment for Unit 25D is estimated at 175–350 black bears (ADF&G 2002).

Black bears were monitored on the western Yukon Flats between 1995 and 2001. Five female bears produced 10 litters between 1996 and 2001 and the survival rate estimate for cubs weaned to one year was 0.45 (Bertram and Vivion 2002). One adult female was documented giving birth to cubs during three consecutive years and losing her first 2 litters, but successfully raising the third litter to one year of age. Although mortality sources were largely unknown, Bertram and Vivion (2002) documented brown bear (grizzly) predation on two denned female black bears with cubs. An adult male black bear was also found to be killed by a brown bear (Bertram and Vivion 2002).

Harvest History

The black bear has traditionally been an important part of Athabascan culture. The black bear's meat is an important food, and its fat is considered a delicacy. The fat, rendered into lard, is eaten with dried fish. The meat is also mixed with berries and fish to make Eskimo ice cream.

Household survey data indicates that annual black bear harvest for the Yukon Flats area (Unit 25D) has been between 32 and 68 for years 2003–2008 (Thomas 2008). Current harvests are lower than the estimated annual recruitment of 175–350 bears (ADF&G 2002).

Current Events

The Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service are currently conducting a study to estimate the density of black bears in a 500 mi^2 study area within Unit 25D, where a large portion of the black bear harvest occurs and where most of the villages in Unit 25 are located. Results from this study are expected in August 2010.

Effects of the Proposal

If the black bear harvest limit were increased from three to five in Unit 25, overall harvest may increase for local hunters. There is a need for more local knowledge and information from the public and the members of the Eastern Interior Regional Advisory Council at the Council's February 2010 meeting in Fairbanks.

OSM CONCLUSION

Oppose Proposal WP10-92

Justification

There is ample opportunity for local residents to harvest black bears, as current regulations allow an annual harvest limit of three bears for individuals. Community harvest permits under State regulations provide additional harvest opportunities in Unit 25. Local users have yet to utilize community harvest permits.

The Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service are currently conducting a study to estimate the density of black bears in 25D. Results from this study are expected in August 2010. Once the results are known, better decisions can be made in regards to black bears and harvest limits. A future proposal may be warranted if population data indicate sufficient abundance to support a more liberal harvest limit.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Defer Proposal WP10-92. There are adequate numbers of black bears in this Unit to accommodate a small additional harvest. Local residents are not well aware of the option to participate in a community harvest program. The Council is looking forward to hearing the results of an ongoing population assessment study.

INTERAGENCY STAFF COMMITTEE COMMENTS

The Interagency Staff Committee (ISC) found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

The ISC notes that the Eastern Interior Regional Council recommendation to defer the proposal may not be supported by substantial evidence. Subsistence uses are being provided with the existing 3 bear harvest limit and the under-used community harvest program.

Comments for WP10-92
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-92: Increase the hunter bag limit of black bears in Unit 25 from 3 bears to 3–5 bears per year.

Introduction: The proponent is requesting liberalization of the annual federal subsistence black bear harvest limit for Unit 25. The proponent indicates the current federal subsistence limit of three black bears per year does not meet his subsistence needs, and he would prefer to harvest and eat more black bears per year.

Impact on Subsistence Users: If adopted, federal subsistence users could harvest an additional two black bears per year in Unit 25.

Opportunity Provided by State: The current bag limit is 3 black bears annually in all of Unit 25. In Unit 25D, there is additional opportunity to obtain a Community Harvest Black Bear Permit so that a hunter can harvest more than 3 bears annually as long as the total number of animals taken by hunters in the group does not exceed the combined bag limits of the people who signed up. The community harvest regulation allows a group of people to combine their individual bag limits into a group bag limit. To date, no black bears have been harvested under the Community Harvest Black Bear Permit.

Conservation Issues: None. There are numerous black bears in Unit 25D, and the additional harvest would likely be low to moderate. Most hunters do not take 3 bears annually. When the opportunity to take 5 black bears annually was available in some other parts of the state, it did not result in an increase in harvest.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Other Comments: The department is implementing an intensive management program in a portion of Unit 25D, and additional harvest on black bears may help reduce predation on moose calves.

Recommendation: Neutral. The department supports providing additional opportunity for subsistence users when resources are sufficient. The current federal and state hunting regulations provide the opportunity necessary for subsistence on federal public lands if/when populations decline in the future; i.e., an expanded bag limit when the population is high should not be used in the future to unnecessarily elevate a higher meaningful preference than that which is reasonably necessary for federally qualified subsistence users on federal public lands.

WP10-93 Executive Summary	
General Description	Proposal WP10-93 requests changes in the dates of the fall moose season in Unit 25D remainder. *Submitted by Phillip Solomon of Fort Yukon*
Proposed Regulation	**Unit 25D—Moose** *Unit 25D west, that portion lying west of a line extending from the Unit 25D boundary on Preacher Creek, Birch Creek and lower mouth of Birch Creek to the Yukon River; then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River; then upstream along the west bank of the Hadweenzic River to the confluence of the Forty and One-Half Mile Creek; and then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary —1 bull by a Federal registration permit. Permits will be available in the following villages: Beaver (25 permits), Birch Creek (10 permits) and Stevens Village (25 permits).* — *Aug. 25–Feb. 28* *Unit 25D remainder—1 antlered moose* — *Aug. ~~25~~**1**–~~Sept. 25~~ **Oct. 1** Dec. 1–Dec. 20*
OSM Conclusion	**Support** Proposal WP10-93 **with modification** to only extend the end of the season by six days.
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-93 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and federal subsistence board action on the proposal. *See full comments following the analysis.*
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-93

ISSUES

Proposal WP10-93, submitted by Phillip Solomon of Fort Yukon, requests changes in the dates of the fall moose season in Unit 25D remainder.

DISCUSSION

The proponent is requesting that the dates of the Federal fall moose season for Unit 25D remainder be changed from August 25–September 25 to August 1–October 1 to provide an additional 30 days to harvest moose. The proponent states that, due to low moose harvest, high fuel prices, high food prices, and the need to work; local residents need more time to be able to harvest moose more opportunistically in conjunction with other subsistence-related activities, such as cutting and gathering firewood in early August.

The current Federal seasons of August 25–September 25 and December 1–20 in Unit 25D remainder are designed to provide local residents with opportunity, outside of the State season, to harvest moose and not have to compete with non-subsistence hunters. Federally qualified subsistence users can harvest moose for 15 days prior to, and 5 days after (as well as during), the State season. Meat spoilage is a primary concern with an early August opening requested by the proponent. In the Yukon Flats area, temperatures in early August are variable, but have historically reached 80–90 degrees. Therefore, meat will have a higher likelihood of spoiling if harvest is allowed in early August (Bertram, 2009).

Note: Proposals WP10-86 and WP10-101 are related to this proposal, in that they are also requesting extensions of the Federal fall moose season for Unit 25C and a portion of Unit 20E, respectively, to match the August 20–September 30 season in adjoining portions of Units 25B and 20E within the Yukon-Charley Rivers National Preserve. These proposals are analyzed separately from this analysis.

Existing Federal Regulation

Unit 25D—Moose

Unit 25D west, that portion lying west of a line extending from the Unit 25D boundary on Preacher Creek, Birch Creek and lower mouth of Birch Creek to the Yukon River; then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River; then upstream along the west bank of the Hadweenzic River to the confluence of the Forty and One-Half Mile Creek; and then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary —1 bull by a Federal registration permit. Permits will be available in the following villages: Beaver (25 permits), Birch Creek (10 permits) and Stevens Village (25 permits).	*Aug. 25–Feb. 28*
Unit 25D remainder—1 antlered moose	*Aug. 25–Sept. 25* *Dec. 1–Dec. 20*

Proposed Federal Regulation

Unit 25D—Moose

Unit 25D west, that portion lying west of a line extending from the Unit 25D boundary on Preacher Creek, Birch Creek and lower mouth of Birch Creek to the Yukon River; then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River; then upstream along the west bank of the Hadweenzic River to the confluence of the Forty and One-Half Mile Creek; and then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary —1 bull by a Federal registration permit. Permits will be available in the following villages: Beaver (25 permits), Birch Creek (10 permits) and Stevens Village (25 permits).	*Aug. 25–Feb. 28*
Unit 25D remainder—1 antlered moose	*Aug. ~~25~~**1**~~–Sept. 25~~ **Oct. 1** Dec. 1–Dec. 20*

Existing State Regulations

Unit 25D—Moose

Unit 25D lying west of a line extending from the Unit 25D boundary on Preacher Creek, Birch Creek and Lower Mouth Birch Creek to the Yukon River, then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzik River, then upstream along the west bank of the Hadweenzik River to the confluence of the Forty and One-Half Mile Creek, then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary—One bull by permit	*TM940*	*Aug. 25–Feb. 28*

Unit 25D remainder

Resident—One bull	*Harvest permit*	*Sept. 10–Sept. 20*
Or		
Resident—One bull	*Harvest permit*	*Feb. 18–Feb. 28*
Or		
Resident—One bull	*CM001*	*Sept. 10–Sept. 20*
Or		
Resident—One bull	*CM001*	*Feb. 18–Feb. 28*
Nonresident—One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Harvest permit*	*Sept. 10–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 61% of Unit 25D; 60% U.S. Fish and Wildlife Service lands and 1% Bureau of Land Management lands (see **Unit 25 Map**).

Customary and Traditional Use Determinations

Residents of Unit 25D west have a positive customary and traditional use determination for moose in Unit 25D west.

Residents of Unit 25D remainder have a positive customary and traditional use determination for moose in Unit 25D remainder.

Regulatory History

Unit 25D was divided by the State into Unit 25D West and Unit 25D East (remainder) in the early 1980's to allow the use of differing regulatory schemes to address the status of the respective moose populations. Low moose density in the western portion of the subunit, combined with the relatively high demand for moose by local residents, resulted in the use of permit systems that have limited hunting primarily to residents of the area, right up to the present. In 1990, the State established a Tier II permit hunt in Unit 25D West because the harvestable surplus was deemed insufficient to support all subsistence uses. During most of the 1990s, 125 permits were available annually for 3 hunting seasons. Also, beginning in 1990, the Federal Subsistence Board began promulgating regulations for subsistence use on Federal lands and initially provided an unlimited number of permits to residents of Beaver, Stevens Village and Birch Creek to harvest bull moose on Federal lands. The state Tier II system remained in effect and applied to both private and Federal lands. However, from 1993 to 1999, State Tier II permits were not recognized on Federal land. During this period, a maximum of 30 Federal permits and 125 State Tier II permits were issued annually. In 1999, discussions with local residents helped identify a number of steps that could improve moose management on the western Yukon Flats, including revising the harvest quota for moose, reducing the number of Tier II permits and aligning State and Federal hunting seasons (Caikoski, 2008). In 2000, the Alaska Board of Game lengthened the State season in Unit 25D West to Aug. 25–Feb. 28 to match the Federal season, increased the harvest quota from 35 to 60 bull moose, and reduced the number of Tier II permits from 125 to 75. State Tier II permits issued to resident of Unit 25D West were again recognized as valid on Federal lands beginning in 2000, when 60 Federal and 75 Tier II permits were available, with a combined State and Federal harvest quota of up to 60 bull moose. The number of annual permits and the combined harvest quota are still in effect.

In 2000, the State Board of Game approved a regulation that established a community harvest permit program (CM001) for part of Unit 25D East. The Board established the Chalkyitsik Community Harvest Area and a community harvest limit for moose in the portion of Units 25D and 25B included in the community harvest area.

The Alaska Department of Fish and Game initiated a cooperative effort in 2001 to develop a moose management plan for the Yukon Flats. By 2002, the Yukon Flats Cooperative Moose Management Plan (YFCMMP) was completed and endorsed by the Alaska Board of Game (ADF&G 2002). The YFCMMP was designed to promote moose population growth in the Yukon Flats through the following guidelines: 1) improve moose harvest reporting to better document subsistence needs and improve management, 2) reduce predation on moose by increasing the harvest of bears and wolves, 3) minimize illegal cow harvest and reduce the harvest of cows for ceremonial purposes to improve recruitment, 4) inform hunters and others about the low moose population on the Yukon Flats and avenues people can take to help in the

effort to increase moose abundance, and 5) use scientific information and traditional knowledge to help make management decisions.

Biological Background

For Unit 25, the State manages moose per the following management direction of the Alaska Board of Game (Caikoski, 2008):

State Management Goals
Unit 25 Overall

- Protect, maintain and enhance the moose population and its habitat in concert with other components of the ecosystem.

Unit 25B and 25D

- Provide for subsistence use and for the greatest opportunity to harvest moose.
- Protect, maintain and enhance the Yukon Flats moose population and habitat, maintain traditional lifestyles and provide opportunities for use of the moose resource.
- Increase the harvestable surplus of bull moose in key hunting areas near local communities by reducing mortality from bear and wolf predation.

State Management Objectives
Unit 25 Overall

- Double the size of the moose population in key hunting areas and, if possible, within the entire planning area, in the next 10 years.
- Maintain a minimum of 40 bulls per 100 cows as observed in fall surveys
- Improve moose harvest reporting to attain 90% or greater reporting compliance during the next 3 years.
- Minimize cow moose harvest while the population is rebuilding, recognizing that some cows will probably be taken for ceremonial purposes when bull moose are in poor condition.

Unit 25D

- Increase the number of moose from 4,000 to 8,000 by 2012.

At the same time as Unit 25D was divided for management purposes (see above), separate surveys areas were established in subunits 25D East and 25D West by the ADF&G and the USFWS, respectively. Since 1999, population surveys have been conducted in these two subunits utilizing geospatial population estimators (GSPE) described in Ver Hoef (2001, 2008) and in Kellie and DeLong (2006). From 1999 to 2006, estimated densities have ranged from 0.18 to 0.38 moose/mi^2 (Caikoski 2008). Survey data indicated that moose numbers were stable in the eastern Yukon Flats and declined in the western Yukon Flats. The ADF&G classified both populations as at "extremely low densities" (Caikoski 2008).

Population Size

The most recent moose surveys for which data are available were conducted in 2007 by the ADF&G in Unit 25D East and in 2006 by the USFWS in Unit 25D West. Based on extrapolation, the estimated observable population was 1,600–2,700 moose (0.15–0.25 moose/mi^2) in Unit 25D East and 900–1,500 moose (0.14–0.22 moose/mi^2) in Unit 25D West. Combining estimates, the total observable moose population for Unit 25D was 2,500–4,200 moose (0.14–0.24 moose/mi^2). Assuming a minimum sightability correction factor of 1.23 for GSPE conducted at 7–8 min/mi^2, the total moose population was estimated at 3,100–5,200 moose (0.18–0.29 moose/mi^2) for Unit 25D in 2007 (Caikoski 2008).

Population Composition

In Unit 25D East, estimates from fall surveys during 2005–2007 resulted in high bull:cow ratios (range 60–80 bulls:100 cows) and high calf:cow ratios (range 37–58 calves:100 cows; **Table 1**). Yearling recruitment also appeared to be robust, as indicated by high yearling bull:cow ratios (range 12–22 yearling bulls:100 cows). In 2006, Unit 25D West fall survey data resulted in 65 bulls:100 cows, 22 calves:100 cows and 18 yearling bulls:100 cows (**Table 1**). However, significant variation between years and poor precision in ratio estimates due to small sample sizes makes detection of trends in ratios difficult (Caikoski 2008). Furthermore, given that harvest of cows is known to occur and a decline in the population trend has occurred, these ratio data for calves, yearling bulls and adult bulls per 100 cows may be more indicative of a stable or declining cow population. For example, in some survey years, yearling recruitment is unexplainably high compared to fall calf production from the previous year (i.e. fall yearling recruitment appears greater than the prior year's fall calf recruitment). Possible causes of this discrepancy may include measure error, moose movement and significant harvest of cow moose (Caikoski 2008).

Sources of Mortality

Predation is a major factor accounting for a low density of moose in Unit 25D. In their moose mortality study, Bertram and Vivion (2002) found that predation was responsible for 97% of known calf mortality, with black bears (45%) and brown bears (39%) the major causes. Annual harvest by humans was estimated at 7 to 12% of the population, and of that, illegal cow harvest constituted at least 33% (Bertram and Vivion 2002). These issues have been, and are being addressed by and through the Yukon Flats Cooperative Moose Management Plan (ADF&G 2002).

Harvest History

The current Federal seasons in Unit 25D remainder are August 25–September 25 and December 1–20. Federally qualified subsistence users can harvest moose for 15 days prior to, and 5 days after (as well as during), the State fall season of September 10–20.

Moose harvest in 25D West is allowed only under State Tier II or Federal subsistence permits, with a harvest quota of 60 bull moose. During the 11-year period of 1997–2007, the harvest reported through these two permit systems has ranged from 11 to 30 moose (**Table 3)**.

Current Events

Staff of the Yukon Flats National Wildlife Refuge, Alaska Department of Fish and Game, and Council of Athabascan Tribal Governments will be meeting with communities in Unit 25D during 2010 to develop moose regulation proposals for both the State and Federal boards to consider (Lenart 2010; Bertram 2010).

Effects of the Proposal

If this proposal were adopted, Federally qualified subsistence users would be provided an additional 30 days of harvest opportunity, which would likely lead to an increase in the amount of moose harvested. This could lead to a conservation concern, given the low population size and population density, classified as "extremely low."

Table 1. Estimated moose population composition based on fall GSPE surveys in Unit 25D, 1999–2007 (Caikoski 2008).

Survey area and year	Bulls: 100 Cows	Yrlg bulls: 100 Cows	Calves: 100 Cows
Eastern Unit 25D (2,936 mi²)			
1999	57	24	59
2000	79	19	49
2001	95	17	43
2004	43	10	51
2005	80	22	58
2006	60	12	37
2007	64	15	39
Venetie Survey (2,858 mi²)			
2004	75	24	41
2005	44	4	58
Birch Creek Survey (3,630 mi²)			
2006	55	8	29
Western Unit 25D (2,269 mi²)			
1999	31	6	31
2000	71	12	22
2001	52	9	27
2004	72	5	34
2006	65	18	22

Table 2. Unit 25D East reported moose harvest, regulatory years 1996–1997 through 2006–2007 (Caikoski 2008).

Regulatory year	Bulls	Cows	Unknown	Total
1996–1997	14	0	0	14
1997–1998	19	0	0	19
1998–1999	23	0	0	23
1999–2000	16	0	0	16
2000–2001[b]	21	0	0	21
2001–2002[c]	16	0	0	16
2002–2003[d]	24	0	0	24
2003–2004[e]	12	0	0	12
2004–2005	8	0	0	8
2005–2006	23	0	0	23
2006–2007	16	0	0	16

[a]Source: moose harvest reports
[b]Includes 3 moose taken in Chalkyitsik community harvest permit hunt
[c]Includes 2 moose taken in Chalkyitsik community harvest permit hunt
[d]Includes 11 moose taken in Chalkyitsik community harvest permit hunt
[e]Includes 9 moose taken in Chalkyitsik community harvest permit hunt

Table 3. Unit 25D West moose harvest for permit hunt TM940 (Tier II) and Federal subsistence permits, regulatory years 1996–1997 through 2006–2007 (Caikoski 2008).

Regulatory year	TM940 Permits issued	Did not hunt	Did not report	Unsuc-cessful hunters	Suc-cessful hunters	Bulls	Cows	Unk	Tier II	Fed. sub. harv	Total harvest
1996–1997	91	32	18	31	10	10	0	0	10	7	17
1997–1998	36	23	0	11	2	2	0	0	2	13	15
1998–1999	40	21	1	11	7	7	0	0	7	20	27
1999–2000	92	55	0	24	13	13	0	0	13	17	30
2000–2001	75	41	4	21	9	7	0	2	9	7	16
2001–2002	34	15	6	9	4	4	0	0	4	14	18
2002–2003	49	23	6	16	4	4	0	0	4	7[a]	11
2003–2004	51	31	7	10	3	3	0	0	3	7[b]	10
2004–2005	72	29	27	15	1	1	0	0	1	15[c]	16
2005–2006	53	22	2	22	7	7	0	0	7	14	21
2006–2007	75	56	0	17	2	2	0	0	2	10	12

[a]No Federal harvest reports received from Stevens Village
[b]Includes 6 cows reported by Stevens Village hunters
[c]Includes 5 cows reported by Stevens Village hunters

Meat spoilage is a primary concern with the early August opening requested by the proponent. In the Yukon Flats area, temperatures in early August are variable, but have historically reached 80–90 degrees. Therefore, meat will have a higher likelihood of spoiling if harvest is allowed in early August (Bertram, 2009).

Other Alternatives Considered

One alternative considered was to oppose the proposal, as an additional 30 days of harvest opportunity could result in an increase in the amount of moose harvested that may exceed the sustainable level.

Another alternative considered was to defer the proposal. In 2010, staff of the Yukon Flats National Wildlife Refuge, Alaska Department of Fish and Game, and Council of Athabascan Tribal Governments will be meeting with communities in Unit 25D, including Fort Yukon, to discuss moose management options and to develop moose regulation proposals for both the State and Federal boards to consider. The outcome of the meetings may result in consensus on proposals to address the issues raised in this proposal.

OSM CONCLUSION

Support Proposal WP10-93 **with modification** to only extend the end of the season by the requested six days.

The modified regulation would read:

Unit 25D—Moose

Unit 25D west, that portion lying west of a line extending from the Unit 25D boundary on Preacher Creek, Birch Creek and lower mouth of Birch Creek to the Yukon River; then downstream along the north bank of the Yukon River (including islands) to the confluence of the Hadweenzic River; then upstream along the west bank of the Hadweenzic River to the confluence of the Forty and One-Half Mile Creek; and then upstream along Forty and One-Half Mile Creek to Nelson Mountain on the Unit 25D boundary —1 bull by a Federal registration permit. Permits will be available in the following villages: Beaver (25 permits), Birch Creek (10 permits) and Stevens Village (25 permits)	*Aug. 25–Feb. 28*
Unit 25D remainder—1 antlered moose	*Aug. 25–~~Sept. 25~~* ***Oct. 1*** *Dec. 1–Dec. 20*

Justification

A six-day increase at the end of the current fall season will provide for some additional harvest opportunity, consistent with the proponent's request, while addressing conservation and meat spoilage concerns over a 30-day increase in the fall season, starting in early August.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-93 **with modification** as described in the OSM Conclusion. The Council is in support of current planning efforts by the USFWS and ADF&G to analyze moose hunting regulations in this area. The addition of six days to the current Federal regulations will not undermine that process and will provide additional subsistence hunting opportunities.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-93

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and federal subsistence board action on the proposal.

Given an ongoing collaborative planning effort to develop Unit 25 wildlife regulation proposals by staff of the Yukon Flats National Wildlife Refuge, Alaska Department of Fish and Game and the Council of Athabascan Tribal Governments, the ISC recognizes that options before the Board for Proposal WP10-93 include opposing or deferring this proposal until these regulatory planning efforts have concluded. Either option provides time for the planning group to consider the merits of proposal WP10-93 during their work. Should the Board adjust season dates at this time, the Board should anticipate a subsequent set of proposals seeking changes that may or may not coincide with this action.

Comments WP10-93
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-93: Extend the fall portion of the moose season in "Unit 25D, remainder" from August 25 through September 25 to August 1 through October 1.

Introduction: The proponent requests liberalization of the Unit 25D Remainder fall federal subsistence moose hunting season from a 31-day season to a 61-day season. The proponent indicates liberalizing the federal subsistence moose hunting season dates will assist meeting Fort Yukon residents' needs.

Impact on Subsistence Users: If adopted, federal subsistence moose hunting opportunity in Unit 25D Remainder will double. Federal subsistence moose hunters could opportunistically take moose earlier in August while out in the field conducting other activities.

Opportunity Provided by State: The state resident moose hunting season is from September 10 through September 20 and February 18 through February 28 as either a general season or by permit CM001, and the limit is one bull. The state nonresident moose hunting season is September 10 through September 20, and the limit is one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side. Additionally, residents may obtain a community harvest permit for moose.

Conservation Issues: There may be conservation concerns for moose in Unit 25D due to its low density moose population but, at present, there is no conservation issue extending the season to the end of September for a bull-only hunt for federally qualified users based on current harvest levels. There may be some concerns about meat spoilage during the first 25 days of August but subsistence users are usually skilled at meat harvest and transport without spoilage.

Other Comments: The Department and Yukon Flats NWR will be examining moose regulations in Unit 25D during the next year at the request of the Eastern Interior Regional Advisory Council in an effort to align and simplify regulations between federal public and non-federal lands. The Department intends to involve all communities in Unit 25D and submit proposals to both federal and state boards in the future.

Recommendation: Neutral, but urge that that the Board defer action until the state and federal analysis of moose regulations is completed in 2010, as originally requested by the Eastern Interior Regional Advisory Council, to develop moose regulation proposals for both the state and federal boards.

WP10-94 Executive Summary	
General Description	Proposal WP10-94 requests extension of the harvest season in a portion of Unit 25A from July 1–April 30 to July 1–June 30. Only bull or antlerless cow caribou may be taken May 1–June 30. This regulation change would apply only to the Chandalar drainage, west of the Middle Fork of the Chandalar River drainage. The harvest limit is to stay the same. *Submitted by Jack Reakoff*
Proposed Regulation	**Unit 25—Caribou** *Unit 25A* ***remainder****, 25B, and 25D remainder — 10 caribou* — *July 1– Apr. 30* ***Unit 25A[1] within the Chandalar River drainage, west of the Middle Fork of the Chandalar River drainage — 10 caribou. However, only bulls or antlerless cows may be taken May 1– June 30.*** — ***July 1– June 30*** [1]The proposed regulatory language as submitted applies to unit 25A. This was misprinted as unit 25 in the Federal Subsistence 2010–2012 Wildlife Proposals Book.
OSM Conclusion	**Support** Proposal WP10-94 **with modification** to establish a caribou hunting season from July 1 through June 30 in Unit 25A restricting the harvest to bulls only from May 15 through June 30. **Unit 25—Caribou** *Unit 25A* ***remainder****, 25B, and 25D remainder — 10 caribou* — *July 1– Apr. 30* ***Unit 25A in those portions west of the east bank of the East Fork of the Chandalar River extending from its confluence with the Chandalar River upstream to Guilbeau Pass and north of the south bank of the mainstem of the Chandalar River at its confluence with the East Fork Chandalar River west (and north of the south bank) along the West Fork Chandalar River — 10 caribou. However, only bulls may be taken May 16– June 30.*** — ***July 1– June 30***
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-94 **with modification** as described in the OSM proposal analysis.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

continued on next page

WP10-94 Executive Summary *(continued)*	
ADF&G Comments	**Support** Proposal WP10-94 **with modification** to parallel portions of proposal #99 submitted to the Alaska Board of Game to restrict the harvest to bulls only from May 16 through June 30 and modify the proposed boundary.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-94

ISSUES

Proposal WP10-94, submitted by Jack Reakoff requests extension of the harvest season in a portion of Unit 25A from July 1–April 30 to July 1–June 30. Only bull or antlerless cow caribou may be taken May 1–June 30. This regulation change would apply only to the Chandalar drainage, west of the Middle Fork of the Chandalar River drainage. The harvest limit is to stay the same.

DISCUSSION

This proposal request an extension of the season through May and June while only allowing the harvest of bulls and antlerless cows at that time. This would protect calving cows while allowing customary and traditional use of the resource in spring and early summer. The Alaska Board of Game (BOG) adopted a complimentary wildlife proposal at its February 2010 meeting. If both proposals are adopted, State and Federal regulations would be aligned simplify hunting regulations for the users in the area west of the Middle Fork of the Chandalar River drainage.

The proposal applies to only a small portion of land administered by BLM in the northwest corner of 25A. Most of the BLM land lies within the Dalton Highway Corridor Management Area (DHCMA), which extends five miles from each side of the Dalton Highway. Hunting in the DHCMA under State regulations is restricted to bow hunting only. However, Federally qualified subsistence users can hunt within the DHCMA using firearms. Hunting with firearms in the DHCMA is only authorized for residents of Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, Stevens Village, and residents living within the Dalton Highway Corridor Management Area.

Existing Federal Regulation

Unit 25—Caribou

Unit 25A, 25B,and 25D remainder —10 caribou	*July 1–Apr. 30*

Proposed Federal Regulation

Unit 25—Caribou

*Unit 25A **remainder**, 25B, and 25D remainder — 10 caribou*	*July 1– Apr. 30*
Unit 25A[1] within the Chandalar River drainage, west of the Middle Fork of the Chandalar River drainage — 10 caribou. However, only bulls or antlerless cows may be taken May 1– June 30.	***July 1– June 30***

[1]The proposed regulatory language as submitted applies to unit 25A. This was misprinted as unit 25 in the Federal Subsistence 2010–2012 Wildlife Proposals Book.

Existing State Regulation

Unit 25 A—Caribou

Residents Only—10 caribou	*July 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 75.7% of Unit 25A. The Arctic National Wildlife Refuge and Yukon Flats National Wildlife Refuge, both managed by Fish and Wildlife Service, comprise 73.5% of the land. BLM administers 2.2 % of the lands much of which is within the DHCMA (**Unit 25 Map).**

Customary and Traditional Use Determinations

There has not been a customary and traditional determination made for caribou in Unit 25A, therefore, all rural residents can harvest caribou in Unit 25A.

Regulatory History

In 1991, the Dalton Highway was officially open to public traffic and the Central Arctic Caribou Herd (CAH) became accessible to hunters via the road system. In 1992, the DHCMA was established to limit harvest near the highway. Under State hunting regulations this area was closed to all hunting except with bow and arrow, while Federal subsistence hunting regulations allowed for hunting with firearms on Federal public land by Federally qualified subsistence hunters. During the first year of the regulation hunting was open to all Federally qualified subsistence users, however, in 1992 the Federal Board limited it to residents of Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, Stevens Village, and residents living within the Dalton Highway Corridor Management Area.

Harvest limits and seasons in Unit 25A for caribou have been consistent since 1996 for both the State and Federal hunts. During its March 2000 meeting, the BOG established intensive management population and harvest objectives for the CAH. The intensive management population objective for the CAH is 18,000–20,000 caribou and the harvest objective is 600–800 caribou (5 AAC 92.108). With the exception of regulatory year 2006, the total harvest of CAH has not exceeded the harvest objective and the herd population has been within the population objectives since 1991.

Biological Background

Since the mid 1970s, when the CAH was recognized as a discrete herd, it has experienced tremendous growth. In 1975, it was estimated at 5,000 caribou (Cameron and Whitten 1979), by 2000 the herd size had increased substantially to over 27,000 animals. Photocensus completed in July 2008 estimated a herd size of 66,772 animals (Lenart 2009, pers. comm.). This growth represents a 246% increase from 2000 (**Table 1).** The annual rate of increase was 4% from 1995 to 1997, 11.2% from 1997 to 2000, 8.4% from 2000 to 2002 and most recently 13.1% from 2002 to 2009. This impressive growth rate has been attributed to low adult mortality (<10%), high parturition rates (≥ 85%) and high calf survival (Lenart 2007). Parturition rates of radio-collared females ≥ 4 years old were 93% (n=56) and 98% (n=4) in 2007 and 2008, respectively. High rates in this age group have been documented since 1998. General parturition rates for 3-year-olds were good from 1998 through 2007 (≥ 71%). The last fall composition survey was conducted in October 2002. No surveys were conducted in 2003–2008. The fall survey in October 2002 indicates a bull:cow ratio of 67:100 and a calf:cow ratio of 72:100 (**Table 2**). Bull:cow ratios have been high since 1976 (>50:100), indicating harvest had little effect on sex ratios. Calf:cow ratios were high in 2000, 2001 and 2002 (> 50:100) indicating summer calf survival rates were high. Peak calving for this herd occurs in early June and cows drop there antlers within a week of calving.

Table 1. Central Arctic Caribou Herd estimated popuatlion size, 1978-2008 (Modified from Lenart 2007 and Lenart pers. comm. 2009).

Date	Method[a]	Estimated Size
1978	STS	5,000
1981	AC	8,537
1983	APDCE	12,905
1991	GM	19,046[b]
1992	APDCE	23,444
1995	APDCE	18,100
1997	APDCE	19,730
2000	APDCE	27,128
2002	APDCE	31,857
2008	APDCE	66,772

[a] STS-Systematic transect surveys: AC= Aerial couts: APDCE-Aerial Photo Direct Count Extrapolation (Davis et a. 1979); GM=Gasaway method (Gasaway etal. 1986; Valenburg 1993).
[b] Ninety-percent confidence interval was 14,677-23,414.

Table 2. Central Arctic Caribou Herd fall composition counts, 1976-2002 (Modified from Lenart 2007).

Date	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size
1976	122	44	17	38	46	1223
1977	118	55	20	37	43	628
1978	96	58	23	39	38	816
1980	132	49	18	35	47	1722
1981	81	64	26	41	33	1712
1992	96	47	19	41	40	2469
1996	61	67	29	44	27	3062
2000	84	57	24	42	35	3335
2001	73	54	24	44	32	4092
2002[a]	67	72	30	42	28	1732

[a] This survey was conducted later in the fall than usual, and caribou were more widely distributed; thus, ADF&G was unable to obtain a large sample size.

Harvest History

Harvest levels have been well within the management objectives since the early 1990s. While most of the CAH harvest occurs in Unit 26B, some also occurs in units 24, 25A, and 26A. Beginning in regulatory year 2000, harvest of the CAH began to increase but remained below the maximum sustained yield of 5% (**Table 3**). During regulatory years 06–07, most of the reported harvest occurred in August (51% and 48%, respectively) similar to previous years. The remaining harvest occurred primarily in September and October (Lenart 2009, pers.comm.). Reported harvest of cows during regulatory years 06 and 07 was considerably lower than the management objective of 3% of the cows in the population. The management objective of maintaining at least 40 bulls:100 cows has also been achieved.

Table 3. Central Arctic Caribou Herd harvest and hunter success, regulatory years 2000-2001 through 2007-2008[a] (Modified from Lenart 2007 and Lenart pers. comm. 2009).

Regulatory Year	Reported Harvest			Total Harvest	Total Hunters	Percent Successful Hunters[b]	Estimated Unreported Harvest[c]	Reported Harvest
	Male	Female	Unk					
2000-2001	465	28	1	494	804	52	200-250	694-744
2001-2002	496	16	4	516	918	47	200-250	716-766
2002-2003	389	23	3	415	851	41	200-250	615-665
2003-2004	389	11	4	404	717	48	200-250	604-654
2004-2005	588	42	4	634	989	52	200-250	834-884
2005-2006	635	45	7	687	1104	52	200-250	887-937
2006-2007	798	37	6	841	1331	53	200-250	1041-1091
2007-2008	620	68	2	690	1380	42	200-250	890-940

[a] Source: Harvest ticket reports in ADF&G WINFONET database.
[b] Percent successful hunters calculated by dividing successful hunters by number of total hunters.
[c] Estimated by area biologist and Division of Subsistence.

Effects of the Proposal

This proposal would extend the Federal caribou subsistence harvest season in a portion of Unit 25A west of the middle fork of the Chandalar River drainage. This change would allow Federally qualified hunters the opportunity to harvest additional caribou (bulls or antlerless cows) during May and June. Permitting antlerless cows to be taken may have unintended consequences as cows retain their antlers through winter and cast them shortly before, after, or during calving (Whitten 1995). Allowing the harvest of anterless cows in May and June may cause accidental harvest of parturient or lactating cow. The CAH population has exceeded the population objectives since 1991 and the herd can sustain additional harvest providing additional Federal subsistence opportunity. In addition, the BOG adopted a proposal extending the hunting season in Unit 25A through June 30, but restricting the harvest to bull only May 15–June 30.

OSM CONCLUSION

Support Proposal WP10-94 **with modification** to establish a caribou hunting season from July 1 through June 30 in Unit 25A restricting the harvest to bulls only from May 16 through June 30.

The regulations should read:

Unit 25—Caribou

*Unit 25A **remainder**, 25B, and 25D remainder — 10 caribou*	*July 1– Apr. 30*
Unit 25A in those portions west of the east bank of the East Fork of the Chandalar River extending from its confluence with the Chandalar River upstream to Guilbeau Pass and north of the south bank of the mainstem of the Chandalar River at its confluence with the East Fork Chandalar River west (and north of the south bank) along the West Fork Chandalar River — 10 caribou. However, only bulls may be taken May 16– June 30.	***July 1– June 30***

Justification

The CAH has steadily increased in abundance since 1995, and currently exceeds the upper level population objectives by over 40,000 animals. Extending the hunt will provide additional harvest opportunities for subsistence users. Furthermore, restricting the hunt to bulls in May and June will protect the calving females. The additional harvest of bulls will have little effect on the population, while providing additional subsistence opportunity. This hunt occurs in the area where CAH winters. The date and the area description were changed from the original proposal to match State regulations. If the modified proposal is adopted it would align Federal and State regulations in this portion of Unit 25A.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP10-94 **with modification** as described in the OSM Conclusion. The Council believes the State Board of Game may provide additional harvest opportunities in this area. Although harvesting barren cows would provide additional harvest opportunity, not all cows without antlers are barren, some may give birth in future years and some may have already given birth that spring. The OSM recommendation would align with State regulations and provide for conservation.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-94

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-94
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-94: Extend the caribou season in Unit 25A within the Chandalar drainage and west of the Middle Fork Chandalar River from July 1 through April 30 to July 1 through June 30 (no closed season). However, only bulls or antlerless cows may be taken during May 1–June 30.

Introduction: The Central Arctic Herd has increased substantially during the past 10 years and recent harvest levels are below sustainable yield. The proposal would allow hunters to harvest bull caribou all year and antlerless cow caribou May 1 through June 30. These proposed liberalizations are to take advantage of the increase in the herd. A companion proposal was submitted to the Alaska Board of Game for consideration at the February 26 through March 7, 2010, meeting. The department will likely recommend adoption with amendment to limit to bulls only May 16 through June 30.

Impact on Subsistence Users: If this proposal is adopted, federal subsistence user opportunity to harvest caribou would increase to 12 months per year and harvest of cow caribou from May 1 through June 30 would be restricted to cows without antlers.

Opportunity Provided by State: The state resident caribou hunting season in 25A is July 1 through April 30 with a limit of 10. The Board of Game will be evaluating liberalizations.

Conservation Issues: None.

Other Comments: There is a very small section of federal public land along the Dalton Highway where federally qualified users would be able to take advantage of the extended season. The size of the section of federal public lands is likely too small to support a federal subsistence hunt. Most of the remaining land is under state jurisdiction.

Recommendation: Support with modification, to parallel portions of proposal #99 submitted to the Alaska Board of Game to restrict the harvest to bulls only from May 16 through June 30 and modify the proposed boundary. Proposal #99 requests regulation changes for Unit 25A, in those portions east of the east bank of the East Fork Chandalar River extending from its confluence with the Chandalar River upstream to Guilbeau Pass.

WP10-95 Executive Summary	
General Description	Proposal WP10-95 requests that the harvest limit be reduced for wolf hunting in that portion of Unit 20C within Denali National Park and Preserve. *Submitted by the Denali National Park and Preserve and cosponsored by the Denali Subsistence Resource Commission*
Proposed Regulation	**Unit 20C—Wolf Hunting** ***Unit 20C, that portion within Denali National Park and Preserve*** *1 wolf* — ***Aug. 10–Oct. 31*** *~~10~~* ***5*** *wolves* — ***Nov. 1*** *~~Aug 10~~–April 30* *Unit 20C* ***remainder*** *10 wolves* — *Aug 10–April 30*
OSM Conclusion	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**2 Oppose**

STAFF ANALYSIS
WP10-95

ISSUES

Proposal WP10-95, submitted by the Denali National Park and Preserve and is cosponsored by the Denali Subsistence Resource Commission. The proposal requests that the harvest limit be reduced for wolf hunting in that portion of Unit 20C within Denali National Park and Preserve.

DISCUSSION

In November 2009, the proponent clarified that their intent was that this proposal only apply to the portion of Unit 20C within Denali National Park and Preserve (Craver 2009a, pers. comm.). Their intent was a harvest limit of one wolf for hunters from August 10 to October 31, and five wolves from November 1 to April 30. The Denali Subsistence Resource Commission voted to co-sponsor this proposal at its November 2009 meeting (Craver 2009b, pers. comm.; R. Collins 2010, pers. comm.).

The proponent states that this regulatory change should be made to protect subsistence hunting and trapping by limiting the opportunities for incidental harvest of wolves from frequently viewed packs near the Denali Park Road during a September subsistence moose hunt. The proponent observes that these wolves have value for the tourist industry and that the harvest of wolves could result in unfavorable publicity and increased pressure on the National Park Service to curtail subsistence activities. The proponent also noted that wolf pelts are not prime until later in the winter.

Existing Federal Regulation

Unit 20C—Wolf Hunting

10 Wolves	*Aug. 10–April 30*

Proposed Federal Regulation

Unit 20C—Wolf Hunting

Unit 20C, that portion within Denali National Park and Preserve

1 wolf	***Aug. 10–Oct. 31***
~~10~~ ***5*** *wolves*	***Nov. 1*** *~~Aug. 10~~–April 30*

Unit 20C remainder

10 wolves	*Aug. 10–April 30*

Existing State Regulation

Units 20C—Wolf Hunting

5 Wolves	*Aug. 10–May 31*

Extent of Federal Public Lands

This proposal affects Federal public lands within the Denali National Park and Preserve (See **Unit 20 Map**). Wildlife may not be taken for subsistence uses on lands within Mount McKinley National Park as it existed prior to December 2, 1980. Subsistence is permitted in Denali National Preserve and lands added to Denali National Park on December 2, 1980.

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 20C. These rural residents may hunt wolves on Denali National Preserve land under Federal regulations.

In order to engage in subsistence on lands added to Denali National Park on December 2, 1980, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent. The subsistence resident zone(s) for Denali National Park and Preserve include the communities of Cantwell, Lake Minchumina, Nikolai, and Telida.

Regulatory History

The Alaska National Interest Lands Conservation Act (ANILCA), Public Law 96-487, Section 1, Title II, sec. 202(3)a expanded Mount McKinley National Park for a variety of reasons, including protection of habitat for fish and wildlife, and to provide continued opportunities and other wilderness recreational activities. Subsistence uses by local residents are permitted in additions to the Park, where such uses are traditional in accordance with Title VIII of ANILCA. Title II, Sec. 203 permits hunting on the Preserve portion of Denali National Park and Preserve and provides that subsistence uses by local residents is allowed on the Preserve and Park where specified. Title VIII, Section 802 requires that utilization of the public lands is to cause the least adverse impact possible on rural residents who depend upon subsistence uses of the resources.

In 1990, the Federal Subsistence Management Program wolf hunting season in Unit 20C was from August 10 to April 30 with no harvest limit. The harvest limit was reduced to 10 wolves in 1991. The season was shortened to September 1 to March 31 in 1998. In regulatory year 2000/2001 there was no harvest limit and an August 10 to April 30 season. In regulatory year 2001/2002 the harvest limit was reduced to 10 wolves.

In 1996, the Denali Subsistence Resource Commission submitted a proposal to the Federal Subsistence Board, concerning the wolf hunting season in those portions of Units 13, 16, 19 and 20 that are within Denali National Park and Preserve. The Denali Subsistence Resource Commission asked that the wolf hunting season be shortened to coincide with the wolf trapping season, which at that time extended from November 1 to March 31 in Unit 20C. The reason for the proposal was to limit the harvest of wolves to the period when their hides were most valuable. Consistent with the recommendations of the Eastern Interior Alaska Subsistence Regional Advisory Council (Council) and the Southcentral Alaska Subsistence Regional Advisory Council, the Federal Subsistence Board (Board) rejected this proposal (Proposal 31) in 1997.

In 2004, Defenders of Wildlife submitted Proposal WP05-02 requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 not be opened until September 15. The Council

opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02.

This type of proposed regulation (a stair-stepped harvest limit) has been approved by the Board previously for wolf harvest in Unit 24.

The Board restricted subsistence to provide for wildlife viewing once before. In 1996, the U.S. Department of Agriculture, U.S. Forest Service submitted a proposal to close a portion of Anan Creek in Unit 1B to brown bear hunting and to modify a closure to black bear hunting to provide for wildlife viewing. The change was requested to align with State regulations and to address potential safety hazards of bear hunting near a viewing area. The Southeast Alaska Subsistence Regional Advisory Council supported that proposal and it was adopted by the Board in April 1997.

Biological Background

Murie (1944) observed that the wolves (*Canis lupus)* have been part of Alaska fauna for hundreds of years and have probably been present since the Pleistocene glaciation. Wolves are found throughout Denali National Park and Preserve. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Meier et al. (2006) reported that 28% of the wolves they studied in Denali National Park and Preserve left their packs each year, and that most offspring eventually left the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances; the longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles.

Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). The size of the home range is believed to depend on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) reported that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Since 1986, estimated wolf density in Denali National Park and Preserve has varied from approximately 13 to 48 wolves/1000 mi^2 (Meier 2005). Meier (2005) observed that low numbers of caribou in the Denali herd, along with a series of mild winters, had resulted in low numbers of vulnerable prey (moose, caribou and sheep) for wolves to kill. The spring/late winter 2009 wolf density estimate (23/1000 mi^2) was the lowest observed in more than 20 years (Meier 2010, pers. comm.). The Denali National Park and Preserve wolf population is currently estimated at fewer than 90 wolves (Rabinowitch 2010, pers. comm.).

Harvest History

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Wolf harvest estimates for Denali National Park and Preserve are based on reported harvests from Unified Coding Units (UCUs) that are entirely or partly within the boundaries of the Park and Preserve (NPS 2009b). From regulatory years 1998/99 to 2007/08, the reported total annual harvest of wolves by hunters and trappers in and around the Denali National Park and Preserve ranged from 10 to 29 wolves/year (**Table 1**). Approximately 90% of this harvest was from outside of Denali National Park and Preserve boundaries (Rabinowitch 2010). Examination of wolf sealing data shows no evidence that any wolves have been harvested, either by hunting or trapping, during the months of August, September or October within the boundaries of Denali National Park and Preserve. However, outside of the Park and Preserve boundaries approximately 13% of the wolf harvest has been in those months (**Table 1**).

Table 1. Estimated wolf harvest (hunting and trapping) in and around Denali National Park and Preserve portion of Unit 20C (NPS 2009b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. Harvest
1998/99	22	1
1999/2000	29	7
2000/01	28	6
2001/02	15	1
2002/03	22	3
2003/04	27	2
2004/05	14	2
2005/06	10	1
2006/07	18	1
2007/08	27	3

Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, Adams et al. concluded that the risks of reducing wolf populations through regulated harvest are quite low.

At its March 2005 meeting, Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from fall and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005). At the Southcentral Alaska Subsistence Regional Advisory Council's March 2005 meeting, it was noted that the Denali Subsistence Resource Commission had reported that the early season wolf pelts have low commercial value but are a resource for local subsistence user making crafts and clothing for personal use (SCRAC 2005).

According to Denali Subsistence Resource Commission Chair Mr. Ray Collins, local subsistence users do not target fall wolves because their pelts are not in their prime. Mr. Collins is not aware of any Federally qualified subsistence users taking wolves in the Kantishna area during the fall. Mr. Collins believes that any take of wolves in the fall in Kantishna would be incidental to harvesting a moose (R. Collins 2010,

per. comm.). Ms. Miki Collins, member of the Denali Subsistence Resource Commission and skin sewer, noted that in the twenty years she and her twin sister, Julie, have trapped wolves, they have never taken a fall wolf because they are unsure of the quality of the wolf pelts that time of year for skin sewing. According to Ms. Collins, last year a Lake Minchumina resident harvested a wolf in October and the pelt was in such poor condition he was unable to sell the hide (M. Collins 2010, pers. comm.). No member of the Denali Subsistence Resource Commission, and no subsistence hunter who has obtained a permit to drive the Denali Park Road to hunt moose, has expressed an interest in taking a wolf during the fall moose hunting season (Rabinowitch 2010).

Effects of the Proposal

If this proposal is adopted, the Federal harvest limit for wolf hunting would be reduced from 10 per year to 6 in that portion of Unit 20C that is within the Denali National Park and Preserve. Under Federal subsistence regulations, hunters would be allowed to take 1 wolf from August 10 to October 31 and an additional 5 wolves from November 1 to April 30. Hunters can take wolves within Denali National Preserve under State regulations (5 wolf limit and August 10–May 31 season).

This proposal affects Federally qualified subsistence hunters from the communities of Cantwell, Lake Minchumina, Nikolai, and Telida and those that have 13.440 permit to hunt in the portion of Denali National Park that was established on December 2, 1980. These same subsistence users are represented by the Denali Subsistence Resource Commission which is requesting this regulatory change.

The proposal would not affect regulations regarding wolf trapping in this area, currently November 1–April 30, with no harvest limit. Trapping is by far the most common means of subsistence wolf harvest in Denali National Park and Preserve.

Wolves in the Kantishna area of Denali National Park and Preserve, where subsistence moose hunting takes place, are frequently seen by park visitors and are relatively unafraid of humans. A subsistence moose hunt occurrs along the Kantishna Road. Under the current hunting bag limit of 10 wolves, a single hunter could remove a significant portion of Denali's wolf population (currently estimated at fewer than 90 wolves parkwide). Such an incident could cause the emergency closure of the Unit 20C wolf harvest in Denali National Park and Preserve, eliminating opportunities for the subsistence harvest of wolves later in the year when the pelts are prime.

OSM CONCLUSION

Support Proposal WP10-95

Justification

This proposal was supported by the Council. This proposal is cosponsored by the Denali Subsistence Resource Commission which represents the Federally qualified subsistence users that would be affected by the proposed regulatory change.

The proposed regulation would not curtail any historic pattern of use and would protect future patterns of subsistence use in Denali National Park and Preserve. There is no evidence that Federally qualified subsistence users have harvested any wolves in Denali during the fall months, and no interest has been expressed by subsistence users who reside in close proximity to the Park and Preserve in such harvest

opportunities. This proposal provides a stair-stepped harvest limit that allows some opportunistic harvest as early as August 1, while attempting to restrict most wolf harvest to the winter months.

Even if this proposal is adopted by the Federal Subsistence Board, hunters would still be able to take wolves under State regulations on Denali National Preserve lands in Unit 20C.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-95. The Council noted that this proposal is supported by local users and would provide a hunting opportunity for wolves without producing a conservation issue.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-95

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-95.
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-95: This proposal, submitted by the National Park Service, would reduce the federal subsistence hunting bag limit for wolves in Game Management Unit 20 from 10 wolves to 6 wolves and establish bag limits within two specified periods within the season. The proposed bag limits and season dates are 1 wolf during August 10 through November 1 and 5 wolves during November 2 through April 30 remainder of the season.

Introduction: The proponent and federal subsistence proposal book were unclear regarding what portion of Unit 20 the proposal addresses. The Department assumes the proposal was intended to focus on the portion of Unit 20 C within Denali National Park in the Kantishna area near the Denali Park Road frequented by wolf viewing tourists. The proponent incorrectly assumes that a bag limit reduction and bag limit seasonal distribution will protect federal subsistence hunting and trapping by limiting opportunities for incidental harvest of non-prime wolf hides. Hide value depends on what it will be used for by subsistence users. Hides that are not prime are suitable for making warm items for personal use, consistent with subsistence uses. Additionally, the proponent indicated adoption of this proposal will result in continuing significant commercial value to the wolf viewing tourist industry, which if impacted by federal subsistence harvests, may result in unfavorable publicity and increased pressure on National Park Service to curtail federal subsistence activities. Data do not indicate that viewing opportunity is diminished under current federal and state regulations. Furthermore, subsistence is a purpose of federal public lands and a responsibility of the National Park Service to educate visitors of the value of the subsistence way of life protected by Congress.

Impact on Subsistence Users: If adopted, federal subsistence wolf hunters will have their opportunity to harvest wolves in autumn and fall significantly restricted to one wolf. In addition, the federal subsistence wolf hunt bag limit would be reduced by up to 50% during the November 2 through April 30 portion of the season. Data are needed to indicate what the customary and traditional subsistence needs are by federal subsistence users on federal public land.

Opportunity Provided by State: The current state wolf hunting season and bag limit in all of Unit 20 is five wolves during August 10 through May 31.

Conservation Issues: None.

Enforcement Issues: A divided federal season with period assigned bag limits will create enforcement issues in areas with mixed land ownership and cause confusion among the public, particularly where state regulations are significantly different from federal regulations.

Other Comments: If adopted, the earlier part of the season in which only one wolf may be taken should end October 31 to avoid a one-day overlap with the November 1 season.

Recommendation: Oppose. This restriction is not necessary to provide for conservation of wolves and would unnecessarily restrict federal subsistence opportunity without achieving the proponent's desire to benefit non-consumptive users.

WRITTEN PUBLIC COMMENTS

Oppose. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose Proposal WP10-95. We oppose WP10-95 to reduce the bag limit and shorten the hunting season for wolves in Unit 20 remainder, which includes C&T in Unit 20A, Unit 11, Unit 12 and Unit 13. Some of the Cantwell residents are Ahtna Athabascans and hunt within Unit 20A.

We do not support reducing bag limits and restricting wolf hunting season, so that the "public can view wolves," and to have superiority before the Federally qualified subsistence users. "Unfavorable publicity and increased pressure on NPS to curtail subsistence activities," that was written in the proposal, is not a valid reason to reduce wolf bag limits and hunting season. ANILCA mandates are not being adhered to.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-96 Executive Summary	
General Description	Proposal WP10-96 requests a Federal hunting season for muskrat on Federal public lands within Unit 20 remainder with a harvest limit of 25 muskrat per season. *Submitted by Miki Collins*
Proposed Regulation	**Unit 20–Muskrat Hunting** *Unit 20E, that portion within Yukon-Charley Rivers National Preserve—No limit* — *Sept. 20–June 10* *Unit 20 remainder —* ***25 Muskrat*** — *~~No open season~~* ***Nov. 1–June 10***
OSM Conclusion	**Support** proposal WP 10-96 **with modification** to establish a muskrat hunting season from November 1 through 10 June in Unit 20C, that portion within Denali National Park and Preserve. **Unit 20–Muskrat Hunting** *Unit 20E, that portion within Yukon-Charley Rivers National Preserve—No limit* — *Sept. 20–June 10* *Unit 20C,* ***that portion within Denali National Park and Preserve—25 Muskrat*** — ***Nov. 1–June 10*** *Unit 20 remainder* — *No open season*
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-96 **with modification** as described in the OSM proposal analysis.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-96 **with modification**. The department supports modification to establish a season from November 1 through 10 in that portion of Unit 20C within Denali National Park and Preserve with a harvest limit of 25 muskrat.
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP10-96

ISSUES

Proposal WP10-96, submitted by Miki Collins, requests a Federal hunting season for muskrat on Federal public lands within Unit 20 remainder with a harvest limit of 25 muskrat per season.

DISCUSSION

The proponent's intent is to establish a hunting season in order to provide opportunity to harvest muskrat with a firearm while trapping in Denali National Park and Preserve. While there is some ambiguity in the proposal as to whether the intended scope of the proposed regulation is limited to Denali National Park and Preserve, this was verified in consultation with the proponent. Federal subsistence trapping regulations prohibit the taking of free-ranging furbearers with a firearm on National Park Service (NPS) lands under a trapping license. To opportunistically harvest muskrat with a firearm for subsistence proposes on NPS lands a muskrat hunting season must be created. A hunting season in Denali National Park and Preserve would allow for the harvest of muskrat during the trapping season. It is not necessary to apply this regulation beyond Denali National Park and Preserve because individuals can currently harvest muskrat with a firearm in the rest of Unit 20 excluding NPS lands under current Federal and State trapping regulations. A hunting season for muskrat on other NPS lands in Unit 20, at Yukon-Charley Rivers National Preserve, is already addressed in regulation. The proponent suggested a 25 muskrat harvest limited until more is known about the population.

Existing Federal Regulation

Unit 20 —Muskrat Hunting	
Unit 20E, that portion within Yukon-Charley Rivers National Preserve—No limit	*Sept. 20–June 10*
Unit 20 remainder	*No open season*

Proposed Federal Regulation

Unit 20–Muskrat Hunting	
Unit 20E, that portion within Yukon-Charley Rivers National Preserve—No limit	*Sept. 20–June 10*
*Unit 20 remainder — **25 Muskrat***	*~~No open season~~* ***Nov. 1–June 10***

Existing State Regulation

Unit 11—Muskrat (trapping)	
Unit 20 (except 20E) — No limit	*Nov. 1–June 10*
Unit 20E — No limit	*Sept. 20–June 10*

Extent of Federal Public Lands

Federal public lands comprise approximately 18.9% of Unit 20. They consist of 14.8% Denali National Park and Preserve and Yukon-Charley Rivers National Preserve managed by the National Park Service (NPS), 0.1% Yukon Flats National Wildlife Refuge managed by US Fish and Wildlife Service (USFWS) and 4.0% Bureau of Land Management (BLM) administered land (**Unit 20 Map).**

Customary and Traditional Use Determinations

There has not been a customary and traditional determination made for muskrat in Unit 20, therefore, all rural residents are eligible to harvest muskrat in Unit 20.

Regulatory History

The State of Alaska authorizes the holder of a trapping license to harvest muskrat with a firearm under trapping regulations. State trapping regulations have not changed over the last 10 years for Unit 20E and 20 remainder. The State trapping seasons are September 20–June 10 for Unit 20E and November 1–June 10 and for Unit 20 remainder. The current Federal trapping regulations are identical to State trapping regulations and have not changed over the past 10 years. In May 2006, the Federal Subsistence Board adopted proposal WP06-62 allowing for muskrat hunting in Unit 20E within Yukon-Charley Rivers National Preserve during the trapping season.

Biological Background

Muskrats are one of Alaska's most visible and numerous furbearers, but harsh environmental conditions and overpopulation result in periodic fluctuations in numbers. Since muskrat do not have to be sealed there is little information to evaluate current population trends. Results from the 2005/06 State Trapper Questionnaire report estimated the muskrat population in Unit 20 as scarce. This assessment continued through 2006/07 (Schumacher 2009, pers. comm.). Anecdotal observations suggest that muskrat populations are slowly rising from a long-term low and are beginning to occupy habitats that have not been occupied since the 1970s (Seaton 2007). Currently, the population in Unit 20 is stable or increasing and can sustain additional harvest (Seaton 2009, pers. comm.). Due to limited funding, neither ADF&G nor NPS staffs routinely conduct surveys or inventories for muskrats.

Harvest History

Most of the muskrat harvest takes place in the spring, when muskrats are actively looking for a mate and seeking food in open waters of thawing lakes and streams. Muskrat provide fresh meat for trappers and hunters. Historically, muskrats have been both economically and culturally important to local residents (Gross 2004). Currently, 12% of the muskrats harvested in Unit 20 are taken with .22-caliber rifles (ADF&G 2006).

Effects of the Proposal

This proposal would re-establish a traditional practice to harvest muskrats with a firearm for food and hides. Currently, free ranging muskrat in Unit 20 can be taken with firearms under a trapping license on State, USFWS and BLM lands and under hunting regulations in Yukon-Charley Rivers National Preserve. Existing Federal regulations do not allow the taking of free ranging furbearers with a firearm under a trapping license in Denali National Park and Preserve. This proposal would allow the taking of muskrats with a firearm under hunting regulations in Denali National Park and Preserve, thereby providing for

additional subsistence opportunity. The proposal would have minimal effects on the muskrat population, as the population is considered healthy and stable. Any possible small increase in harvest, which would result from this proposal, is considered sustainable.

OSM CONCLUSION

Support proposal WP 10-96 **with modification** to establish a muskrat hunting season from November 1 through 10 June in Unit 20C, that portion within Denali National Park and Preserve.

The regulations should read:

Unit 20–Muskrat	
Unit 20E, that portion within Yukon-Charley Rivers National Preserve—No limit	*Sept. 20–June 10*
Unit 20C, ***that portion within Denali National Park and Preserve—25 Muskrat***	***Nov. 1–June 10***
Unit 20 remainder	*No open season*

Justification

Adoption of this proposal would provide for additional subsistence opportunity to harvest muskrat through use of a firearm in Denali National Park and Preserve under a hunting license. The current muskrat population levels for Unit 20 are stable, and could accommodate the small increase in harvest that may occur with passage of this proposal. Regulations were implemented in 2006 for Yukon –Charley Rivers National Preserve.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-96 **with modification** as described in the OSM proposal analysis. The Council determined that this proposal required modification for clarification because Denali is the only location where hunting with a rifle is not already allowed. The proposal would re-establish traditional hunting practices, will align Federal and State regulations and will benefit subsistence users. There is not a conservation issue.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-96

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-96
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-96: This proposal would establish a hunting season of November 1 through June 10 for a bag limit of 25 muskrats in Unit 20 remainder exclusive of the Yukon-Charley Rivers National Preserve where there is a September 20 through June 10 season with no bag limit.

Introduction: This proposal was submitted to establish a federal subsistence hunting season in Unit 20, within Denali National Preserve, allowing take of muskrat as a free-ranging furbearer with a firearm, which gear-type is currently prohibited by National Park Service regulation with a state trapping license.

Impact on Subsistence Users: If adopted, all federally qualified rural residents statewide will have the opportunity to harvest muskrat with a firearm in Unit 20 remainder portions of Denali National Preserve. (There is no federal C&T finding of communities that have harvested the affected muskrat populations, so federal subsistence use is open to all rural residents.)

Opportunity Provided by State: There is no hunting season for muskrats under state regulations. However, firearms may be used to take muskrats under a state trapping license with no limit September 20 through June 10 in Unit 20E and November 1 through June 10 in the remainder of Unit 20.

Conservation Issues: None.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal will create enforcement issues with mixed land ownership. Only a small portion of Unit 20 is federal public lands, and the federal lands area under consideration for this proposal is within Unit 20C.

Recommendation: Support with modification. The department supports modification to establish a season from November 1 through 10 in that portion of Unit 20C within Denali National Park and Preserve with a harvest limit of 25 muskrat.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-96. We support WP10-96 to allow a hunting season—Nov. 1–June 10, for a take of 25 muskrats for all residents in Unit 20 remainder. This will allow all rural residents to hunt for muskrats.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-97/98/99/100 Executive Summary	
General Description	Proposals WP10-97, -98, -99 and -100 seek to shorten wolf seasons and/or lower harvest limits for wolves in Units 20A, 12 and 25A. *Submitted by the Defenders of Wildlife and the Alaska Wildlife Alliance*
Proposed Regulation	Proposal WP10-97 **Unit 20A—Wolf Trapping** *No limit* *Nov. 1–* ***Mar. 31****~~April 30~~* Proposal WP10-98: **Unit 20A—Wolf Hunting** *~~10~~* ***5*** *Wolves* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~* Proposal WP10-99 **Unit 12—Wolf Trapping** *No limit* ***Nov. 1–Mar. 31*** *~~Oct. 1–April 30~~* Proposal WP10-100: **Unit 25A—Wolf Hunting** *~~No limit~~* ***10 Wolves*** *Aug. 10 –April 30*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Defer** Proposals WP10-97/98/99/100 to the Eastern Interior Subsistence Regional Advisory Council.
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**4 Oppose** Proposal WP10-97 and 98 **4 Oppose** Proposal WP10-99 **1 Oppose** Proposal WP10-100

STAFF ANALYSIS
WP10-97, -98, -99, AND -100

ISSUES

Proposals WP10-97, -98, -99 and -100 were submitted by the Defenders of Wildlife in conjunction with the Alaska Wildlife Alliance and seek to shorten wolf seasons and/or lower harvest limits for wolves in Units 20A, 12 and 25A.

DISCUSSION

WP10-97 requests that trapping not be allowed in Unit 20A in the month of April. WP10-98 requests that hunting not be allowed in Unit 20A in the months of August, September, October, and April and that the harvest limit be reduced from 10 wolves to five.

WP10-99 requests that trapping not be allowed in October and April in Unit 12. The proponent wishes to apply this restriction in the part of Unit 12 that is outside of the State's predator control program (U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) lands).

WP10-100 requests that the harvest limit for wolf hunting in Unit 25A be reduced from no limit to 10 wolves.

The proponents note that in Unit 12, wolf hides are not fully prime by October 1, and trappers generally do not begin trapping until later when snow and ice conditions permit. The proponents note that in late April, in Units 20A and 12, hides are rubbed and that pregnant females are approaching full term. The proponents note that pups are only half grown at the start of the current wolf hunting seasons in 20A and 25A and that in August hides are not suitable for commercial sale or trophies. The proponents states that "hunters shooting wolves in August would likely discard the low-quality hide or leave the intact carcass in the field."

Existing Federal Regulation

Unit 20A—Wolf Trapping	
No limit	*Nov. 1–April 30*
Unit 20A—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 12—Wolf Trapping	
No limit	*Oct. 1–April 30*
Unit 25A—Wolf Hunting	
No limit	*Aug. 10–April 30*

Proposed Federal Regulation

Proposal WP10-97

Unit 20A—Wolf Trapping	
No limit	*Nov. 1–* ***Mar. 31****~~April 30~~*

Proposal WP10-98:

Unit 20A—Wolf Hunting

*~~10~~ **5** Wolves* — ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*

Proposal WP10-99

Unit 12—Wolf Trapping

No limit — ***Nov. 1–Mar. 31*** *~~Oct. 1–April 30~~*

Proposal WP10-100:

Unit 25A—Wolf Hunting

~~No limit~~ ***10 Wolves*** — *Aug. 10 –April 30*

Existing State Regulation

Unit 20A—Wolf Trapping

No limit — *Nov. 1 –April 30*

Unit 20A—Hunting

5 Wolves — *Aug. 10 – May 31*

Unit 12—Wolf Trapping

No limit — *Oct. 15 –April 30*

Unit 25A—Wolf Hunting

10 Wolves — *Aug. 10 – May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12 and consist of 82% NPS lands and 18% FWS lands (see **Unit 12 Map**). Federal public lands comprise approximately 1% of Unit 20A and are all Bureau of Land Management (BLM) lands (see **Unit 20 Map**). Federal public lands comprise approximately 76% of Unit 25A and consist of 97% FWS lands and 3% BLM lands (see **Unit 25 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 12, 20A and 25A. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf hunting season in Unit 20A has been August 10 to April 30 since 1990. There was no harvest limit for wolf hunters in Unit 20A in regulatory year 1990/91; the harvest limit was reduced to 10 wolves in 1991/92 and has remained at that level since then. The Federal subsistence wolf trapping season in Unit 20A has been November 1 to April 30 since 1990.

The Federal subsistence wolf trapping season for Unit 12 has been October 1 to April 30 since 1990.

There has been no harvest limit for wolf hunting in Unit 25A since 1990. Units 25A and 22 are the only units in Alaska that have no harvest limit for wolf in the Federal hunting regulations.

In 2004, Defenders of Wildlife submitted a Proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Eastern Interior Alaska Subsistence Regional Advisory Council (Council) opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02. At its March 2005 meeting, Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 12, 20A and 25A and are well adapted to living in the interior Alaska boreal forests, river valleys and mountains. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

The size of the home range is believed to be dependant on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. ADF&G (2010) observed that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through interspecific competition. It is the adults, including pregnant and lactating females, that do the killing of large prey. Thus the adults are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support of pups (ADF&G 2010a).

Unit 12

While information is limited, Hollis (2006) estimated that there were 240–255 wolves in Unit 12. Wolf density estimates for 2001 to 2004 ranged from 16 to 50/1000 mi^2 (Hollis 2006). Hollis (2006) estimated that in regulatory year 2002/03 that there were a total of 31 packs with an average pack size of 7.0–7.4 wolves. The current fall wolf population estimate for Unit 12 is 179–192 wolves (18 to 19/1000 mi^2)

(ADF&G 2010a). The Unit 12 wolf population has benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998–2001 and 2007–2009 (ADF&G 2010a). The Chisana caribou herd has been a reliable food source for wolves in eastern Unit 12. Caribou from the Mentasta, Nelchina, and Macomb herds also have used portions of the unit and are a food source for wolves (Hollis 2006).

Unit 20A

While information is limited, Young (2006) estimated that there were 200–250 wolves and 20–25 packs in Unit 20A. ADF&G (2009a) reported that there were 224–229 wolves in Unit 20A in fall 2008. The current Unit 20A fall wolf density estimate is 36/1000 mi^2; this is the highest density in interior Alaska (ADF&G 2010a).

Unit 25A

The current fall wolf population density estimate for Unit 25A is 230–277 wolves (11–13/1000 mi^2) (ADF&G 2010a). Wolf population numbers have been relatively stable in Unit 25A for many years (ADF&G 2010a).

Harvest History

Fur prices and snow conditions affect wolf trapping effort in any given year. Hollis (2006) observed that few trappers selected for wolves, but noted that during years when martin and lynx pelt prices are low and wolf prices are adequate, more trappers concentrate on wolves. Harvest rates in remote areas are dependent on fur prices and weather conditions. Trapping pressure is high along the road system, especially around communities (Hollis 2006). Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. During the early winter period, conditions are inadequate for travel. Once snow-cover and ice are adequate for snowmachine travel, trappers began establishing and maintaining trap lines. In these interior Alaska units, wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. ADF&G (2010a) observed that adult wolves learn to avoid humans through experience and are the most difficult pack members to take; pups are the most vulnerable pack members to harvest.

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used.

There have been a number of wolf control programs in these units over the years (Young 2006, Hollis 2006). The Alaska Board of Game authorized aerial wolf control in northern Unit 12 in 2004 (Hollis 2006).

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Table 1. Reported wolf harvest and method of take for Unit 12 (ADF&G 2009b, 2010b).

Regulatory Year	Reported Total Harvest	Oct. & April Harvest	Method of take for total harvest from Unit 12				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	54	3	40	74	13	24	1
2000/01	58	1	51	88	7	12	0
2001/02	39	2	32	82	7	18	0
2002/03	53	2	49	92	4	8	0
2003/04	25	5	23	92	2	8	0
2004/05	29	2	27	93	2	7	0
2005/06	39	3	22	56	15	38	2
2006/07	30	1	24	80	6	20	0
2007/08	49	9	36	73	9	18	4
2008/09	39	0	29	74	7	18	3

Unit 12

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 12 ranged from 25–58/year (**Table 1**). Most of the wolves were taken using traps or snares. Annual harvest rates in Unit 12 have been <24% since 1998 (ADF&G 2010a).

Of a total of 376 wolves taken Unit 12 for regulatory years 1999/2000 to 2008/089, 16 were trapped or snared during the months of October and April (**Table 1**). Seven wolves were shot in October and April; it isn't clear whether the seven wolves that were shot were taken under hunting or trapping regulations. With a trapping license, during trapping season, a trapper may take free ranging wolves with a firearm on FWS lands in Unit 12.

Unit 20A

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 20A ranged from 33–98/year (**Table 2**). Most were taken with traps or snares (**Table 2**). Of the total Unit 20A wolf harvest, from 3 to 15 wolves/year were taken in August, September, October, and April. The harvest rate of wolves in Unit 20A is higher than in some other areas.

Unit 25A

From regulatory years 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 25A ranged from 12–24/year (**Table 3**). Most were taken with traps or snares (**Table 3**). Stephenson (2006) estimated that the reported annual harvest accounted for a maximum of 8 to 10% of the estimated wolf population in Unit 25A.

Effects of the Proposal

If adopted, these proposals would decrease opportunity for Federally qualified subsistence users to harvest wolves in Units 12, 20A, and 25A. The harvest of wolves and the use, barter, and sale of pelts has long been very important for subsistence uses in Units 12, 20A and 25A (Halpin 1987; Andrews 1988; Caulfield 1983).

Table 2. Reported wolf harvest and method of take for Unit 20A (ADF&G 2009b, 2010b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of take for total harvest in Unit 20A				
			Trap/snare	(%)	Shot	%	Unk
1999/2000	67	11	53	79	14	21	0
2000/01	95	10	79	83	12	13	4
2001/02	98	10	90	92	8	8	0
2002/03	82	11	70	85	12	15	0
2003/04	61	3	52	85	2	3	7
2004/05	54	9	44	81	8	15	2
2005/06	33	7	28	85	5	15	0
2006/07	67	10	55	82	11	16	1
2007/08	42	11	27	64	13	31	2
2008/09	57	15	39	68	16	28	2

Table 3. Reported wolf harvest and method of take for Unit 25A (ADF&G 2009b, 2010b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of take for total harvest in Unit 25A				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	13	4	8	62	5	38	0
2000/01	24	4	13	54	11	46	0
2001/02	13	5	5	38	8	62	0
2002/03	12	3	9	75	3	25	0
2003/04	18	4	12	67	6	33	0
2004/05	15	5	12	80	3	20	0
2005/06	21	5	14	67	6	29	1
2006/07	24	9	14	58	10	42	0
2007/08	15	6	7	47	8	53	0
2008/09	21	5	12	57	9	43	0

If Proposal WP10-97 is adopted, the Federal wolf trapping season in Unit 20A would be closed during April, thereby shortening the season by 30 days. If Proposal WP10-98 is adopted, the Federal wolf hunting season in Unit 20A would be closed August 10–October 31 and April 1–30 thereby shortening the season by 113 days. Between regulatory years 1999/2000 and 2008/09, 13% of the reported Unit 20A wolf harvest occurred in August, September, October and April (**Table 1)**. Federal subsistence wolf hunting and trapping in Unit 20A have little impact on wolf numbers; Federal public lands comprise a small part of Unit 20A (approximately 1%).

If proposal WP10-99 is adopted, the Federal wolf trapping season in Unit 12 would be closed in October and April, thereby shortening the season by 61 days. This would restrict subsistence opportunity to take a wolf while trapping other species such as muskrat or beaver in the spring. The wolf harvest in the months of October and April in Unit 12 was relatively small in regulatory years 1999/2000 to 2008/09.

Currently, there is no limit on the number of wolves that can be taken by hunters under Federal regulations in Unit 25A. If proposal WP10-100 is adopted, the Federal wolf harvest limit for hunters would be reduced to 10 wolves. This change would have a limited affect on subsistence users since the number of wolves harvested by an individual hunter is typically lower than that.

WP10-98 and WP10-99 would eliminate the opportunity for subsistence users to harvest wolves under Federal regulations during the fall and spring when they are hunting other species.

Proposals WP10-97, -98 and -99 would make the Federal subsistence wolf seasons shorter than the State seasons. Proposal WP10-100 would align the Federal subsistence wolf hunting harvest limit with the State harvest limit.

OSM CONCLUSION

Oppose Proposals WP10-97, -98, -99, and -100.

Justification

The wolf populations in Units 12, 20A and 25A are considered healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are a very important subsistence resource in Units 12, 20A and 25A. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy.

While less than 1% of the Unit 12 wolf harvest occurred in the months of October and April over the past decade, the opportunity for trappers to take wolves in these two months is important to those that participate in the harvest.

Over the past decade, 13% of the reported, Unit 20A wolf harvest has occurred in the months of August, September, October and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use to make clothing and handicrafts.

Even if these proposals were adopted by the Federal Subsistence Board, hunters and trappers would still be able to take wolves under State regulations on FWS, BLM, and Wrangell-St. Elias Preserve lands in Units 12, 20A and 25A. As such, adoption of these proposals by the Federal Subsistence Board would not have the effect sought by the proponents.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposals WP10-97-98-99-100. The Council determined that wolf populations are healthy in these areas and there is no evidence presented that would be a reason to restrict subsistence use.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Defer Proposals WP10-97/98/99/100 to the Eastern Interior Subsistence Regional Advisory Council.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-97/98/99/100

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposals WP10-97, 98, 99, and 100: These proposals would reduce the federal subsistence wolf trapping seasons in Units 12 and 20A by 61 days and 30 days, respectively; reduce the wolf hunting season in Unit 20A by 112 days and bag limit from 10 wolves to 5 wolves; and reduce the wolf hunting bag limit in Unit 25A from no limit to 10 wolves.

Introduction: These proposals incorrectly assume federal subsistence wolf hunting and trapping bag limits and season lengths are part of a predator control program. Predator and prey management is the responsibility of the State of Alaska. Federal subsistence regulations are authorized by ANILCA for the purpose of providing a continued customary and traditional subsistence use by rural residents on federal lands. The federal subsistence regulations provide August openings for wolf hunting and trapping that are traditional, allowing federal subsistence hunters the opportunity to take a wolf while hunting for other big game in the fall and closing April 30 after mild spring weather that made travel conditions easier. In fact, April seasons are traditional, allowing federal subsistence users the opportunity to take a wolf while trapping for other furbearers. These proposals fail to recognize that hide value depends on intended use; e.g., hides taken in early fall and late spring are suitable for making warm items for personal use, consistent with subsistence use of this species.

Impact on Subsistence Users: Proposal 99 would restrict the subsistence opportunity to take a wolf in Unit 12 while trapping other species, such as muskrat and beaver in the spring. Proposal 97 would reduce the federal subsidence user opportunity in Unit 20A to take a wolf while trapping other species in the spring, and proposal 98 would reduce federal subsistence user opportunity to hunt wolves by 113 days, about a 40% reduction of the season, and reduce the bag limit by 50%. Proposal 100 would reduce federal subsistence hunters' opportunity in Unit 25A to take an unlimited number to 10 wolves.

Opportunity Provided by State: In Unit 12, the state provides an October 15 through April 30 trapping season with no harvest limit. In Unit 20A, the state trapping season is November 1 through April 30 with no harvest limit and the state hunting season is August 10 through May 31 with a 5 wolf bag limit. The state wolf hunting season in Unit 25A is August 10 through May 31, with a bag limit of ten wolves.

Conservation Issues: None, as described for each unit below.

Unit 12: The current federal subsistence season and bag limits for wolf trapping in Unit 12 have virtually no impact on wolf numbers. Wolf numbers and total harvests have been relatively stable in Unit 12 for many years, and there are no current conservation concerns. Since 1999, an average of 41 wolves per year have been harvested by all methods in Unit 12, including a total of 4 wolves that were taken in the Upper Yukon–Tanana predation control area in northern Unit 12. The current fall wolf population estimate in Unit 12 is 179–192 wolves (7–7.5 wolves/1,000 km^2). Despite active wolf reduction efforts in a portion of northern Unit 12 and in neighboring Units 13 and 20E, the minimum fall population of wolves residing entirely within Unit 12 has changed little since 1998. Harvest rates in Unit 12 have been $\leq$24% since 1998, well below annual harvest rates of more than 30% needed to preclude wolf population growth. Wolf

numbers, particularly in northern Unit 12, have benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998–2001 and 2007–2009.

The proposer suggests that adjacent Units 13 and 20E have very low wolf densities due to active predator management. While wolves have been reduced in these units in recent years, it was not by 80% as the proposer suggests. The Unit 12 wolf density estimate of 7–7.5 wolves/1,000 km^2 indicates that this population was unaffected by wolf control in adjacent units. Shortening the wolf trapping season in Unit 12 at this time would have no effect on the conservation of wolves.

Unit 20A: Current season and bag limits for federal subsistence wolf hunting and trapping in Unit 20A have little impact on wolf numbers in Unit 20A. While annual harvest by all methods averaged 50 wolves during 2004–2008, Alaska Department of Fish and Game research indicates that interspecific competition is a substantial cause of mortality in this wolf population. Shortening the federal subsistence season to end on the proposed date of March 30 is not warranted.

The proposer cites wolf control during 1976 through 1983 as a reason to restrict current seasons and bag limits in Unit 20A. However, as the proposer points out, moose responded to reduced wolf numbers and are now abundant throughout Unit 20A. Wolf numbers have also recovered in Unit 20A, reaching current fall densities of 14 wolves/1,000 km^2, the highest wolf density in Interior Alaska, indicating that previous wolf control in Unit 20A has benefited the wolf population as well as the moose population and federal subsistence hunters. The proposer suggests that density-dependent effects in the moose population cannot be reduced without increasing the wolf population. On the contrary, the department is managing hunter numbers in Unit 20A in order to effectively manage this moose population.

Unit 25A: Wolf population numbers and total harvests have been relatively stable in Unit 25A for many years. Current federal subsistence and state bag limits for wolf hunting in Unit 25A have virtually no impact on wolf numbers. There is no danger of overharvest, and there are no current conservation concerns. The current fall wolf population density estimate in Unit 25A is 230–277 wolves (4.2–5.0 wolves/1,000 km^2). Since 1999, an average of 7 wolves per year have been shot in Unit 25A, and the harvest rate by all methods is less than 9% of the population, well below a level needed to preclude wolf population growth. Decreasing the wolf hunting bag limit in Unit 25A at this time would have no beneficial effect on the conservation of wolves in Unit 25A.

Other Comments: It is unlikely that all adult wolves would be taken out of a pack by the federal subsistence hunting and or trapping seasons and bag limits addressed in these proposals. Adults have learned to avoid man through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the older adults, including pregnant and lactating females, that do the killing of large prey, thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposals WP10-97 and 98. Wolves in GMU 20A are not in jeopardy. The current trapping and hunting seasons for wolves has contributed to the increased numbers of moose for human consumption as intended through Intensive Management. Hunters are reducing the numbers of moose in this subunit as intended.

Don Quarberg, Delta Junction

Oppose Proposals WP10-97 and 98**.** Delta Junction Advisory Committee members feel that the wolf trapping and hunting season should left to the current time frames. This is needed to help maintain game populations and help control wolf populations in this intensive management area as it is now. No change needed.

Delta Junction Advisory Committee

Oppose Proposals WP10-97, 98, 99, and 100. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose Proposal WP10-97. We oppose WP10-97 to shorten the wolf hunting season in Unit 20A. The moose population my be high right now, and that is not a reason to allow a shorter hunting season for wolves. The moose population may crash if there is food shortage, severe winter, too much snow, etc. The wolf hunting season should be kept as it is in Unit 20A.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Oppose Proposal WP10-98. We oppose WP10-98 to shorten the wolf hunting season and a limit of 5 wolf take in Unit 20A on Federal public lands or State lands. The moose population may be high right now, and that is not a reason to allow a shorter hunting season for wolves. The moose population may crash if there is food shortage, severe winter, too much snow, etc. The wolf hunting season should be kept as it is in Unit 20A.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Oppose Proposal WP10-99. We oppose WP10-99 to shorten the wolf hunting season from Oct. 1–Apr. 30 to Nov. 1–Mar. 31 in that portion of Unit 12 not part of the State's predator control program. See comments under WP10-36 and WP10-38.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

Oppose Proposal WP10-99. The proposal would adversely affect subsistence users by reducing subsistence opportunity and there is not a conservation concern.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-99**.** Please keep wolf trapping season open in Unit 12 from Oct. 1–Apr. 30. Wolves prey heavily on moose, sheep, and caribou in this area, leaving less opportunity for subsistence users. Let's give trappers plenty of opportunity to harvest wolves.

Kieth Rowland, McCarthy

WP10-101 Executive Summary	
General Description	Proposal WP10-101 requests that the moose harvest season be changed to August 20–September 30 in a portion of Unit 20E, matching the existing season in the other portion of the unit. *Submitted by Bronk Jorgensen of Tok, Alaska*
Proposed Regulation	**Unit 20E — Moose** ***Unit 20E*** *~~that portion within Yukon-Charley National Preserve~~- 1 bull.* — ***Aug. 20–Sept. 30*** *~~Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road— 1 bull.~~* — *~~Aug. 24–Aug.. 28 Sept. 1–Sept. 15~~*
OSM Conclusion	**Support** WP10-101 **with modification** to retain the Yukon-Charley Rivers National Preserve portion and to closely align the other two portions with State regulations for purposes of permit administration and harvest reporting and to provide an August 24 to September 25 season in these two portions. The modified regulation would read: **Unit 20E — Moose** *Unit 20E, that portion within Yukon-Charley* ***Rivers*** *National Preserve— 1 bull.* — *Aug. 20–Sept. 30* *~~Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.~~* — *~~Aug. 24–Aug. 28 Sept. 1–Sept. 15~~* ***Unit 20E, that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage — 1 bull.*** — ***Aug. 24 – Sept. 25*** ***Unit 20E remainder — 1 bull by joint state — Federal registration permit.*** — ***Aug. 24. – Sept. 25***
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-101 **with modification** for clarity, for conservation and to benefit subsistence users. The modified regulation would read: *Unit 20E, that portion within Yukon-Charley* ***Rivers*** *National Preserve— 1 bull.* — *Aug. 20–Sept. 30* *~~Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.~~* — *~~Aug. 24–Aug. 28 Sept. 1–Sept. 15~~*

continued on next page

WP10-101 Executive Summary *(continued)*	
	Unit 20E, that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage — 1 bull. ***Aug. 24 – Sept. 25*** ***Unit 20E remainder — 1 bull by joint state — Federal registration permit.*** ***Aug 24. – Sept. 25***
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP10-101 as **modified** by the Eastern Interior Regional Advisory Council to: 1. Require Federal subsistence hunters to hunt under the Unit 20E moose registration permit RM865, in the road accessible portions of Unit 20E, instead of a green harvest ticket. The current Unit 20E state moose registration permit (RM865) has strict reporting requirements and would improve reporting and make enforcement much easier in Unit 20E. 2. Retain the August 24 opening date in the road accessible portions of Unit 20E to align State and federal seasons to reduce enforcement issues. The proposed extension in August should not result in a major conservation concern. Modification of the hunting season closing date in the road accessible portions of Unit 20E should not exceed September 25. This would represent a more conservative approach, compared to the proposed 15-day extension. With the high level of uncertainty about the potential increase in harvest with a late September season extension, an extension to no later than September 25 is warranted. However, the Department continues to recommend this regulation be enacted for a period of two years which would give managers a chance to assess changes in harvest, while minimizing risk to the moose population.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-101

ISSUE

Proposal WP10-101, submitted by Bronk Jorgensen of Tok, Alaska, requests that the moose harvest season be changed to August 20–September 30 in a portion of Unit 20E, matching the existing season in the other portion of the unit.

DISCUSSION

The proponent is requesting that the dates of the Federal fall moose season for Bureau of Land Management administered lands in Unit 20E, including the Fortymile Wild and Scenic River corridor, be changed to August 20–September 30 to match the season dates in the portion of Unit 20E within the Yukon-Charley Rivers National Preserve (Preserve). The proponent states that adoption of this proposal would benefit Federally qualified subsistence users by providing an additional 22 days to hunt moose in the affected area.

Proposal WP10-86 is related to this proposal, in that it is requesting that the dates of the Federal fall moose season for Unit 25C, a portion of which is in the Preserve, be changed to also match the August 20–September 30 season in adjoining portions of Units 25B and 20E within the Preserve.

Existing Federal Regulations

Unit 20E — Moose

Unit 20E, that portion within Yukon-Charley [Rivers] National Preserve— 1 bull.	*Aug. 20–Sept. 30*
Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.	*Aug. 24–Aug. 28* *Sept. 1–Sept. 15*

Proposed Federal Regulations

Unit 20E — Moose

Unit 20E *~~that portion within Yukon-Charley [Rivers] National Preserve~~— 1 bull.*	***Aug. 20–Sept. 30***
~~Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.~~	*~~Aug. 24–Aug.. 28~~* *~~Sept. 1–Sept. 15~~*

Existing State Regulations

Unit 20E — Moose

Unit 20E drainages of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage	*Resident: One bull*	*Harvest permit*	*Aug. 24–Aug. 28* *OR* *Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 20E remainder	*Resident: One bull by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865*	*RM865*	*Aug. 24–Aug. 28* *OR* *Sept. 8–Sept. 17*
	OR		
	Resident: One bull by permit in the Ladue River Controlled Use Area	*DM-794/796*	*Nov. 1–Nov. 30*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865	*RM865*	*Sept. 8–Sept. 17*

The Unit 20E State management goals and objectives for moose are as follows (Gross, 2008):

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem
- Continue sustained opportunities for subsistence use of moose
- Provide for a sustained harvest and promote moose habitat enhancement by allowing natural fires to alter vegetation.
- Management Objective
- Maintain a post hunting ratio of at least 40 bulls:100 cows in all survey areas

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20E; 4% Bureau of Land Management lands and 20% National Park Service lands (see **Unit 20 Map**).

Customary and Traditional Use Determination

Rural residents of Unit 20E, Unit 12 (north of Wrangell-St. Elias National Preserve), Circle, Central, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for moose in Unit 20E.

Regulatory History

In 2000, the State Board of Game created registration hunt RM865 in Unit 20E (excluding the Middle Fork Fortymile River) and split the moose season into two periods: 24–28 August and 8–17 September, except within the Yukon River drainage, where the season became 24–28 August and 5–25 September. The Board also stipulated that that a hunter could hunt both moose (RM865) and caribou (RC860), but not hold a registration permit for both species at the same time. These actions were in response to increased moose harvest, due to increasing numbers of caribou hunters in most of Unit 20E, and were designed to stabilize the moose harvest to maintain the bull:cow ratio within the management objective (listed above).

In 2002, the State Board of Game reduced the season within the Yukon River drainage to match the season in the remainder of Unit 20E (24–28 August and 8–17 September).

Prior to the 2004–2005 regulatory year, the State Board of Game changed to the present area descriptions (listed above), from the previous area descriptions of **"***Unit 20E draining into the Middle Fork of the Fortymile River upstream from the drainage of the North Fork Fortymile River"* and *"Remainder of Unit 20E."* The seasons and bag limits did not change.

In 2006, the Board identified the entire Unit 20E moose population as being important for providing high levels of human consumptive use under the Intensive Management law (AS 16.05.255[e]-[g]), and applied the intensive management objectives (listed above) to the entire unit. From 2000 to 2005, these intensive management objectives only applied to the moose populations within the drainages of the Fortymile and Ladue rivers.

Biological Background

The ADF&G conducted moose population estimation surveys in southern Unit 20E, within the Tok West and Tok Central survey areas during 1998—2006, using the geospatial population estimator (GSPE) moose survey technique (Ver Hoef 2001, Kellie and DeLong 2006). The data collected were utilized to determine population trends, herd composition in the survey areas and to estimate moose numbers in the entire unit by extrapolation (**Table 1**).

The highest densities of moose have been in a portion of southern Unit 20E, entirely within the Tok West and Tok Central moose survey areas, including the Mosquito Fork Fortymile River drainage downstream from and including Mosquito Flats, the West Fork Fortymile River drainage and the northern Mount Fairplay — lower Dennison Fork Fortymile River areas, where habitat availability and quality are also highest.

The bull:cow ratio remained above 40 bulls:100 cows each year, but varied across the unit. In the most popular hunting areas — Nine Mile Trail, Mitchell's Ranch, and along the Yukon River and the Taylor Highway — bull populations were noticeably lower, but still remained ≥ 40 bulls:100 cows (**Tables 1 and 2**) (Gross 2008; Burch 2006, 2009).

Table 1. Moose population estimates for portions of Unit 20E using GSPE, fall 1998—2009 (Gross 2008; 2010).

Year	Bulls: 100 Cows	Yearling bulls:100 Cows	Calves: 100 Cows	Percent Calves	Total moose observed	Density moose/mi^2 (90% CI)	Population estimate (90% CI)
1998[a]	64	18	19	10	278	0.56	1,086
1998[b]	59	14	23	14	450	0.62	1,694
1999[a]	80	16	22	10	365	0.47	901
2000[a]	60	11	14	8	561	0.58	1,115
2000[c]	49	11	21	13	347	0.70	1,272
2001[a]	76	9	14	7	531	0.47	915
2001[d]	51	6	10	6	624	0.75	2,026
2002[a]	59	10	25	14	364	0.60	1,166
2002[d]	71	8	20	10	396	0.63	1,707
2003[e]	64	9	15	9	355	0.58	1,128
2003[d]	53	5	11	6	297	0.51	1,379
2004[f]	61	11	26	14	283	0.59	1,435
2004[g]	48	11	23	14	233	0.37	802
2005[f]	55	13	30	16	543	0.73	1,801
2005[g]	48	8	16	10	344	0.50	1,097
2006[f]	39	9	37	20	584	0.98	2,398
2006[g]	46	3	24	14	520	0.45	979
2007[f]	50	11	30	16	503	0.86	2,098
2007[g]	46	11	22	13	440	0.62	1,348
2008[f]	47	11	27	16	509	.83	2040
2008[g]	72	16	31	16	356	.72	1571
2009[f]	63	18	34	18	585	1.00	2445
2009[g]	51	11	25	14	461	0.68	1471

[a] Tok West Survey Area, 1,932 mi$^{2)}$ sampled
[b] Tok Central Survey Area, 2,750 mi$^{2)}$ sampled
[c] Tok Central Survey Area, 1,821 mi$^{2)}$ sampled
[d] Tok Central Survey Area, 2,703 mi$^{2)}$ sampled
[e] Tok West Survey Area, 1,944 mi$^{2)}$ sampled
[f] Tok West Survey Area, 2,452 mi$^{2)}$ sampled
[g] Tok Central Survey Area, 2,178 mi$^{2)}$ sampled

Twinning rates in the southern portion of Unit 20E were moderate at 24–30% in 2004, 2005 and 2007, but higher in 2006 at 47% (Gross 2008). These twinning rates indicate that nutritional status is adequate to support an increase in the moose population (Boertje et. al. 2007).

Recent, unpublished data indicates that the moose population is increasing in Unit 20E (Gross 2010).

National Park Service (NPS) staff has periodically conducted moose surveys in the Yukon-Charley Rivers National Preserve, results from which are shown in **Table 2**. In 1997, a population estimation survey in a portion of northern 20E within the Preserve found a density of 0.27 moose/mi^2 (Burch and Demma 1997). In 1999 and 2003 the NPS surveys , included a 1,200-mi^2 portion of Unit 20E, and estimated the moose density for the entire survey area at 0.36 moose/mi^2 in 1999 and 0.26 moose/mi^2 in 2003 (Burch 2006). All NPS surveys from 1997 to 2009 with portions of the preserve in Units 20E (northern portion), 25B and 25C, were conducted in a designated 3,096 mi^2 survey area consisting of 555 units along a 30–40 mile

Table 2. Moose survey results for Yukon-Charley Rivers National Preserve, 1997-2009 (Burch, 2006 & 2009).

Year	Bulls per 100 Cows	Calves per 100 Cows	Density moose/mi^2	Population estimate (CI 90%)
1997	60	28	0.27	737
1999	51	36	0.36	979
2003$^+$	61	25	0.27	835
2006$^+$	73	33	0.23	726
2009$^+$	59	26	0.43	1331

$^+$ Sightability correction factor of 1.2 applied to Geo Spatial Estimates.

wide corridor of the Yukon River drainage between Eagle and Circle, Alaska, which includes the lower sections of the Charley, Nation and Kandik rivers. Moose densities were 0.23 moose/mi^2 in 2006 and 0.43 moose/mi^2 in 2009 (**Table 2**). (Burch, 2006 & 2009).

Analysis of the population survey data in the Preserve, for the survey years between 1997 and 2006, show the moose population has been relatively stable. However, 2009 data indicates that the population has grown, as there were notable increases in the yearling bull:cow ratio, population density and population size compared to 2006 data (**Table 2**). Survey data (1997–2009) indicates that the bull:cow ratios have been well above the State management objective of 30:100 in areas with aerial surveys, and well above the State management objective of 40:100 in all survey areas of Unit 20E (Gross 2008).

Harvest History

Unit 20E

Between 1998 and 2007, the reported number of hunters in Unit 20E averaged 647 per year, with a range of 472–913 (**Table 3**). The reported harvest averaged 140 moose per year, with a range of 95–174 (**Table 4**). Unreported legal harvest is estimated at 0–5 moose per year and illegal harvest is estimated at 5–10 moose per year (Gross 2008).

The harvest amount and the number of hunters were lower in 2004–2005 compared to other years. Much of interior Alaska was covered in a thick blanket of smoke in the fall due to record-setting wildfires. This may have contributed to the fewer number of hunters in the field and reduced moose harvest.

Yukon-Charley Rivers National Preserve — Units 20E, 25B and 25C

Moose hunting in the Preserve occurs primarily along the main rivers; the Yukon, Kandik, Nation and Charley. Federally qualified users who hunt in the Units 25B and 25C portions of the Preserve do so under Federal regulations, but report under a state registration permit. Federally qualified users who hunt in the Unit 20E portion of the Preserve report under State registration permit RM865.

Between 1983 and 2006, the number of hunters increased, however the number of moose harvested remained fairly stable (**Table 5**). Harvest reports indicate that approximately 178 moose were harvested in Unit 20E, 317 moose in Unit 25B and 27 moose in Unit 25C in the Preserve (Burch, 2006). Harvest in Unit 25C is somewhat proportional to the amount of land in the Preserve compared to the other two units, but may also be an indication that the more favorable and/or preferred hunting locations are outside the boundaries of Unit 25C.

Table 3. Unit 20E reported moose hunter residency and success, regulatory years 1998–1999 through 2006–2009 (Gross 2008; 2010).

	Successful hunters					Unsuccessful hunters					
Regulatory year	Local[a] res	Non local Res	Non res /Uknwn	Total (%)		Local[a] res	Non local res	Non res /Unkwn	Total (%)		Total hunters
1998–1999	47	91	12	150	(32)	76	205	39 / 2	322	(68)	472
1999–2000	36	77	17 /1	131	(23)	98	299	30 / 4	431	(77)	562
2000–2001	36	84	15	135	(26)	98	255	33 / 1	387	(74)	522
2001–2002	33	88	16 /1	138	(19)	222	323	58 / 4	607	(81)	745
2002–2003	29	119	20 /1	169	(18)	200	449	92 / 3	744	(82)	913
2003–2004	21	81	26 /1	129	(16)	143	448	74 / 4	669	(84)	798
2004–2005	20	55	19	94	(19)	102	238	47 / 3	390	(81)	484
2005–2006	25	83	29	137	(22)	129	311	58 / 1	499	(78)	636
2006–2007	27	85	18	130	(19)	131	364	68 / 2	565	(81)	695
2007-2008	25	107	12	144		141	374	90	605		749
2008-2009	26	130	23	179		134	375	81	591		767

[a] Residents of Unit 12 and Unit 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

Table 4. Unit 20E reported moose harvest, regulatory years 1998–1999 through 2008–2009 (Gross 2008; 2010).

Regulatory	General and registration					Drawing permits			
Year	M	F	Unk	Total		DM794	DM796	Total	TOTAL
1998–1999	145	0	5	150		1	10	11	161
1999–2000	127	0	4	131		3	9	12	143
2000–2001	135	0	0	135		2	6	8	143
2001–2002	137	0	1	138		5	3	8	146
2002–2003	169	0	1	170		1	3	4	174
2003–2004	129	0	0	129		0	0	0	129
2004–2005	93	0	1	94		1	0	1	95
2005–2006	137	0	0	137		1	0	1	138
2006–2007	129	1	0	130		0	0	0	130
2007-2008	144	0	0	144		0	0	0	144
2008-2009	176	0	0	176		1	2	3	179

Table 5. Moose hunting information from Yukon-Charley Rivers National Preserve, 1983-2006. (Burch 2006).

Year	Number of Hunters	Number of Reported Moose Harvest	Percent Success
1983	59	21	36
1984	46	19	41
1985	41	19	46
1986	48	13	27
1987	57	14	25
1988	66	17	26
1989	61	17	28
1990	81	35	43
1991	90	31	34
1992	100	12	12
1993	93	36	39
1994	126	32	25
1995	99	33	33
1996	94	24	26
1997	100	24	24
1998	80	37	46
1999	116	41	35
2000	102	38	37
2001	145	25	17
2002	129	34	26
2003	168	20	12
2004	104	26	25
2005	87	24	28
2006	83	29	35
Total	**2,175**	**621**	n/a
Mean	**91**	**26**	**30**
1st 10-yr mean	65	20	32
last 10-yr mean	110	29	28
Last 5-yr mean	114	27	25

Effects of the Proposal

If the proposal were adopted, the fall season dates of August 20–September 30 would become uniform for all of Unit 20E which would allow for a single area description in regulation.

Federally qualified subsistence users would be provided an additional 22 days of harvest opportunity in the affected portion of Unit 20E (outside the Preserve), with more days to hunt without competition from non-subsistence users. However, Federally qualified subsistence users would continue to need separate permits; State registration permit RM865 in Unit 20E on Preserve lands, and a State (green) harvest ticket on Bureau of Land Management lands. Permit RM865 has a stipulation that hunters may not possess State permit RC860, for hunting caribou in Unit 20E at the same time as RM865 (see Regulatory History). Federally qualified subsistence users are allowed to hunt caribou and moose concurrently on Federal lands outside the Preserve only when the State moose season is closed September 1–7.

There would likely be an increase in the number of moose harvested, due to the season extending into the rut, when moose are more vulnerable, and because this is a road-accessible moose population. This vulnerability necessitates improved harvest reporting to accurately determine the amount of harvest and to closely monitor the population for conservation purposes. Note: Reporting compliance for RM865 has been much greater than for State green harvest tickets in Unit 20E (Gross 2010, pers. comm.).

Other Alternative Considered

One alternative considered was to support the proposal with modification, by breaking out the proposed single, all encompassing Unit 20E area description into two area descriptions to match State regulations for purposes of permit administration and harvest reporting. In the State's remainder portion of Unit 20E, hunters may not possess registration permits for caribou (RC860) and moose (RM865) at the same time, which means they can only hunt for one species at a time (see Regulatory History). While it is unclear whether permit administration has been a problem in the past under current regulations, it may now be necessary to make permit and reporting requirements more explicit in Federal regulations.

Current Events

After lengthy discussions at its February 2010 meeting, the Eastern Interior Alaska Subsistence Regional Advisory Council recommended breaking out the proposed single, all encompassing Unit 20E area description into three area descriptions to retain the Yukon-Charley Rivers National Preserve portion and to closely align the other two portions with State regulations for purposes of permit administration and harvest reporting. OSM staff agreed with this approach and changed its preliminary conclusion to the Council's recommendation.

OSM CONCLUSION

Support Proposal WP10-101 **with modification** to retain the Yukon-Charley Rivers National Preserve portion and to closely align the other two portions with State regulations for purposes of permit administration and harvest reporting and to provide an August 24 to September 25 season in these two portions.

The modified regulation would read:

Unit 20E — Moose	
*Unit 20E, that portion within Yukon-Charley **Rivers** National Preserve— 1 bull.*	*Aug. 20–Sept. 30*
~~*Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.*~~	~~*Aug. 24–Aug. 28*~~ ~~*Sept. 1–Sept. 15*~~
Unit 20E, that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage — 1 bull	***Aug. 24 – Sept. 25***
Unit 20E remainder — 1 bull by joint state — Federal registration permit	***Aug. 24. – Sept. 25***

Justification

The fall season dates would become uniform in all of the Yukon-Charley Rivers National Preserve for Federally-qualified subsistence users. The population appears healthy enough to allow for a few more bulls to be harvested.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL COUNCIL

Support Proposal WP10-101 **with modification** for clarity, for conservation, and to benefit subsistence users.

The modified regulation would read:

*Unit 20E, that portion within Yukon-Charley **Rivers** National Preserve— 1 bull.*	*Aug. 20–Sept. 30*
~~*Unit 20E, that portion drained by the Forty-mile River (all forks) from Mile 9½ to Mile 145 Taylor Highway, including the Boundary Cutoff Road — 1 bull.*~~	~~*Aug. 24–Aug. 28*~~ ~~*Sept. 1–Sept. 15*~~
Unit 20E, that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage — 1 bull.	***Aug. 24 – Sept. 25***
Unit 20E remainder — 1 bull by joint state — Federal registration permit.	***Aug. 24. – Sept. 25***

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-101

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-101
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-101: This proposal would extend the moose season in the road accessible portions of Game Management Unit 20E from 20 days to 42 days. The proposal would change the current season August 24 through 28 and September 1 through 15 to August 20 through September 30.

Impact on Subsistence Users: Extending the season in August would likely increase Unit 20E moose harvest by federal subsistence users by a few moose annually. However, extending the season 15 days in September could result in a substantial increase in harvest and a reduction in the moose population which would negatively impact federal subsistence users in the future.

Opportunity Provided by State: State residents may currently take any bull in this portion of Unit 20E from August 24 through 28 and September 8 through 17 under State regulations.

Conservation Issues: (1) Extending the season an additional 15 days in September, when moose are entering the rut and become much more vulnerable, could result in a substantial increase in harvest and a decline in the bull:cow ratio, possibly causing a reduction in moose population over time. The State moose hunting season structure for this unit was developed to maintain a minimum bull:cow ratio of 40 bulls:100 cows. (2) The proposed season extensions would more than double the moose season length in the road accessible portion of Unit 20E. This area has highway access to much of the federal land and easy river or trail access to the rest, and liberalizing the hunting season length which could result in a significant increase in harvest.

Enforcement Issues: There are two primary enforcement issues with this proposed change.

1. **Permit/harvest ticket requirements:** The current State season is managed under a Registration Permit (RM865), while the federal subsistence hunt is managed under a green harvest ticket, creating an inconsistency that is an enforcement issue. Also, hunt conditions for the State hunt do not allow a hunter to possess a moose Registration Permit (RM865) at the same time as a caribou Registration Permit (RC860). This requirement was put in place to keep large numbers of caribou hunters from impacting the moose population. The current federal subsistence season is managed under a State moose harvest ticket. This inconsistency is also an enforcement issue in that it allows federal subsistence hunters to circumvent the hunt condition that does not allow hunting of moose and caribou at the same time in the road accessible portion of the unit.

2. **Different federal and state season dates:** Having a federal subsistence season when a State season is closed is an enforcement issue in areas of mixed land ownership and increases risks of enforcement action for subsistence users.

Other Comments: The Department opposes any season extension, unless much stricter reporting requirements are approved. Green harvest tickets are currently used for this federal subsistence moose season, which has resulted in <u>very poor</u> harvest reporting. The Department

recommends adopting a joint state/federal registration permit for this hunt, similar to the Fortymile Caribou joint state/federal registration hunt in Unit 20E.

Recommendation: Support as modified by the Eastern Interior Regional Advisory Council to:

1. Require federal subsistence hunters to hunt under the Unit 20E moose registration permit RM865, in the road accessible portions of Unit 20E, instead of a green harvest ticket. The current Unit 20E state moose registration permit (RM865) has strict reporting requirements and would improve reporting and make enforcement much easier in Unit 20E.

2. Retain the August 24 opening date in the road accessible portions of Unit 20E to align State and federal seasons to reduce enforcement issues. The proposed extension in August should not result in a major conservation concern. Modification of the hunting season closing date in the road accessible portions of Unit 20E should not exceed September 25. This would represent a more conservative approach, compared to the proposed 15-day extension. With the high level of uncertainty about the potential increase in harvest with a late September season extension, an extension to no later than September 25 is warranted.

However, the Department continues to recommend this regulation be enacted for a period of two years which would give managers a chance to assess changes in harvest, while minimizing risk to the moose population.

WP10-102 Executive Summary	
General Description	Proposal WP10-102 requests the Unit 12 remainder harvest limit for caribou during the winter season (October 1 –April 30) be increased from one caribou to two caribou. The sex of the animals allowed to be taken would continue to be announced by the Tetlin National Wildlife Refuge Manager in consultation with other State and Federal agencies involved in Nelchina Caribou Herd (NCH) management. *Submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee*
Proposed Regulation	**Unit 12–Caribou** *Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— The taking of caribou is prohibited on Federal public lands.* — *No Federal open season.* *Unit 12 remainder—1 bull* — *Sept. 1– Sept. 20* *Unit 12 remainder— 1 caribou may be taken by a Federal registration permit during a winter season.* ***A hunter who harvested 1 bull during the fall season in this hunt area may also harvest 1 additional caribou during the winter season. A hunter who did not take 1 bull in the fall season in this hunt area may take 2 caribou in the winter season. Hunters may not harvest more than 2 caribou in this hunt area per regulatory year.*** *(Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.)* — *Winter season to be announced.*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**

continued on next page

WP10-102 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**2 Oppose**

STAFF ANALYSIS
WP10-102

ISSUES

Proposal WP10-102, submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee, requests the Unit 12 remainder harvest limit for caribou during the winter season (October 1 –April 30) be increased from one caribou to two caribou. The sex of the animals allowed to be taken would continue to be announced by the Tetlin National Wildlife Refuge Manager in consultation with other State and Federal agencies involved in Nelchina Caribou Herd (NCH) management.

DISCUSSION

The proponent requests the harvest quota be increased to two caribou to match the harvest limits in the Federal subsistence hunts in Units 13. The Federal subsistence hunt in Unit 12 remainder (RC412) and the Federal subsistence hunts in Units 13 (RC513 & 514) both harvest caribou from the NCH. Currently in Units 13A and 13B, 2 caribou may be taken by Federal registration permit and in Unit 13 remainder, 2 bulls may be taken by Federal Registration permit.

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—The taking of caribou is prohibited on Federal public lands.	*No Federal open season*
Unit 12 remainder—1 bull	*Sept. 1– Sept. 20*
Unit 12 remainder—1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.	*Winter season to be announced*

Proposed Federal Regulation

Unit 12–Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— The taking of caribou is prohibited on Federal public lands.	*No Federal open season.*

Unit 12 remainder—1 bull	*Sept. 1– Sept. 20*
Unit 12 remainder— 1 caribou may be taken by a Federal registration permit during a winter season. ***A hunter who harvested 1 bull during the fall season in this hunt area may also harvest 1 additional caribou during the winter season. A hunter who did not take 1 bull in the fall season in this hunt area may take 2 caribou in the winter season. Hunters may not harvest more than 2 caribou in this hunt area per regulatory year.*** *(Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.)*	*Winter season to be announced.*

Existing State Regulation

Unit 12—Caribou

West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway within the Tok River—one bull	*Harvest*	*Sept. 1–Sept. 20*
West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway excluding Tok River drainage (Macomb Herd) (RC835)	*(RC835)*	*Aug. 10–Aug. 27*
Remainder		*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 58.4% of Unit 12 and consist of 10.7% Tetlin National Wildlife Refuge managed by the US Fish and Wildlife Service and 47.7% Wrangell-St. Elias National Park and Preserve managed by the National Park Service **(Unit 12 Map).**

Customary and Traditional Use Determinations

Rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for caribou in Unit 12.

Regulatory History

The NCH is an important resource in Alaska due to its proximity to Anchorage and Fairbanks and its distribution within Units 11, 12, 13, and 20E (Tobey 2003). The majority of the animals harvested from the NCH are harvested in State and Federal hunts in Unit 13. For the 2009–2010 regulatory season, the State Nelchina caribou Tier II subsistence hunt was eliminated. Two hunts were added: a Tier I, Alaska resident only hunt, and a community harvest hunt for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each hunt is one caribou (sex to be announced annually) with season dates of Aug. 10–Sept. 20 and Oct. 21–Mar. 31. The Federal

registration hunts (RC513 & RC514) in Unit 13 are for residents of Units 11, 13, and residents along the Nabesna Road in Unit 12 and Delta Junction in Unit 20. In 2005, Federal regulations for Unit 13A and 13B changed to allow the sex of the animals allowed to be harvested to be determined by the Glennallen Field Office Manager (Bureau of Land Management) in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council for the entire season (Aug. 10–Sept. 30 and Oct. 21–Mar. 31). Since then, the managers of the State and Federal hunts have coordinated their announcement as to whether bulls and/or cows could be taken in a given year. The Federal harvest limit in Unit 13A and 13B is two caribou and the Federal harvest limit for Unit 13 remainder is two bulls.

A smaller number of NCH caribou are harvested in the Federal subsistence hunt in Unit 12. Since 1998, a Federal registration hunt (RC412) has been opened to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between October and April when the NCH migrate through the Tetlin National Wildlife Refuge. The harvest limit is one caribou and the season dates and sex of the caribou are announced by the Tetlin National Wildlife Refuge Manager.

Current Events Involving Species

Tetlin National Wildlife Refuge staff observed Mentasta Caribou within the boundaries of the refuge during their fall surveys. Currently, the Mentasta Caribou Herd (MCH) is around 450 animals and can not sustain a hunt (EIRAC 2010, Putera2010). The herd's calf production is below its management objectives of a 2-year mean fall calf recruitment greater than 80 calves (Wrangell-St. Elias National Park and Preserve, 1995). While the MCH is present on the refuge during the winter caribou hunt, it is unknown how many Mentasta Caribou are mixing with the NCH (EIRAC 2010).

Biological Background

The NCH has remained relatively stable since 2001. The fall population estimates for the NCH have remained between 30,000–39,000 animals (**Table 1**). In June 2007, a post-calving census estimated the NCH to be approximately 32,569 caribou (ADFG 2008) and in June 2009, the census showed approximately 33,146 caribou (ADFG 2009a). Currently the herd size is a little below the management objective of 35,000–40,000 caribou for the fall population. With the exception of 2009, the bull:cow ratio has been below the management objective of 40 bulls:100 cows since 1998 and has averaged 32 bulls:100 cows since 2001 with the lowest ratio of 23 bulls:100 cows in 2006–2007 (**Table 1**). Hunters harvested primarily bulls in the Tier II and subsistence registration hunts despite the hunts being open for either sex (ADF&G 2009b). The calf to cow ratio has remain near the management objective of 40 calves:100 cows for most years. In 2009, the calf to cow ratio dipped to 29 calves:100 cows (**Table 1**).

Harvest History

The State Tier II subsistence hunt (TC566) was the primary source for harvest of the NCH and accounted for 78% of the overall harvest from 2005–2008. The Federal registration hunt (RC513/514) in Unit 13, administered by the BLM, comprised 21% of the harvest from 2005–2008 and the Federal registration hunt (RC412) in Unit 12 remainder administered by the Tetlin National Wildlife Refuge, comprised 1% of the overall harvest from 2005–2008 **(Table 2**).

The fall caribou season in Unit 13 is the most popular and successful time to hunt. Bulls become more vulnerable to harvest because of the rut (Tobey 2005) and proximity to the road system. The successful harvests in the fall make the winter season more susceptible to emergency closures when the harvest quota may be reached before the end of the season on March 31. A large percentage of NCH typically

Table 1. Nelchina Caribou Herd fall composition counts and estimated herd size, regulatory users 2001-2009 (Modified from Tobey and Kelleyhouse 2007, ADF&G 2008, Schwanke 2009 pers. comm.)

Regulatory Year	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimate of herd size	Postcalving[a] count
2001-2002	37	40	22	57	21	3949	33,745	33,745
2002-2003	31	48	27	56	17	1710	34,380	34,380
2003-2004	31	35	21	60	19	3140	30,141	30,141
2004-2005	31	45	26	57	17	1640	36,677	36,677
2005-2006	36	41	23	57	20	3263	36,428	36,428
2006-2007	23	48	25	61	14	3300	N/A	N/A
2007-2008	34	35	21	59	20	3027	32,569	32,569
2008-2009	39	40	22	56	22	3378	N/A	N/A
2009-2010	42	29	17	58	25	3076	33,835	33,835

[a] Spring census

migrates out of Unit 13 in October and winters in Units 11, 12 and 20E until April. Success during the winter season in Unit 13 is largely dependent upon the number of caribou that remain in the unit (Tobey and Kelleyhouse 2007). The Federal registration hunt in Unit 13 has remained relatively consistent with the average annual harvest of 460 caribou from 2005 to 2008 **(Table 2**). Between 2003 and 2007, the average number of successful hunters taking one caribou was 138, while an average of 165 hunters reported taking 2 caribou (Schwanke 2009, Pers. Comm.). In Unit 12 remainder the average harvest has remained small. The Federal registration hunt on Tetlin National Wildlife Refuge has taken an average of 20 animals annually from 2005–2008.

Effects of the Proposal

If adopted, the harvest limit for Unit 12 remainder (Tetlin National Wildlife Refuge) would be increased from one caribou to two caribou. Given the small number of Nelchina caribou harvested in Unit 12 remainder (3–28 caribou) since 2002, the overall increase in harvest would likely be small. The additional harvest is unlikely to have any biological affect on the NCH. It could however result in incidental harvest from the MCH. The Nelchina and Mentasta caribou herds have been known to mix during migration to and from of the winter range in Unit 12, and the depressed MCH cannot support additional harvest (Booth 2009, pers. comm.)

OSM CONCLUSION

Oppose Proposal WP10-102

Justification

While it is known that the MCH is present on the Tetlin National Wildlife Refuge during the winter hunt, it is not known how many Mentasta caribou mix with the NCH. Increasing the harvest from one to two caribou in the Federal registration hunt (RC412) in Unit 12 remainder could have the unintended consequences of harvesting Mentasta caribou. Currently, the MCH is below its management objective and cannot sustain a harvest. A conservative approach is warranted until more is known about the mixing ratio of the MCH and NCH during the winter hunt.

Table 2. Nelchina Caribou Herd harvest and hunter success, regulatory years 2002–2008. (ADF&G 2008, 2009a and 2009b, USFWS 2009, Tobey 2007)

		Permits			Reported Harvest			
Hunt	Regulatory Year	Issues	% Hunted	% Successful	Male	Female	Unk	Total Harvest
TC566[a]	2002-2003	2003	80%	48%	965	1	0	966
	2003-2004	2005	83%	38%	746	3	3	752
	2004-2005	1869	74%	48%	884	5	5	894
	2005-2006	4001	78%	65%	1614	548	15	2177
	2006-2007	5494	83%	59%	1813	686	3	2502
	2007-2008	3003	78%	32%	693	272	1	966
	2008-2009	2500	68%	54%	787	262	0	1049
RC 513/514[b]	2002-2003	2552	58%	14%	349	2	12	363
	2003-2004	2598	56%	12%	318	2	1	321
	2004-2005	2558	48%	13%	250	86	1	337
	2005-2006	2570	52%	24%	369	239	7	615
	2006-2007	2641	59%	17%	319	239	8	566
	2007-2008	2408	45%	15%	259	120	5	384
	2008-2009	2569	49%	22%	180	89	4	273
RC412[c]	2002-2003	87	NA	15%	13	0	0	13
	2003-2004	62	NA	21%	13	0	0	13
	2004-2005	116	44%	18%	13	1	0	14
	2005-2006	78	50%	21%	18	1	0	19
	2006-2007	54	56%	6%	6	10	0	16
	2007-2008	98	35%	18%	11	5	2	18
	2008-2009	156	42%	18%	15	13	0	28

[a] State Tier 2 subsistence drawing permit (Unit 13) .

[b] Subsistence registration permit administered by BLM (Unit 13).

[c] Subsistence registration permit administered by USFWS (Unit 12).

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-102. Although limiting the harvest to only bull caribou would tend to minimize the negative effects of this proposal on Mentasta caribou, the Council felt that there was unacceptable risk to the health of the herd if the proposal was adopted. Adopting this proposal would result in an unnecessary conservation issue.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-102. The Council opposed the proposal based on conservation concerns and to protect the Mentasta Caribou Herd. The Council supported the Eastern Interior Regional Advisory Council rationale to oppose. Other opportunities exist to harvest caribou from the Forty Mile Caribou Herd.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-102

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-102: Increase federal subsistence caribou bag limit from one caribou to two on federal public lands in Tetlin National Wildlife Refuge in Game Management Unit 12.

Introduction: This proposal seeks to increase the federal subsistence caribou bag limit on federal public land in Tetlin National Wildlife refuge in Game Management Unit 12 from one to two caribou to match the two caribou bag limit on federal public land in Unit 13.

Impact on Subsistence Users: The federally qualified hunters in this area have the option of hunting the Fortymile caribou herd in Unit 20E as well as the Nelchina Herd in Unit 12. The reported caribou harvest on Tetlin National Wildlife refuge in Unit 12 during the past 5 years ranged from 3 to 28 annually and averaged 17 per year, suggesting low participation in this hunt. Federal subsistence regulations provide a widely used designated hunter option which allows one hunter to harvest caribou for several federally-qualified subsistence users. This proposal, if adopted, would not likely impact meeting subsistence needs.

Opportunity Provided by State: Within Unit 13, two subsistence hunts are offered for the Nelchina Caribou Herd. New this year, a community subsistence hunt for residents of Cantwell, Chistochina, Chitina, Kluti Kaah (Copper Center), Gakona, Gulkana, Mentasta, and Tazlina as well as any other Alaska resident with close ties to these communities was established. Up to 300 caribou can be taken by this community hunt. All other Alaska residents can apply for a registration permit (permittees are selected from the group with the highest points).

Local subsistence users can also participate in a state administered fall registration hunt for the Fortymile Caribou Herd in adjacent Unit 20E, as well as a winter hunt. State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Hwy (Tok Cutoff), but provide no caribou hunting opportunity on Tetlin Wildlife Refuge.

Conservation Issues: The Nelchina Caribou Herd was estimated at 33,837 in 2009, which is below population objectives (35,000-40,000). The herd is already managed at maximum sustained yield. Interest in Nelchina caribou hunting has historically been high, and the hunts have been controversial. The Nelchina caribou harvest is managed closely. Since 2000, state subsistence hunts have been closed by emergency order 7 of 10 years prior to the scheduled 31 March closure. State managers must estimate potential take from long federal subsistence hunts both in Unit 13 as well as Unit 12, which is has proven very difficult given the potential for high harvests if caribou congregate on federal public lands. Many years the state winter hunt in Unit 13 is not opened because the harvest quota for the herd has been reached or is very close to being reached. Any additional harvest above the annual harvest quota would negatively affect the herd and would be expected to reduce opportunity for all Nelchina caribou subsistence hunters in the future.

During fall and spring migrations, the Nelchina and Mentasta caribou herds mix. Mentasta caribou winter along-side Nelchina caribou in Units 12 and 20E. Hunters cannot distinguish between the two, therefore any hunting during this period has the potential to further impact the

severely depressed Mentasta Caribou Herd. Both the Mentasta Herd and the Nelchina Herd have declined in recent years. When caribou are available in Unit 12, they are migrating to or from their winter range. The spring is a particularly stressful time for these animals, and increased hunting pressure using snowmachines during this time would be expected to negatively affect the caribou, particularly late term cow caribou.

In recent years, large numbers of the Nelchina Caribou Herd have wintered in Unit 12 and 20E. When much of their primary winter range in the vicinity of the Taylor Highway burned, caribou began using adjacent areas, as they do not readily use burns that are less than 50 years old. Given lower than average fall female calf weights the last 2 years (2008 = 114 and 2009 = 112 lb; average 118 lb), it is possible these fires have forced caribou to use less than optimal habitat. Additional harvest at this time is not recommended.

Enforcement Issues: Federal law enforcement is minimal during this hunt, and any increased hunting effort would create additional enforcement issues for subsistence users and private landowners.

Other Comments: Large amounts of land are being conveyed from the Bureau of Land Management to Ahtna Native Corporation and the State of Alaska within Unit 12 and Unit 13. In Unit 12, recent conveyances to local Native corporations have removed most road accessible hunting areas from federal subsistence management.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-102. Although the proposal would benefit subsistence users, through increased opportunity, the SRC has significant conservation concerns with the proposal. The Mentasta caribou herd, which is a conservation concern, mixes with the Nelchina caribou herd during the winter. Although managers make an effort to adjust the season when Mentasta caribou are present, that adjustment depends on the limited ability to conduct multiple aerial surveys to determine the Mentasta distribution and mixing ratios. Doubling the harvest limit will increase the chances of incidental harvest of Mentasta caribou. In addition, the low harvest reporting rate is of concern.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-102. We oppose WP10-102 to allow 2 [Nelchina] caribou to be taken by Federal registration permit during a winter season to be announced by the Tetlin National Wildlife Refuge.

In the proposal, it states that Nelchina Caribou Herd crosses, and is on Federal wildlife refuge lands, and it is this caribou herd, that is proposed in the petition. The management objective for the Nelchina Caribou Herd is below the 35,000–37,000 management objective. The Nelchina Caribou Herd cannot sustain the additional hunting pressure.

Federally qualified subsistence hunters from Unit 12, Dot Lake, Healy Lake, and Chickaloon, as well as those from Unit 11 and Unit 13 will be able to hunt and take 2 Nelchina caribou, and put more hunting pressure on this caribou herd. In Unit 13 under the State hunt, the Nelchina Caribou Herd has tremendous hunting pressure. Adding more hunting pressure will be counter productive to the Nelchina Caribou Herd population.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-103 Executive Summary		
General Description	Proposal WP10-103 requests the winter Federal caribou hunting season for Unit 12 remainder be opened by regulation October 21 and remain open until closed by the Tetlin National Wildlife Refuge manager in consultation with other Federal and State staff, councils and committees. The harvest limit is to stay at one caribou. *Submitted by Michael Cronk*	
Proposed Regulation	*Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— The taking of caribou is prohibited on Federal public lands.*	*No Federal open season*
	Unit 12 remainder—1 bull	*Sept. 1– Sept. 20*
	Unit 12 remainder—1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between ~~Oct. 1~~ ***Oct. 21****–Apr. 30. Closure date and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.*	*~~Winter season to be announced~~.* ***Oct. 21–Closure to be announced****.*
OSM Conclusion	**Oppose**	
Southcentral Regional Council Recommendation	**Oppose**	
Eastern Interior Regional Council Recommendation	**Oppose**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Neutral**	
Written Public Comments	**Oppose**	

STAFF ANALYSIS
WP10-103

ISSUES

Proposal WP10-103 submitted by Michael Cronk requests the winter Federal caribou hunting season for Unit 12 remainder be opened by regulation October 21 and remain open until closed by the Tetlin National Wildlife Refuge manager in consultation with other Federal and State staff, councils and committees. The harvest limit is to stay at one caribou.

DISCUSSION

The proponent requests the opening date of the winter Federal hunt be put into regulations to ensure the hunting season is open prior to the arrival of caribou on the Tetlin National Wildlife Refuge. This would give subsistence users a chance to harvest the earliest caribou arriving on the refuge. It would also align the opening date of the winter Federal hunting season in Unit 12 with the opening date of the winter Federal hunting season in Unit 13.

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—The taking of caribou is prohibited on Federal public lands.	*No Federal open season*
Unit 12 remainder—1 bull.	*Sept. 1– Sept. 20*
Unit 12 remainder—1 caribou may be taken by a Federal registration permit during a winter season to be announced. (Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.)	*Winter season to be announced.*

Proposed Federal Regulation

Unit 12–Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— The taking of caribou is prohibited on Federal public lands.	*No Federal open season*
Unit 12 remainder—1 bull.	*Sept. 1– Sept. 20*

Unit 12 remainder—1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between ~~Oct. 1~~ ***Oct. 21****–Apr. 30.* ***Closure date*** *and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.*	*Sept. 1– Sept. 20* *~~Winter season to be announced~~.* ***Oct. 21–Closure to be announced****.*

Existing State Regulation

Unit 12—Caribou

West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway within the Tok River—one bull	*Harvest*	*Sept. 1–Sept. 20*
West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway excluding Tok River drainage (Macomb Herd) (RC835)	*(RC835)*	*Aug. 10–Aug. 27*
Remainder		*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 58.4% of Unit 12 and consist of 10.7% Tetlin National Wildlife Refuge managed by the US Fish and Wildlife Service and 47.7% Wrangell-St. Elias National Park and Preserve managed by the National Park Service (**Unit 12 Map).**

Customary and Traditional Use Determinations

Rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for caribou in Unit 12.

Regulatory History

The NCH is an important resource in Alaska due to its proximity to Anchorage and Fairbanks and its distribution within Units 11, 12, 13, and 20 E (Tobey 2003). The majority of the animals harvested from the NCH are harvested in State and Federal hunts in Unit 13. For the 2009–2010 regulatory season, the State Nelchina caribou Tier II subsistence hunt was eliminated. Two hunts were added: a Tier I, Alaska resident only hunt, and a community harvest hunt for residents of Gulkana, Cantwell, Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each hunt is one caribou (sex to be announced annually) with season dates of Aug. 10 – Sept. 20 and Oct. 21 – Mar. 31. The Federal registration hunts (RC513 & RC514) in Unit 13 are for residents of Units 11, 13, and residents along the Nabesna Road in Unit 12 and Delta Junction in Unit 20. In 2005, Federal regulations for Unit 13A and 13B changed to allow the sex of the animals allowed to be harvested to be determined by the Glennallen Field Office Manager (Bureau of Land Management) in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council for the entire. Since then, the managers of the State and Federal hunts have coordinated their announcement as to whether bulls and/or cows could be taken in a

given year. The Federal harvest limit in Unit 13A and 13B is two caribou and the Federal harvest limit for Unit 13 remainder is two bulls.

A smaller number of NCH caribou are harvested in the Federal subsistence Unit 12 hunt. Since 1998, a Federal registration hunt (RC412) has been opened to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between October and April when the NCH migrate through the Tetlin National Wildlife Refuge. The harvest limit is one caribou and the season dates and sex of the caribou are announced by the Tetlin National Wildlife Refuge Manager. The most popular method to hunt caribou on Tetlin National Wildlife Refuge is by snowmachine. Once the snow cover is adequate the refuge manager opens the refuge to use of snowmachines independent of the Federal subsistence hunt. If enough animals have accumulated to warrant a hunt before there is adequate snow cover the refuge manager may open the hunt while the refuge remains closed to snowmachines.

Current Events Involving Species

The current events information for this analysis is the same as that presented in proposal WP10-102. Please refer to that analysis.

Biological Background

The biological background information for this analysis is the same as that presented in proposal WP10-102. Please refer to that analysis.

Harvest History

The harvest history information for this analysis is the same as that presented in proposal WP10-102. Please refer to that analysis.

Effects of the Proposal

Placing an opening date for the Federal winter subsistence hunt in regulation would limit the ability of the refuge manager to manage the hunt on the Tetlin National Wildlife Refuge. By the proposed opening date of October 21, very few caribou have usually migrated on to refuge lands. In some other areas of the State, people try to avoid harvesting the first migrating caribou to not disrupt the migration of the herd, delaying the hunt would allow the first caribou to remain undisturbed. In addition, the current management authority also allows the refuge managers the flexibility to open or close the hunt in response to the presence of animals from the Mentasta Caribou Herd. The Nelchina and Mentasta caribou herds have been known to mix during migration to and from of the winter range in Unit 12, and the depressed Mentasta Caribou Herd can not support additional harvest (Booth 2009, pers. comm.). Finally, the refuge manager may delay the opening to ensure adequate snow for snowmachine use. Most of the caribou hunting on the refuge occurs by snowmachine and the refuge manager may delay opening the hunt until sufficient snow-cover is available to access to the animals with snowmachines.

OSM CONCLUSION

Oppose Proposal WP10-103

Justification

The Tetlin National Wildlife Refuge Manager needs the flexibility to open and close the hunting season to manage the winter Federal caribou hunt effectively. This includes the ability to open and close hunting season to ensure proper management of the caribou herd. Maintaining the management authority allows the refuge manager to open the hunting season when caribou are present in adequate number for a sustainable harvest. It also allows the manager to adjust the season to accommodate snow conditions and delay an opening when there is a possible mixing with the Mentasta Caribou Herd.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-103. Monitoring efforts of the migratory trends of Mentasta and other caribou herds indicate there is likely some mixing of populations in the fall. The local manager must retain the flexibility to open and close the hunt as necessary for conservation.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-103. The Council opposed the proposal based on conservation concerns and to protect the Mentasta Caribou Herd, and supported the Eastern Interior Regional Advisory Council rationale to oppose. Other opportunities exist to harvest caribou from the Forty Mile Caribou Herd.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-103

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-103
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-103: The proposal would establish in regulation the federal subsistence winter caribou season opening date as October 21 on federal public land in Tetlin National Wildlife Refuge in Game Management Unit 12.

Introduction: Currently, the opening date for hunting caribou on Tetlin National Wildlife Refuge is announced between October 1 and April 30 by the Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, Alaska Department of Fish and Game area biologists, and Chairs of the Eastern Interior Subsistence Regional Advisory Council and upper Tanana/Fortymile Fish and Game Advisory Committee. This allows the refuge manager to delay the hunt to protect Mentasta caribou if large numbers are present on the refuge when Nelchina caribou migrate on the refuge.

Impact on Subsistence Users: A set season opening date would presumably make it easier for federal subsistence users to plan their hunting activities and improve their ability to hunt Nelchina caribou while present in accessible areas of the refuge. However, the opening date would still not be firm because the refuge manager would need to delay opening the season if insufficient numbers of Nelchina caribou are present to sustain a harvest, to protect Mentasta caribou, and/or insufficient snow is present to protect refuge habitat.

Conservation Issues: There is significant hunting pressure on the Nelchina caribou herd, which forced the state to implement Tier II and community harvest regulations to limit harvest. If harvest of Nelchina caribou increases substantially in federal subsistence hunts in Units 12 and 13, steps may be necessary to keep harvest within sustainable levels.

Enforcement Issues: Adoption of this proposal would not reduce confusion over federal subsistence season opening dates because the refuge manager would still need to adjust the date to assure the presence of sufficient Nelchina caribou, protect Mentasta caribou, and authorize snowmachine use due to snowcover. In addition, adopting an opening date in regulation would increase the potential for early illegal harvest on non-federal lands where the hunt remains closed.

Other Comments: This proposed regulation change retains the Tetlin refuge manager authority to close the season if there are Mentasta caribou in the area. In recent years, few Mentasta caribou have been reported on Tetlin refuge, however radio-collars should continue to be used to identify when the Mentasta Herd is in accessible hunt areas

Recommendation: Neutral. This proposal is primarily a regulatory change with little substantive change in providing subsistence and some possible complications for administrators in assuring conservation and sustainability of Nelchina and Mentasta caribou.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP10-103. The commission is particularly concerned about potential incidental harvest of Mentasta caribou and believes it is important for the refuge manager to have the ability to open or close the season in response to the presence of animals from the Mentasta caribou herd.

Wrangell-St. Elias National Park Subsistence Resource Commission

Oppose Proposal WP10-103. We oppose WP10-103 to allow a winter season for [Nelchina] caribou to be taken by Federal registration permit during the winter season to open on Oct. 21 and stay open until determined by Tetlin National Wildlife Refuge staff. This proposal is similar to WP10-102. See comments on WP10-102.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-104 Executive Summary	
General Description	Proposal WP10-104 requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd be established in Unit 12 starting fall of 2011. The harvest quota would be in accordance with the recommendations of the Chisana Caribou Herd Management Plan, the harvest limit would be one bull and the hunting season would be September 1 though September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the rest of the permits would be issued to Alaska residents and nonresidents for a State hunt. *Submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee*
Proposed Regulation	**Unit 12—Caribou** *Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is prohibited on Federal public lands~~.* ***1 bull by joint State-Federal drawing permit only***. — ~~*No Federal open season*~~ ***Sept. 1–Sept. 30*** *Unit 12 remainder—1 bull during the Sept. season. 1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee* — *Sept. 1– Sept. 20 Winter season to be announced.*
OSM Preliminary Conclusion	**Defer**
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Support**

continued on next page

WP10-104 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee recognizes that the Council's recommendations on this proposal are split, one in support and one in opposition. Deferring the proposal could be another course of action. The National Park Service, the U.S. Fish & Wildlife Service and the Alaska Department of Fish & Game field staff have been working effectively with their Canadian counterparts over the last year and a half on a management plan for this small herd of woodland caribou. *See full comments following the analysis.*
ADF&G Comments	**Support**, following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada, as contained in the draft management plan and using a joint state/federal permit to monitor harvest in Alaska.
Written Public Comments	**6 Support** **1 Oppose**

STAFF ANALYSIS
WP10-104

ISSUES

Proposal WP10-104, submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee, requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd (CCH) be established in Unit 12 beginning in Fall of 2011. The harvest quota would be in accordance with the recommendations of the Chisana Caribou Herd Management Plan, the harvest limit would be one bull and the hunting season would be September 1 through September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the remainder of the permits would be issued to Alaska residents and nonresidents for a State hunt.

DISCUSSION

Since 2002, the CCH has increased from a low of 315 animals (Gross 2007). Currently the population appears to be stabilized at around 700 animals. If the herd size remains stable or increases, it is likely that the CCH could sustain a small annual harvest. Because the territory occupied by the CCH includes both U.S. and Canadian lands, the harvest would be shared between the U.S. and Canada. The proponent requests that the U.S. portion of the harvestable surplus be managed through a joint Federal-State hunt and implemented in accordance with the Chisana Caribou Herd Management Plan. While currently in draft form, this plan is being developed through a cooperative effort involving State of Alaska, Federal and Canadian representatives. The proponent requests that if the plan is not finalized by Fall of 2011, a harvest quota of 2% of the annual minimum population, split evenly between Alaska and Yukon, be implemented with a harvest limit of one bull caribou. The proposed CCH hunt would be modeled after the moose hunt in Unit 6C for Cordova residents, in which the harvest of the local moose population is jointly managed and drawing permits are issued by both State and Federal managers. The proponent suggests that harvest records for the past 30 years be used as a basis for determining the allocation of Federal and State drawing permits for the CCH hunt.

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—The taking of caribou is prohibited on Federal public lands.	*No Federal open season*
Unit 12 remainder—1 bull during the Sept. season. 1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.	*Sept. 1– Sept. 20 Winter season to be announced.*

Proposed Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is prohibited on Federal public lands~~. ***1 bull by joint State-Federal drawing permit only***.	~~No Federal open season~~ ***Sept. 1–Sept. 30***
Unit 12 remainder—1 bull during the Sept. season. 1 caribou may be taken by a Federal registration permit during a winter season to be announced. Dates for a winter season to occur between Oct. 1–Apr. 30 and sex of animal to be taken will be announced by Tetlin National Wildlife Refuge Manager in consultation with Wrangell-St. Elias National Park and Preserve Superintendent, ADF&G Area Biologists and Chairs of the Eastern Interior Alaska Subsistence Regional Advisory Council and Upper Tanana/Fortymile Fish and Game Advisory Committee.	*Sept. 1– Sept. 20 Winter season to be announced.*

Existing State Regulation

Unit 12—Caribou

Residents: West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway within the Tok River—one bull	*Harvest*	*Sept. 1–Sept. 20*
Residents: West of the Glenn Highway (Tok Cutoff) and south of the Alaska Highway excluding Tok River drainage (Macomb Herd)	*RC835*	*Aug. 10–Aug. 27*
Residents and Non-residents: remainder		*No open season*

Extent of Federal Public Lands

Federal public lands comprise 58.4% of Unit 12 and consist of 10.7% Tetlin National Wildlife Refuge managed by the U.S. Fish and Wildlife Service and 47.7% Wrangell-St. Elias National Park and Preserve managed by the National Park Service (**Unit 12 Map).**

Customary and Traditional Use Determinations

Rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for caribou in Unit 12.

Regulatory History

In 1994, due to conservation concerns all hunting of Chisana caribou was stopped in Alaska. There has been no legal harvest of Chisana caribou in Alaska since that time (Gross 2007).

Current Events Involving Species

In January 2009, a cooperative planning process was initiated to develop a five-year management plan for the CCH. Planning participants included the Government of Yukon, Alaska Department of Fish and Game, White River First Nation, Kluane First Nation, National Park Service and U.S. Fish and Wildlife Service. Diverse management mandates and interests for managing CCH were considered in developing the draft management plan. In addition to a comprehensive assessment of the existing data and knowledge about CCH, the draft plan also includes a recommended management strategy, which includes management actions for maintaining a stable or increasing Chisana caribou population. The draft management plan also provides guidelines for allocating the harvest between Alaska and Canada.

Based on census information from 2005 and 2007, the herd appears to be stable at 706 and 766 animals (Adams 2007). An additional survey is needed to validate this trend and a population census is scheduled to be completed in October 2010 towards this end. The management plan and population census will provide the framework needed for identifying the harvestable surplus and developing harvest limits for managing a CCH hunt.

At its February-March 2010 meeting, the Alaska Board of Game (BOG) adopted a similar proposal submitted by the Upper Tanana/40 Mile Advisory Committee. The purpose of the proposal was to establish the regulatory framework for a State drawing permit hunt for the CCH if the Federal proposal for a similar hunt was adopted by the Federal Subsistence Board (Board). The adopted State proposal included a harvest limit of one bull and a hunting season from September 1 through September 30. No harvest quota or Federal-State allocations were adopted by the BOG.

During the Winter 2010 Regional Advisory Council meetings, both the Eastern Interior Alaska Regional Advisory Council (Eastern Interior Council) and Southcentral Alaska Regional Advisory Council (Southcentral Council) took up this proposal. The Eastern Interior Council supported the proposal, supporting the intent to begin the process of establishing drawing permit hunts with a combined State and Federal allocation. The Southcentral Council opposed the proposal. The Southcentral Council stated that opening a hunting season for the Chisana Caribou Herd was premature at this time, and it should wait until a final management plan for the herd is adopted. Once the management plan is adopted, the Southcentral Council would consider establishing a season for Federally qualified rural residents. The Southcentral Council also expressed support for local users to be included in the CCH management planning effort, as they can provide important local context.

Biological Background

The CCH is a small, nonmigratory herd inhabiting eastcentral Alaska and southwest Yukon, Canada. The CCH was first surveyed in 1977 and has been continuously monitored since 1987. The CCH increased through the 1980's and reached a peak of 1,900 caribou in 1988 (Gross 2007). However, beginning in 1990 the CCH experienced a decline in population size. An intensive captive rearing program was conducted from 2003 to 2006 by USGS and the Canadian Wildlife Service. This effort was designed to increase recruitment and calf survival resulting in overall population growth. During calving, captured cows were held in pens where their offspring could be protected from wolves and bears. Surveys conducted since 2003 reflect increased caribou numbers and the most recent census in 2007 estimated a herd size of 766 animals (**Table 1**). Past declines were attributed to poor calf recruitment and high adult mortality associated with adverse weather conditions and predation. Research indicates predation caused 89% of the documented mortality among radio-collared cows greater than 4 months old (Gross 2007). While trends have been consistent since 2005, in 2009, the calf:cow ratio was lower than what was observed the previous year. This drop was only observed on the Yukon side of the border and may

Table 1. Fall sex and age composition of the Chisana Caribou Herd, 1994–2009.(Modified from Adams 2007, Bentzen 2008, 2009 and Gross 2007).

Date	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size[a]
2000	20	6	5	80	15	412	425
2001	23	4	3	79	18	356	375
2002	25	13	10	72	18	258	315
2003[b]	37	25	15	62	23	603	720
2004[b]	38	21				538	
2005[b]	46	23	14	59	27	599	706
2006[b]	48	21				628	
2007[b]	50	13	8	61	31	719	766
2008	44	21	13	60	27	532	
2009	49	15	9	61	30	505	

[a] Bases on population mode designed by P. Valkenburg and D. Reed (ADF&G).
[b] Captive rearing efforts. Calf:cow ratios observed during survey are adjusted by extrapolating the calf:cow ratio for the wild population to a total estimate of wild cows and then adding the cows and calves from the captive rearing program.

have been related to lower than usual numbers of caribou counted during the Yukon portion of the survey. However, the low ratio has also been observed in other Yukon caribou herds following severe winter conditions.

Harvest History

The CCH has historically been an important resource for the Athabascans of eastern Alaska and the first nations of Yukon (Gross 2007, SCRAC 2010). During the early to mid-1900s the CCH was used as a subsistence resource by the eastern Alaska Athabascans and although subsistence hunting has been disallowed through regulation since 1994, CCH continues to be an important aspect of Ahtna and Upper Tanana Athabascan culture. Simeone (2006) documented the cultural significance of the CCH through interviews with knowledgeable individuals, as the following passage illustrates:

> *"…But it's really, those caribou was really prized by the Indians of Canada all the way over here, it's kind of like a royalty, the royalty of caribou, not any Indian can hunt them, you have to be someone special…The 'alts'e'tnaey have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody…" (Wilson Justin, IN Simeone 2006).*

In the late 1920s, Chisana caribou became economically important to local hunters as guided hunting became common in the Chisana area. Caribou from the Chisana herd were harvested by nonresident hunters guided by local guides through 1994; when hunting was allowed, nonresidents took the majority of the harvest. Chisana caribou herd bulls were desired by sport hunters because of their large stature. From 1990–1994, 43% of those participating in hunting the CCH were nonresidents, they took 58% of the harvest while local subsistence users took 9% of the harvest during that four year period (Gross 2007). Between 1989 and 1994 under State and Federal regulations, the harvest limit was 1 bull caribou and the annual harvest ranged between 16–34 animals (Gross 2007).

Effects of the Proposal

If this proposal is adopted, a CCH hunt would be established in Federal regulation without the benefit of a final CCH Management Plan, without local Alaskan involvement in the CCH Management Planning effort, and without current information regarding the herd size. Composition data of marked and unmarked caribou observed during surveys in 2009 indicates the herd has been relatively stable since 2007 (Bentzen 2009, pers. comm.). If the population remains at about 700 animals, a 2% harvest quota would result in approximately 14 animals being available for harvest. When split between Yukon and Alaska, approximately seven animals could be available to harvest in Alaska.

If this proposal is adopted it would establish a hunt in an area and on a population that is currently closed to all harvest. In this case, the Board would need to carefully consider whether or not the closure should be lifted to all users, or lifted only for Federally qualified users. The Alaskan range of the CCH is primarily within the Wrangell-St. Elias National Park and Preserve. Federal subsistence management regulations mandate a priority for subsistence use by Federally qualified rural residents. In the case of caribou in Unit 12, this includes the rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake. While the level of participation by Federally qualified users if a Federal subsistence hunt were established is unknown, it may be that it would exceed the harvestable surplus, which would mean that no animals would be available for harvest under State regulations and the Board would maintain the closure to all but Federally qualified users. In addition, if the proposal is adopted and the number Federally qualified users were to exceed the harvestable surplus, an ANILCA Section 804 analysis would need to be developed in order to determine which Federally qualified users (as determined by the existing customary and traditional use determination) are most dependent on Chisana Caribou. Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. Whenever it is necessary to restrict the subsistence uses of populations of fish and wildlife on these lands, in order to protect the continued viability of fish and wildlife populations, or to provide for or continue the subsistence use of these populations, such a priority is to be implemented through appropriate limitations.

The proponent requests that the drawing permit hunt be modeled after the Unit 6C moose hunt in which Federally qualified subsistence hunters greatly exceed the harvestable surplus of moose. The Unit 6C drawing permit hunt is a unique Federal hunt that has evolved as an adaptation which was locally derived and supported by the Southcentral Council. Establishing a similar Federal drawing permit hunt for the CCH would need support from both the Southcentral and Eastern Interior Councils. Currently, this proposal is not supported by the Southcentral Council.

Alternative Considered

An alternative approach would be to have an early Federal drawing permit hunt and a later State drawing permit hunt. The portion of the Federal subsistence quota that was not harvested in the early hunt would be assigned to the State hunt. This scenario could result in more animals available for the State hunt than could be available in a simultaneous Federal and State drawing permit hunt.

OSM PRELIMINARY CONCLUSION

Defer Proposal WP10-104 until the Chisana Caribou Herd Management Planning is finalized and the 2010 census is complete

Justification

Two key components are needed before a hunt can be established for the CCH. First, the CCH Management Plan needs to be finalized and supported by local users and all management agencies involved with the CCH. An approved management plan would establish the biological thresholds (e.g., herd size, sex ratio, cow-calf ratio) needed for evaluating herd stability before a harvest quota could be identified. Second, the 2010 CCH census needs to be completed to establish the current herd size. Once the management plan and census are completed, the framework will exist to establish an accurate harvest quota. Until these two components are in place it is premature to create hunting regulations for the CCH. This proposal will be reconsidered by the Federal Subsistence Board once the management plan and the census are completed

ADDENDUM

OSM CONCLUSION

Oppose Proposal WP10-104.

Justification

Two key components are needed before a hunt can be established for the CCH. First, the CCH Management Plan needs to be finalized and supported by local users and all management agencies involved with the CCH. An approved management plan would establish the biological thresholds (e.g., herd size, sex ratio, cow-calf ratio) needed for evaluating herd stability before a harvest quota could be identified. Second, the 2010 CCH census needs to be completed to establish the current herd size. Once the management plan and census are completed, the framework will exist to establish an accurate harvest quota and allow eligibility issues to be addressed. Until then, it is premature to establish hunting regulations for the CCH.

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REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-104. The Council determined there was no reason to defer this proposal and supported the proposal as written. Although population assessments are not available as yet for 2010, there is sufficient information to support the Chisana Caribou Herd Management Plan. The Council supported a similar recommendation for a parallel State regulation (BOG proposal 18) and is generally in favor of joint management planning.

SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose Proposal WP10-104. Opening a hunt for the Chisana Caribou Herd is premature. A final management plan for the herd is not in place and the 2010 aerial survey will not be completed until fall 2010. A small harvest from the herd has the potential to threaten the existing population. The Council supported the idea of a local user being added to the planning effort. Additionally, opening a hunt on the Chisana Herd could also threaten the Mentasta Caribou Herd which is currently closed for harvest and further reduce that population. The Chisana Caribou Herd home range is within Federal public lands, therefore, before opening a season managers must consider a season for some Federally qualified rural residents. The Council thought that if a hunt were to be opened, an ANILCA 804 analysis might have to be developed.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP-10-104

The Interagency Staff Committee recognizes that the Council's recommendations on this proposal are split, one in support and one in opposition. Deferring the proposal could be another course of action. The National Park Service, the U.S. Fish & Wildlife Service and the Alaska Department of Fish & Game field staff have been working effectively with their Canadian counterparts over the last year and a half on a management plan for this small herd of woodland caribou.

The planning work and public review is not yet done. First, the draft herd management plan needs to undergo public review and to be finalized by the international planning team. Second, an updated population census, scheduled for fall 2010, needs to be accomplished. Third, several issues need to be worked out within Alaska among ADF&G, federal staff and the public regarding management of the proposed hunt, allocation of the available animals between federally qualified and non-federally qualified users and other details of hunt administration. All the issues raised by the Southcentral Council need to be fully addressed and sufficient opportunities for local input and broader public involvement need to occur.

Regularly scheduled fall (2010) and winter (2011) Council meetings could be utilized to accomplish some of the needed pubic review. If all the needed agency work and public discussion can be accomplished within the next year, this proposal could be put onto a future Board meeting's agenda in 2011, if the proposal were deferred at this time.

In summary, the end product of a vote to defer the proposal could be the opening of a hunt in the fall of 2011 rather than in 2012. If all the needed work is not accomplished the proposal simply would not be brought to the Board until the next regular cycle in 2012.

Comments WP10-104
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-104: Establishes a joint federal/state draw permit hunt for the Chisana caribou herd starting fall 2011, following recommendations in the draft Management Plan for the Chisana Caribou, 2010-2015,released April 22, 2010, for public review. The management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

Introduction: The Chisana Caribou Herd was historically important for subsistence hunting. However, with the decline of the Gold Rush in the early 1900s, guided nonresident huntin became the predominant use. The remaining Native families left the Chisana area during the 1950s, and most subsistence harvest of caribou in Game Management Unit 12 came from the Nelchina, Fortymile, and Mentasta herds since that time. In the 1980s and early 1990s, an average of 29 Chisana caribou were harvested annually with about 60% of the harvest taken by Alaska residents, who primarily used aircraft for access. During the last five years that hunting was open, nonresidents took 58% of the harvest. Following a decline in the herd in the early 1990s, hunting in Alaska and Canada was stopped. Between 2003 and 2006, a captive rearing program was conducted by Yukon Department of Environment, which may have slightly increased the number of calves recruited into the population. From 2004 through 2008, the population was stable and is estimated at 700-800 caribou. In some years, caribou are available on their winter range to residents of the Yukon in the vicinity of Beaver Creek, and a few bulls have been taken by guided hunters.

The Chisana Caribou herd management plan was drafted by Yukon Department of Environment, White River First Nation, Canadian Wildlife Service, National Park Service (Wrangell St. Elias), US Fish and Wildlife Service, and Alaska Department of Fish and Game.

Impact on Subsistence Users: Access to the Chisana caribou herd is difficult and is mostly limited to aircraft. There are less than 10 permanent residents living within the range of the herd, and there is no access by boat or road to the area. Harvest by federally-qualified subsistence users in Unit 12 averaged less than 2 caribou between 1981-1983 and 1990-1993. A joint federal/state drawing permit would ensure that a portion of the harvest is available for federal subsistence users on federal public lands.

Opportunity Provided by State: State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Highway (Tok Cutoff) and have not provided any opportunity for harvesting Chisana caribou since 1993.

Conservation Issues: The draft Chisana caribou management plan recommends a 2% bulls only harvest if the herd remains increasing or stable, the bull/cow ratio does not fall below 35/100, and calf recruitment remains above 15 calves/100 cows over a three year average. For the last several years, there is likely a harvestable surplus of 15-25 bull caribou in the herd, but composition counts should be done every year to ensure that recruitment and bull:cow ratio is adequately monitored. A limited, bulls-only harvest will have no effect on herd size.

Other Comments: The Alaska Board of Game passed a regulation in March 2010 allowing for a harvest under a joint state/federal permit beginning in 2011. Population and composition data indicate that there has been a harvestable surplus of caribou in this herd since 2003. Given the history of harvest in this herd, some hunting opportunity should be open to all users, including nonresidents.

Recommendation: Support, following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada, as contained in the draft management plan and using a joint state/federal permit to monitor harvest in Alaska.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-104. I am sending this e-mail to give my personal support to proposal #104 regarding the Chisana Caribou herd. I feel it is very important to get some sort of season started. I support the idea of having a early subsistence season and a later State season. This would give a subsistence preference and allow for unused permits if available to be reallocated. I also support having one tag designated as a Governors tag and auctioned off in order to raise money for monitoring the Chisana Caribou. I have seen the letter that the Chistochina People sent to the Wrangell SRC and would support a positive C+T determination for Chisana Caribou for Chistochina.

Leif Wilson, Tok ,AK

Support Proposal WP10-104. I am a long time resident of unit twelve. I have lived and hunted in the Tok area for the past 40 plus years. I want to inform you that I am in support of the Federal proposal #104 that would authorize a joint Federal and State hunt for the Chisana Caribou herd. I believe that hunters are a vital part of culling animals as opposed to predators and this proposal would allow a few Caribou to be taken. Hunters would also give a first hand account of the herds status helping the monitoring process. A small harvest of Chisana Caribou would still be conservative yet sustainable. As a local resident this hunt would be a once of a life time experience. If three hunters were to be given the chance, then that would be three happy hunters.

Craig Roach, *Tok, AK*

Support Proposal WP10-104. As a +15 year resident of Tok, we support a small number of caribou being harvested from the Chisana caribou herd. We support Federal proposal #104 in GMU 12 for a joint Federal and State hunt.

For the well being of the herd, it is important that some sort of harvest is initiated. This gives people a vested interest in making sure the herd is monitored and aided if necessary. The harvest plan advocated in this proposal is very conservative and sustainable. It will only allow a small number of caribou to be harvested but one caribou can be very important to the individual hunter.

Vanessa and Brian Thompson, Tok, AK

Support Proposal WP10-104. I am writing you an email in support of a hunt opening up for the Chisana caribou herd. I have personally hunted this herd back in the mid to late 80's and harvested a caribou from the herd. It was an awesome experience for myself as I was a teenager at the time. I support opening the Chisana caribou herd to hunting and would like to see my kids have the opportunity to also be able to hunt this unique herd. My daughters are the great grand children of the late Chief Walter Northway of Northway. He and other elders talked of traveling to Chisana and harvesting Chisana caribou via dog team and canoes. I have personally made it a point to try my best to show my daughters many of the places where their ancestors have been and where they hunted. By opening up this herd to hunting again, it is possible to show them yet another place/hunting opportunity that their ancestors have been. With the herd bouncing back due to efforts on both sides of the border, it is a great opportunity to re-open hunting of this unique caribou herd.

Mike Cronk, Tok, AK

Support Proposal WP10-104. I would like to personally favor proposal 104 for the working together of the two countries and the our State and Federal agencies towards a possible season in the future for the Chisana caribou. I have worked with locals in the Upper Tanana 40-Mile country, OSM staff, Wrangell NPS staff for many, many meetings to work towards an effort that would work for the future for a possible hunting opportunity for caribou. This herd is a small herd but if something was not started by

the people, it may never be a chance. With the international working group, I wish to show my support for something of this out of the box approach. I support the idea of an early season for subsistence by a drawing and then any unused permits would go to the State through their draw. I am aware of the letter from Chistochina to The Wrangell SRC requesting their participation in GMU 12 caribou. I support a C & T finding for Chistochina at the next wildlife proposal for GMU 12 caribou call since it cannot be done this cycle. The 40-Mile caribou herd has had both the Federal and State agencies working together for a years to hold a joint Federal/State permit. This is a great example of how things can work for the best interest of the user which I highly support. These types of permits make it much easier for the user.

Sue Entsminger, Gakona, AK

Support Proposal WP10-104. I support opening of a Chisana hunt as outlined in Proposal 104. I support a joint State/Federal management of the herd. There has been a long history of international management of this herd which should continue. I believe permits should be divided among Federal and State permittees.

Danny Grangaard, Tok, AK

Oppose Proposal WP10-104. We adamantly oppose WP10-104 to "establish a joint Federal/State draw permit hunt for the Chisana Caribou Herd starting the fall of 2011. This draw permit hunt should be structured similar to the Cordova moose draw permit hunt, with a portion of the permits issued to Federally qualified subsistence hunters, under Federal regulations (Federal hunt) and the rest of the permits issued to Alaska residents and nonresidents, under State regulations (State hunt)."

If the Chisana Caribout Herd can sustain a small harvest, then is should be opened with a priority given to the communities, who have priority under ANILCA. It should be done within the parameters of ANILCA, not a joint State/Federal drawing permit hunt.

Ahtna Tene Nene' Customary and Traditional Council, Glennallen, AK

WP10-105 Executive Summary	
General Description	Proposal WP10-105 requests the Federal Fortymile Caribou Hunt Manager be given discretionary inseason hunt management authority. This includes the authority to modify or restrict harvest limits, season dates, methods, means and access to hunt the Fortymile Caribou Herd (FCH) in Units 20E and 25C. *Submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Fish and Game Advisory Committee in conjunction with the Fortymile Caribou Herd working group*
Proposed Regulation	**Unit 20E—Caribou** *Unit 20E— 1 caribou by joint State-Federal registration permit only. Up to 900 caribou may be taken under a State-Federal harvest quota. During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ration for the two herds* — *Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*~~ **Unit 25C—Caribou remainder** *Unit 25C remainder—1 caribou by joint State-Federal registration permit only. Up to 600 caribou may be taken under a State-Federal harvest quota.* — *Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G*~~
OSM Conclusion	**Support** Proposal WP10-105 **with modification** to change the harvest limit from one caribou to one bull for the fall hunt and to limit the number of caribou harvested in the first 19 days of the Federal subsistence fall hunt to 100 bulls.

continued on next page

P10-105 Executive Summary *(continued)*	
OSM Conclusion *(Continued)*	**Unit 20E—Caribou** *Unit 20E— 1 caribou by joint State-Federal registration permit only. Up to 900 caribou may be taken under a State-Federal harvest quota.* ***During the fall season the harvest with be restricted to 1 bull and the harvest will not exceed 100 caribou between August 10 and August 29.*** *During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Forty mile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ration for the two herds* — *Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*~~ **Unit 25C—Caribou remainder** *Unit 25C remainder—1 caribou by joint State-Federal registration permit only.* ***During the fall season the harvest with be restricted to 1 bull and the harvest will not exceed 100 caribou between August 10 and August 29.*** *Up to 600 caribou may be taken under a State-Federal harvest quota.* — *Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G*~~
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-105 **with modification** as described in the OSM Conclusion.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** authorizing authority to delegated Federal official but **also modify** to address recommended changes described in "Other Comments." *See full comments following the analysis.*
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP10-105

ISSUES

Proposal WP10-105, submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Fish and Game Advisory Committee in conjunction with the Fortymile Caribou Herd (FCH) working group, requests the Federal Fortymile Caribou Hunt Manager be given discretionary inseason hunt management authority. This includes the authority to modify or restrict harvest limits, season dates, methods, means and access to hunt the FCH in Units 20E and 25C.

DISCUSSION

A similar wildlife proposal was adopted by Alaska Board of Game (BOG) at its February 2010 meeting The BOG proposal requested a change in the harvest limit to prevent excessive harvest of the FCH when the herd is migrating past major roads. Both proposals were submitted with the intent of aligning State and Federal hunting regulations. Since 1995 State and Federal managers in Units 20E and a portion of 25C (east and south of Preacher Creek) have managed the fall and winter FCH hunts using a joint Federal-State registration permit. One permit is used for all hunts and harvest reports are returned to ADF&G. Federally qualified subsistence users can begin hunting on Federal public lands 15–30 days before other hunters. A short reporting period allows State and Federal managers to closely monitor the State and Federal season and determine when the harvest quota are met.

The proposal states that the Federal Fortymile Caribou Hunt Manager should be given the authority to modify or restrict bag limits, season dates, methods and means, including access and weapons. The Federal Fortymile Caribou Hunt Manager is the Bureau of Land Management's eastern interior field office manager. A letter of delegation not the regulatory process is the vehicle for granting management authority. The authority to manage the hunt would be granted with a letter of delegation from the Federal Subsistence Board. Under 36 CFR 242.10 (d)(6) and 50 CFR 100.10 (d)(6) the Federal Subsistence Board has the authority to delegate authority to modify or restrict bag limits, season dates, methods and means. The proponent refers to units 20B, 20D, 20E and 25C in the proposal. There is no Federal open season in 20B, and 20D, therefore, any delegated authority would apply only to units 20E and 25C.

The Federal subsistence manager and the Federal Subsistence Board cannot regulate access to lands that are used for subsistence hunting. Access to Federal lands can only be addressed by the Federal agencies that mange the lands.

Existing Federal Regulation

Unit 20E—Caribou *Unit 20E— 1 caribou by joint State-Federal registration permit only. Up to 900 caribou may be taken under a State-Federal harvest quota. During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ration for the two herds.*	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28* *The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*

Unit 25C remainder—Caribou

Unit 25C remainder—1 caribou by joint State-Federal registration permit only. Up to 600 caribou may be taken under a State-Federal harvest quota.	*Aug. 10–Sept. 20* *Nov. 1–Feb. 28* *The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*

Proposed Federal Regulation

Unit 20E—Caribou

Unit 20E— 1 caribou by joint State-Federal registration permit only. Up to 900 caribou may be taken under a State-Federal harvest quota. During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ration for the two herds	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*~~

Unit 25C—Caribou remainder

Unit 25C remainder—1 caribou by joint State-Federal registration permit only. Up to 600 caribou may be taken under a State-Federal harvest quota.	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G*~~

Existing State Regulation

Unit 20E—Caribou

Residents Only: 1 caribou (RC860)	*Aug. 10–Sept. 30*
Or 1 caribou (RC867)	*Dec. 1–Feb. 28*
Nonresidents Only: 1 bull (RC860)	*Aug. 10–Sept. 20*

Unit 25C remainder—Caribou

Residents Only:1 caribou (RC860)	*Aug. 10–Sept. 30*
Or 1 caribou (RC867)	*Dec. 1–Feb. 28*
Nonresidents: 1 bull (RC860)	*Aug. 10–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20E and consists of 4% Fortymile River Corridor managed by the Bureau of Land Management and 20% Yukon-Charley Rivers National Preserve managed by the National Park Service.

Federal public lands comprise approximately 74% of Unit 25C and consists of 64% Steese National Conservation Area managed by the Bureau of Land Management, 9% Yukon Charley Rivers National Preserve managed by the National Park Service, and 1% Yukon Flats National Wildlife Refuge managed by US Wildlife Service (**Unit 20 and 25 Map).**

Customary and Traditional Use Determinations

Rural residents of Units 12 (north of Wrangell-St. Elias National Preserve), 20D and 20E have a positive customary and traditional use determination for caribou in Unit 20E. There has not been a customary and traditional determination made for caribou in Unit 25C, therefore, all rural residents are eligible to harvest caribou in Unit 25C.

Regulatory History

The FCH is an international herd shared between Alaska and Yukon, Canada. It is an important herd for consumptive and nonconsumptive uses in Interior Alaska and southern Yukon. The FCH historically provided much of the food needed by residents within its range. Because of the importance of the FCH, increasing competition among hunters and complex harvest regulations a planning team was established to develop a management plan. The original *Fortymile Caribou Herd Harvest Plan* was completed in October 1995 by the FCH Planning Team. The original plan provided guidance from 1995 through 2000 for governing overall herd harvest levels, with the goal of restoring FCH to its former range and abundance. In accordance with the *Fortymile Caribou Herd Harvest Plan,* the Federal Subsistence Board, in cooperation with ADF&G, established a joint quota for Units 20E and 25C of "up to 150 bulls" beginning in regulatory year (RY) 1996–1997. In 2001, a new Harvest Plan was developed for 2001–2006. This plan increased the harvest quota from 150 bulls per year to 850 caribou with up to 25% cows until the herd reaches 50,000 caribou (ADF&G 1999). This annual harvest quota was maintained when the current 2006–2012 Harvest Plan was adopted (ADF&G 2006). The intent of the 2006–2012 Harvest Plan is to maintain an average annual harvest quota of 850 caribou, but allow up to 15% variation in a single year. If the quota is either not reached or exceeded in one year, the harvest allocation may be adjusted the following year to compensate. Currently, 75% of the harvest quota is allocated to the fall hunt (RC860) and 25% to the winter hunt (RC867).

In the past three years, 2007–2009, the State has issued multiple Emergency Orders to close hunting of the FCH due to high harvest near the road system. Several of these Emergency Orders have been followed by Federal hunt closers. The State and Federal registration permit hunts for the FCH is divided into 3 zones. In 2007, the State lands near the Taylor Highway (zone 3) were closed due to high harvest in the first four days of the fall hunt (ADF&G 2007). By August 16, 2008, State lands accessible from the Steese Highway and Chena Hot Springs Road (zone 1) and the area near the Taylor Highway (zone 3) were closed to hunting due to high harvests in the first few day of the hunting season (ADF&G 2008a, ADF&G 2008b). The closure was followed by a closure of the Federal public lands on September 22 (BLM 2009a). More recently, harvest was unexpectedly high in zone 1 and 3 during the first 3 days of the 2009 fall hunt. An emergency order was issued and State lands in both zones were closed to hunting on August, 12 (ADF&G 2009a). The Federal public lands were closed August 21, 2009 (BLM 2009b). The central portion of the FCH range (zone 2) was closed September 18 (ADF&G 2009b). Due to the

high harvest during the first 3 days of the 2009 fall hunt near the Steese and Taylor Highway, the annual harvest quota of 850 caribou was attained and no winter harvest of FCH was allowed (ADF&G 2009c) on State lands. A winter hunt on Federal public lands did occur in 2009.

Current events involving Species

The BOG adopted a proposal submitted by FCH working at the February 2010 meeting. The intent of the proposal was to improve the field conditions caused by overcrowding of hunters and decrease the large harvest of FCH near the Steese and Taylor Highways. The BOG proposal reduced the harvest limit to one bull for the State FCH fall hunt (Aug. 10–Sept. 30) and requested the State fall hunt be delayed until September 29.

The FCH working group also made a recommendation to be considered in conjunction with WP10-105 of reducing the Federal subsistence harvest limit to one bull for the fall hunt (August 10–September 29) aligning State and Federal hunting regulations for the FCH. They further requested the maximum allowable harvested before August 29 to not exceed 100 bull caribou.

Biological Background

Since implementation of the *Fortymile Caribou Herd Harvest Plan* in 1995, herd size has increased significantly. The FCH doubled in size between RY1995 and RY2002, with annual growth rates between 4 and 14% (Gross 2007). This increase was due to adult and calf survival, reduced overall predation on the herd, increases in growth rates, favorable climate, good range conditions and reduced harvest. In RY2004 and RY2005 the herd began to experience a decline likely due to poor climate conditions and wolf predation on both adults and calves (**Table 1**). Good survival rates among calves since RY2006 allowed for a 19% increase in the estimated population. Most recent herd composition surveys show a decrease in the bull:cow ratio (37 bulls:100 cows) and increase in the calf:cow ratio (33 calves:100 cows) in RY2008.

Harvest History

Under both the 2001–2006 and 2006–2012 Harvest Plans, if a herd growth rate of approximately 10% is achieved in a particular year the harvest objective for that hunting season is 2–3% of the herd (ADF&G 1999 & 2006). When that growth rate is not achieved the harvest objective is reduced to the level of the previous year. Because the FCH grew at less than 10% per year and showed some declines after 2003, the annual harvest quota has remained at 850 animals except for RY2002, when the quota was set before an accurate population estimate was made. For RY2002 the quota was set at 950 caribou. Since RY2002 the total harvest has ranged from 741 to 860 caribou (**Table 2**). The cooperative management of the working group has allowed the harvest to stay within the harvest quota providing for continued conservation of the herd. Guidance provided by the 2006–2012 Harvest Plan ensures harvest quotas will remain conservative through 2012 allowing for continued herd growth and a stable bull:cow ratio (ADF&G 2006).

Effects of the Proposal

A letter of delegated authority to the inseason Federal Manager would provide the ability to work in conjunction with the State to reduce heavy roadside harvest. Since submission of this proposal, the FCH working group has developed specific recommendations that improve field conditions cause by overcrowding of hunters along the road system and align State and Federal management with the *Fortymile Caribou Herd Harvest Plan*. In the proposal the proponent states that the recommendations of the working group should be adopted. Therefore the recommendations of the FCH working group are

Table 1. Fortymile caribou fall composition counts and estimated herd size, regulatory years 2001–2002 through 2008–2009 (modified from Gross 2007and Gross 2009).

Regulatory Year	Bulls: 100 Cows	Calves: 100 Cows	Calves (%)	Cows (%)	Total Bulls (%)	Composition Sample Size	Estimate of Herd Size
2001–2002	49	38	20	53	27	6878	40,800[a]
2002–2003	43	39	21	55	24	6088	44,100[a]
2003–2004	50	17	10	60	30	6296	42,300[a]
2004–2005	45	28	16	59	25	4157	39,700[a]
2005–2006	51	18	10	59	30	2350	39,000[a]
2006–2007	43	34	19	57	24	4995	41,000[a]
2007–2008	36	37	22	58	21	5228	42,000 [a]
2008–2009	37	33	19	59	22	4119	46,509 [ab]

[a] Herd estimates were derived from population models using data from summer census counts, fall composition counts, spring parturition surveys and monthly mortality surveys of collared caribou. Population estimate for 15 May of current regulatory year.
[b] Preliminary data.

Table 2. Reported Fortymile caribou harvest by joint State-Federal registration permit, regulatory years 2002–2003 through 2008–2009[a] (modified from Gross 2007).

Regulatory Year	Permits Issued	Total Hunters	Bulls	(%)	Cows	(%)	Unknown	Total Harvest
2002–2003[b]	4155	2620	663	77	185	22	12	860
2003–2004[b]	5718	3440	612	77	181	23	6	799
2004–2005[b]	4217	2497	592	70	243	29	11	846
2005–2006[b]	4438	2483	556	75	182	25	3	741
2006–2007[b]	3975	2602	601	71	247	29	4	852
2007–2008	4576	3182	746	74	262	26	4	1012
2008–2009	3582	2493	679	76	217	24	16	912
2009–2010	2764	1999	876	82	192	18	12	1080

[a] Data from RC860, R3582, RC863, RC865, RC866, and RC867 harvest reports.
[b] Includes RC860 and RC2867.

considered in conjunction with this proposal. A reduced harvest limit of 1 bull will lessen the hunting pressure on FCH and help boost population growth. A reduced harvest would be consistent with the *Fortymile Caribou Herd Harvest Plan's* primary goal of promoting continued growth of the FCH. Furthermore, the reduced harvest limit would align State and Federal hunting regulations for the fall FCH hunt. Capping the early harvest at 100 animals would spread the harvest over time, ensuring that the harvest quota is not filled before the State fall hunt begins.

OSM CONCLUSION

Support Proposal WP10-105 **with modification** to change the harvest limit from one caribou to one bull for the fall hunt and to limit the number of caribou harvested in the first 19 days of the Federal subsistence fall hunt to 100 bulls. In conjunction with these regulatory changes, it is also recommended that a letter of delegation be issued allowing the Federal subsistence manager the authority to modify or restrict bag limits, season dates, methods and means. The closure authority will be taken out of regulation because that authority is included in the letter of delegation. The access portion of the proposal is not

addressed because the Federal Subsistence Board does not have the authority to restrict access. Access to Federal lands can only be addressed by the Federal agencies that manage the lands.

The modified regulation would read:

Unit 20E—Caribou

Unit 20E— 1 caribou by joint State-Federal registration permit only. Up to 900 caribou may be taken under a State-Federal harvest quota. ***During the fall season the harvest with be restricted to 1 bull and the harvest will not exceed 100 caribou between August 10 and August 29.*** *During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Forty mile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ration for the two herds*	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G.*~~

Unit 25C—Caribou remainder

Unit 25C remainder—1 caribou by joint State-Federal registration permit only. ***During the fall season the harvest with be restricted to 1 bull and the harvest will not exceed 100 caribou between August 10 and August 29.*** *Up to 600 caribou may be taken under a State-Federal harvest quota.*	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28* ~~*The season closures will be announced by the BLM Eastern Interior Field Office Manager after consultation with the NPS and ADF&G*~~

Justification

A letter of delegated authority to the inseason Federal Manager would provide the ability to work in conjunction with the State to reduce heavy roadside harvest. Current FCH population data and composition surveys suggest that the FCH population is steady but not increasing. A more conservative harvest limit will lessen the hunting pressure on this caribou herd and help boost population growth. All necessary safeguards for monitoring inseason harvest of FCH will be maintained. Total Federal-State harvest levels will continue to comply with the population and harvest objectives in the 2006–2012 *Fortymile Caribou Herd Harvest Plan.* Season closures and harvest limits would continue to be coordinated between State and Federal managers. A limit of 100 caribou would be placed on the first 19 days of the Federal subsistence fall hunt spreading the harvest over time ensuring the overall harvest quota is not taken before the State fall hunt begins.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-105 **with modification** as described in the OSM Conclusion. The Council supported limiting harvest in this area to one bull caribou. Because the Federal program cannot control access to lands, the continuation of subsistence uses and reasonable opportunity for subsistence is a concern. The proposal, as modified, is a good example of collaborative management and is a benefit to subsistence users. The Council supported a similar modification for a parallel State proposal (BOG proposal 14).

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-105

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-105
April 30, 2010; Page 1 of 2

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-105: This proposal gives discretionary authority to federal delegated officials for the Joint State/Federal Fortymile Caribou Registration Permit Hunts (RC860 and RC867), which parallels the discretionary authority granted Alaska Department of Fish and Game under Alaska Administrative Code, 5 AAC 92.052.

Introduction: Early hunt closures for the Fortymile Caribou herd have been common place in the past 5 years. In addition, the harvest exceeded the annual quota set in the 2006-2012 Fortymile Herd Harvest Plan (Harvest Plan) on several occasions. In-season authority is necessary for federal subsistence delegated officials to make in-season adjustments to this hunt (including the authority to modify or restrict bag limits, season dates and methods and means, including access and weapons restrictions) to help manage harvest levels by federally qualified subsistence users within agreed upon quotas, as outlined in the Harvest Plan (endorsed by the Federal Subsistence Board in 2006).

Impact on Subsistence Users: These changes will allow for better conservation of the Fortymile Caribou Herd, resulting in more caribou available to subsistence hunters and fewer early season closures. While restrictions may reduce the number of caribou harvested by federal subsistence hunters at certain times, it is not anticipated to reduce the overall annual harvest by subsistence hunters and will spread the harvest throughout the seasons.

Opportunity Provided by State: Currently, the state season for the Fortymile Caribou Herd is open to Alaska residents from August 10 through September 30 and December 1 through February 28, with a bag limit of 1 caribou, unless closed by Emergency Order. However, a proposal has been submitted by the Fortymile Caribou Herd Coalition to the Alaska Board of Game (for their February 2010 meeting) to reduce the state season for Alaska residents to August 29 through September 30, with a 1 bull bag limit.

Conservation Issues: Excessive harvest can occur when large numbers of Fortymile Caribou cross roads. In addition, seasons are often closed early to prevent over harvest. Federal delegated officials need the flexibility to modify various aspects of the federal subsistence Fortymile Caribou hunts just prior to or during these seasons. Authorizing this flexibility will allow federal delegated officials to react to unpredictable hunt conditions and caribou movements which will in turn minimize the frequency of early season closures and prevent overharvest.

Enforcement Issues: Misalignment of federal and state in-season changes to hunting regulations can create enforcement issues. By allowing federal delegated officials authority similar in-season to that of state managers, state and federal officials can work together to implement parallel (applying to both state and federal subsistence hunts) in-season changes to ensure quotas are not exceeded.

Other Comments: In a 2009 proposal to the Alaska Board of Game, the Fortymile Caribou Herd Coalition supported continuation of the current federal subsistence Fortymile Caribou Hunt with two recommended changes.

1. Change the fall season federal subsistence bag limit from 1 caribou to 1 bull. The coalition identified the problem of "flock shooting" as the issue that would be addressed with this change in the bag limit. Flock shooting refers to hunters shooting into groups of caribou, without regard for hitting multiple animals in the group. Some members in the coalition feel that because hunters have been able to take any caribou, they are not being careful about picking out a single animal to shoot, but instead just start shooting into a group hoping to get a caribou. This can result in wounding loss.
2. Limit the federal subsistence harvest to no more than 100 bull caribou during the August 10 through 28 portion of the federal season, as agreed upon with federal officials during the development of the Harvest Plan.

Recommendation: Support authorizing authority to delegated federal official but also modify to address recommended changes described in "Other Comments" above.

WP10-106/107 Executive Summary	
General Description	Proposals WP10-106 and -107 seek to shorten the Unit 26 wolf hunting season and lower the harvest limit. These proposals were submitted separately, but because they ask for the same thing, they have been combined for the purposes of analysis. *Submitted by the Alaska Wildlife Alliance*
Proposed Regulation	**Unit 26—Wolf** ***5*** ~~*15 Wolves*~~ ***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~
OSM Conclusion	**Oppose**
North Slope Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.
ADF&G Comments	**Oppose**
Written Public Comments	**2 Oppose**

STAFF ANALYSIS
WP10-106 AND -107

ISSUES

Proposals WP10-106 and -107 were submitted by the Alaska Wildlife Alliance and seek to shorten the Unit 26 wolf hunting season and lower the harvest limit. These proposals were submitted separately, but because they ask for the same thing, they have been combined for the purposes of analysis.

DISCUSSION

The proponent notes that wolf pups are only half grown at the start of the current wolf hunting season and that hides are of no value at that time of year. The proponent notes that, "hunters shooting wolves in August would likely discard the low-quality hide or leave the intact carcass in the field." The proponent notes that in late April hides are rubbed and that pregnant females are approaching full term.

Existing Federal Hunting Regulation

Unit 26—Wolf

15 Wolves	*Aug. 10–April 30*

Proposed Federal Hunting Regulation

Unit 26—Wolf

5 *~~15 Wolves~~*	***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*

Existing State Hunting Regulation

Unit 26—Wolf

10 Wolves	*Aug. 10–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 67% of Unit 26 and consist of 68% Bureau of Land Management (BLM), 19% U.S. Fish and Wildlife Service (FWS), and 13% National Park Service (NPS) lands (see **Unit 26 Map)**

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 26.

Regulatory History

The Federal Subsistence Management Program Unit 26 wolf hunting season has been from August 10–April 30 since the start of the program. There was no harvest limit for wolves from regulatory year 1990/01 to 1993/94. Federal Subsistence Board action taken on a proposal submitted by ADF&G (Proposal 2) to align harvest limits, and supported by the North Slope Alaska Subsistence Regional Advisory Council, resulted in change to the Unit 26 wolf hunting limit to 10 wolves for regulatory year 1994/95. In regulatory year 1995/96, the harvest limit was raised to 15 wolves based on a proposal from Kuukpikmiut Village (Proposal 68). The Unit 26 wolf hunting harvest limit has remained at 15 wolves since that time.

On BLM and FWS public lands trappers may shoot a free ranging wolf during trapping season. The Federal wolf trapping season in Unit 26 is November 1-April 30. Hunters and trappers may harvest wolves under State regulations on BLM, FWS, and Gates of the Arctic National Preserve public lands in Unit 26.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 not be open until September 15. The North Slope Subsistence Regional Advisory Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02.

Defenders of Wildlife submitted a proposal (Proposal 29) to the Alaska Board of Game requesting a November 1–March 31 wolf hunting season for Unit 26A. At its November 2009 meeting in Nome, the Alaska Board of Game did not support this proposal, noting that there are no wolf conservation concerns in Unit 26A, the proposal would decrease opportunity for harvest, and public testimony did not support proposal (Ardizzone 2009, pers. comm.).

Biological Background

Wolves (*Canis lupus)* are found throughout Unit 26 and are well adapted to living in the mountains of the Brooks Range, and the tundra of the Arctic Slope. Unit 26 contains extensive open habitat and a large seasonal prey base is available to wolves. Their main prey in the central Brooks Range and Arctic Slope is caribou; wolves often move toward areas of high caribou concentrations. Other prey species may be used extensively if caribou are not available, principally sheep, small mammals, moose, snowshoe hare, and beaver.

Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. In the central Brooks Range study, pups constituted about half of the wolf population each August; these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008).

Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters.

Predation by other wolves and rabies are probably the major causes of natural mortality among adult wolves (Stephenson 2006, Zarnke and Ballard 1987). Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in northern Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

Unit 26 wolf populations appear to be stable or increasing (Stephenson 2006, Carroll 2006), but data on population trends are limited. In 1992 and 1993, estimates from surveys, hunter observations, and harvest data indicated that 390–605 wolves in 166–342 packs were present in Unit 26 (Stephenson 2006, Carroll 2006). These estimates are still considered representative. Wolf population density estimates ranged from 4–11 wolves/1000 mi^2 in parts of Units 26 (Stephenson 2006, Carroll 2006). Within Unit 26A, the wolf population is estimated using wolf track surveys, and wolf sightings recorded during aerial surveys for moose. Densities there have doubled in a study area since 1998 when 5.7 wolves/1000 mi^2 were observed compared to 11.4 wolves/1000 mi^2 in 2008 (ADF&G 2010a). Resident packs are rare on the coastal plain in the northern portion of these subunits (Garner and Reynolds 1986). Garner and Reynolds (1986) reported that 8 of 11 packs studied in the Arctic National Wildlife Refuge included 5 or fewer wolves, with low pup production and survival. Summer pup survival rates for packs of <5 wolves were 23–25%, while larger packs had nearly 100% pup survival.

Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) provided evidence that wolf populations compensate for human exploitation <29% via adjustments in dispersal (i.e., local dispersal, emigration, and immigration). ADF&G's management objectives for Units 26B and 26C include providing a sustained annual harvest rate of no more than 30% of the combined wolf population and accommodating nonconsumptive uses (Stephenson 2006).

Harvest History

Wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. Harvest data are summarized by regulatory year.

From regulatory year 1999/2000 to 2008/09, the reported annual harvest of wolves in Unit 26 ranged from 10 to 55 wolves/year (**Table 1**). Among Federal subsistence hunters/trappers taking wolves, no individual has reached the total harvest limit of 15 wolves per season (ADF&G 2010a). A significant amount of the harvest in Unit 26 comes from the western subunit (26A). Carroll (2006) noted that pelts of most wolves harvested in Unit 26A are used locally for manufacture of parka ruffs or handicrafts, and many of the wolves taken in that subunit are not sealed. Carroll (2000) observed that the actual Unit 26C wolf harvest is two or more times the number reported and that there is a need to develop a harvest reporting system that is more acceptable to local residents.

Some harvest occurs from August 10 through October 31 when only hunting season is open. Hunters occasionally take wolves opportunistically in the fall when they are hunting caribou, moose, or sheep (Adams et al. 2008). During much of this period, snow cover and rivers or lake ice conditions are inadequate for snow-machine travel or tracking wolves. Once snow-cover and ice are adequate for travel, trappers began establishing and maintaining trap lines. Because of limited day-length from November through January, little effort is expended hunting wolves though some are taken opportunistically in conjunction with trapping-related activities. Travel conditions begin improving in February with increasing day-length and there is a shift to wolf hunting activities reaching a peak in March. In April,

Table 1. Reported wolf harvest and method of take for Unit 26 (ADF&G 2009, 2010b).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of Take				
			Trap/ snare	(%)	Shot	%	Unk
1999/2000	33	9	15	45	16	48	2
2000/01	55	21	16	29	39	71	0
2001/02	21	4	6	29	15	71	0
2002/03	14	6	4	29	10	71	0
2003/04	29	1	12	41	17	59	0
2004/05	10	4	0	0	6	60	4
2005/06	19	7	1	5	18	95	0
2006/07	35	15	6	17	29	83	0
2007/08	34	17	5	15	27	79	2
2008/09	41	25	4	10	35	85	2

subsistence users have the opportunity to take wolves when milder weather, daylight, and snow conditions allow for safer travel. Wolf harvest declines through April as the trapping season is closed and snow and ice conditions deteriorate with the spring melt (Adams et al. 2008, Ballard et al. 1997). Most of the wolves harvested in Unit 26 are shot; a lesser number are taken with traps and snares (**Table 1**).

Stephenson (2006) estimated that during regulatory year 2002/04, the harvest was 7–11% of the wolf population in Units 26B and 26C. In Unit 26A, Carroll (2006) noted that much of the wolf population inhabiting the Brooks Range is probably not heavily hunted or trapped, except for the area within 50–70 miles of Anaktuvuk Pass. Carroll (2006) observed that hunters from other North Slope villages range over much of the coastal plain. Adams et al. (2008) observed an annual harvest rate of 11.6% in a Central Brooks range study area.

Adams et al. (2008) observed that wolf harvests in and adjacent to Gates of the Arctic National Park and Preserve are largely unaffected by changes in the hunting harvest limits because there are environmental constraints and most hunters take few wolves. The dynamics of the wolf population is regulated more by natural factors than by the harvest by hunters and trappers. Adams et al. (2008) observed that wolves are prolific and survival of young is generally high; thus, surplus individuals are abundant and available to be harvested. The number of wolves harvested in Unit 26 is low relative to the wolf population size. Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that the wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Brower (2009 pers. comm.) said that village residents of the North Slope never shoot wolves and just leave them lay. He said that residents don't start hunting wolves until the quality of wolf hides improves when the weather gets cold, usually in late October or November. He observed that they often have good snow cover, good wolf hunting conditions, and good wolf fur through early May. He indicated that incidental take of a sick or harassing animal may happen at any time of year.

Effects of the Proposal

The proponent states that wolf pups are still totally dependent on adults for food and protection from predators in early fall and that if the adults are shot the pups would die an inhumane death due to starvation. The proponent feels that harvesting late-term pregnant females is not an acceptable wildlife management practice. ADF&G (2010a) observed that adult wolves learn to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable to harvest. They conclude that wolf populations can sustain a small reduction in pups born by taking of a few pregnant females and that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. ADF&G (2010a) reported that it is the mature adults, including pregnant and lactating females that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

If WP10-106 or -107 is adopted, it would shorten the Unit 26 Federal wolf hunting season by 113 days and reduce the harvest limit from 15 to 5 wolves. This would decrease opportunity for subsistence hunters to harvest wolves in Unit 26. Between 1999–2009, 35% of the reported Unit 26 wolf harvest occurred in August, September, October, and April (**Table 1)**. If the proposals were adopted, the opportunity for subsistence users to harvest wolves during the fall when they are hunting caribou, moose, or sheep would be eliminated.

These proposals would make the Federal subsistence wolf hunting season shorter than the State season and the harvest limit would be lower than the State regulations.

OSM CONCLUSION

Oppose Proposals WP10-106 and -107

Justification

The wolf population in Unit 26 is thought to be healthy. The current harvest rate for Unit 26 wolves is thought to be low, though reporting may be significantly underestimating actual harvest. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and two-year-olds; these individuals are abundant and available to be harvested. The population of wolves in Unit 26 is regulated more by natural factors than by the harvest by hunters and trappers.

Federal and State wolf hunting seasons in Unit 26 are the same. At its November meeting in Nome, the Alaska Board of Game did not support a proposal from the Defenders of Wildlife to shorten the Unit 26A wolf hunting season.

Wolves are a very important subsistence resource in Unit 26. The harvest of wolves and the use, barter, and sale of pelts has long been a part of the subsistence economy. Over the past decade, approximately one-third of the reported wolf harvest in Unit 26 has occurred in the months of August, September, October, and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use to make clothing and handicrafts. Wolves are a highly prized and valued subsistence resource in Unit 26.

Even if these proposals were adopted by the Federal Subsistence Board, hunters would still be able to take wolves on FWS, BLM, and Gates of the Arctic National Preserve public lands during August, September, October, and April under State regulations. Adoption of proposals WP10-106 and -107 would not have the

effect sought by the proponent unless these Federal public lands were also closed to wolf hunting by non-Federally qualified user during August, September, October and April.

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REGIONAL COUNCIL RECOMMENDATION

NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL

Oppose WP10-106 and WP10-107. The Council would like to keep Unit 26 wolf hunting regulations as they are (15 wolves and August 10–April 30 season).

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-106/107

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposals.

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-106 and WP10-107: These proposals request reducing the federal subsistence Unit 26 wolf hunting season from August 10 through April 30 to November 1 through March 31 and the bag limit reduced from 15 to 5 wolves.

Introduction: The proponent requests the federal subsistence wolf hunting season be reduced by 113 day and the bag limit be reduced by 66% in order to maintain a sustainable population, result in higher wolf populations, and produce higher quality hide harvests. The proposer wants to shorten the wolf hunting season because of concern about population numbers, harvesting wolves when hides are low quality, harvesting females during late pregnancy in spring, and harvesting females before pups are weaned in fall.

Spring seasons allow subsistence users the opportunity to take wolves when milder weather, daylight, and snow conditions allow for safer travel. Hide value depends on use intended for the wolf hide. Hides of wolves taken in early fall and late spring are suitable for home use and for sale, consistent with subsistence use of wolves.

Opportunity Provided by State: In Unit 26, the following wolf hunting regulations were effective in 2009-2010:

> Ten wolves; residents and nonresidents; season Aug 10-Apr 30; tag required for nonresidents; hide must be sealed within 30 days of kill

Conservation Issues: None. Within Unit 26A, wolf populations are estimated using wolf track surveys, and wolf sightings are recorded during aerial surveys for moose. Densities have doubled in the study area since 1998 when 2.2 wolves per 1,000km^2 were observed compared to 4.4 wolves per 1,000km^2 in 2008. Wolf sighting rates have changed from 0.11 wolves per hour in 2002 to 1.78 wolves per hour in 2008. The current federal subsistence season (August 10 through April 30) allows for maximum opportunity within areas that do not have predator management programs. Among federal subsistence hunters/trappers taking wolves, no individual has reached the total bag limit of 15 wolves per season. In November 2009, the Alaska Board of Game rejected a similar proposal to change the hunting season.

Other Comments: Adults have learned to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable pack members. These populations can sustain the small reduction in pups born by the taking of a few pregnant females. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the mature adults, including pregnant and lactating females, that do the killing of large prey, thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose. Alaska Professional Hunters Association opposes these proposals. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

Oppose. We have a very high level of respect for Alaska's wolf population and believe they are integral to the fabric of Alaska. However, they have to have population control measures that will enable prey species to live within balance of what their habitats will provide. Wolves have to be included into the management process in an active enough manner to provide maximum human benefit from the prey species. This type of management provides the best stewardship possible for the prey species as well as all people who depend upon or enjoy the benefit of high density population equilibriums. As the Federal Subsistence Board is mandated with providing important subsistence hunting opportunities and the scope of these proposals takes away from that objective, we encourage the Board not to pass these proposals.

Alaska Professional Hunters Association

WP10-108 Executive Summary	
General Description	Proposal WP10-108 requests that the closure of Federal public lands for the taking of muskoxen, except by Federally qualified subsistence users in Unit 22D — that portion west of the Tisuk River drainage and Canyon Creek be removed. *Submitted by the Seward Peninsula Regional Advisory Council*
Proposed Regulation	**Unit 22D — Muskox** *Unit 22D–that portion west of the Tisuk River drainage and Canyon Creek – 1 musk ox by Federal permit or State ~~Tier II~~ permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. ~~Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations~~. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.* — *Sept. 1–Mar. 15*
OSM Conclusion	**Support**
Seward Peninsula Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-108

ISSUES

Proposal WP10-108, submitted by the Seward Peninsula Regional Advisory Council, requests that the closure of Federal public lands for the taking of muskoxen, except by Federally qualified subsistence users in Unit 22D — that portion west of the Tisuk River drainage and Canyon Creek be removed.

DISCUSSION

The proponent requests the current closure of Federal public lands forthe taking of muskoxen except by Federally qualified subsistence users be rescinded to allow harvest of muskoxen under Federal and State regulations on Federal public lands in Unit 22D — that portion west of the Tisuk River drainage and Canyon Creek. Harvest quotas are rarely met for this portion of Unit 22D and the proponent believes there is a harvestable surplus of muskoxen to allow harvest under both State and Federal regulations on Federal public lands. In 2008, the State changed the Tier II subsistence hunt (TX103) to a Tier I registration hunt (RX103), which is open to all Alaskan residents regardless of community residence. Since 2006, there have been no Federal permits issued to hunt muskoxen in Unit 22D Southwest, presumably due to the low amount of Federal public land.

Existing Federal Regulation

Unit 22D — Muskox

Unit 22D–that portion west of the Tisuk River drainage and Canyon Creek – 1 musk ox by Federal permit or State Tier II permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Sept. 1–Mar. 15*

Proposed Federal Regulation

Unit 22D — Muskox

Unit 22D–that portion west of the Tisuk River drainage and Canyon Creek – 1 musk ox by Federal permit or State ~~Tier II~~ permit; however, cows may only be taken during the period Jan. 1 – Mar. 15. ~~Federal public lands are closed to the taking of musk ox except by the Federally qualified subsistence users hunting under these regulations~~. Annual harvest quotas and any needed closures will be announced by the Superintendent of the Western Arctic National Parklands, in consultation with ADF&G and BLM.	*Sept. 1–Mar. 15*

Existing State Regulation

Unit 22D — Muskox

22D, Southwest, west of the Tisuk River drainage, west of the west bank of the unnamed creek originating at the unit boundary opposite the headwaters of McAdam's Creek to its confluence with Canyon Creek and west of the west bank of Canyon Creek to its confluence with Tuksuk Channel – One muskox by registration permit for residents only. Season will be closed by emergency order when the quota of 7 muskox are taken (including up to 5 cows)	*Jan. 1 – Mar. 15*
One bull 4 years old or older by drawing permit for both residents and non-residents	*Jan. 1 – Mar. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 16% of Unit 22D and consist of 11% National Park Service and 5% Bureau of Land Management lands (See **Unit 22 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 22C, 22D (excluding St. Lawrence Island), and White Mountain have a positive customary and traditional use determination for muskoxen in Unit 22D, that portion within the Kougarok, Kuzitrin, and Pilgrim River drainages.

Rural residents of Unit 22D excluding St. Lawrence Island have a positive customary and traditional use determination for muskoxen in Unit 22D remainder.

Regulatory History

The Seward Peninsula Cooperative Muskox Management Plan (1994) established the guiding management goals for muskoxen in this region.

In 1995, WP95-44 was adopted by the Federal Subsistence Board (Board) to establish the first Federal muskoxen hunt on the Seward Peninsula and recognized a Federal subsistence priority for Alaskan residents with a positive customary and traditional determination for muskoxen in Unit 22. The Board established a season of Sept. 1 – Jan. 31 for Units 22D, 22E, and 23 west of and including the Buckland River drainage, and limited the harvest to bulls with a quota of 3% of the population from the most recent census (FWS 1995).

In 1996, WP 96-51 was adopted by the Board to increase the harvest from 2 to 8 muskoxen in Unit 22D. The proposal was submitted by the Seward Peninsula Subsistence Regional Advisory Council to increase the harvest quota to 12 muskoxen but was adopted with modification to increase the harvest quota to 8 muskoxen.

In 1997, the Board stratified Unit 22D into two permit areas comprising BLM lands and Bering Land Bridge National Preserve (NPS lands), with half of permits designated in each area. This decision was based on harvest information indicating all muskoxen harvest in Unit 22D was on BLM land. The split of

permits was intended to encourage subsistence hunters to harvest from NPS lands in the eastern end of the unit.

In 1998, the Seward Peninsula Subsistence Regional Advisory Council submitted Proposal 89 to extend the season (Sept. 1 – Jan. 31) two and a half months to Aug. 1 – Mar. 31 for Units 22D, 22E, and Unit 23 SW. However, Proposal 89 was adopted with modification by the Board to extend the season to Aug. 1 – Mar. 15 in Units 22D and 22E and Unit 23SW.

In 1999, Proposal 46 extended the Special Action (SA 97-14) that combined the State/Federal harvest system. Due to the long traveling distances needed to reach Federal public lands and the poor travel/ snow conditions during that time, the six affected villages supported the combination of the State and Federal harvest systems to create more harvest opportunities due to declining hunter success rates under the Federal subsistence harvest. The combined Federal and State harvest was approved into permanent regulations by both the Alaska Board of Game (1998) and the Federal Subsistence Board (1999). The consensus was to manage on a subunit basis within Unit 22 and Unit 23SW to allow for continued growth of the muskoxen population in this region and to increase harvest opportunities. Sharing the harvest quota between Federal and State systems helped meet the subsistence needs of the local users that may not be met under only the Federal or State system separately. The cooperative management dispersed hunting pressure over an entire area regardless of land ownership to create a more biologically sound management approach (FWS 2001).

In 2000, the Board approved Proposal 00-56 to remove the split of two Federal permit areas, one on NPS land and the other on BLM land, as designated in 1997 in Unit 22D. Six of the Federal permits were then transferred into the State Tier II system.

In 2001, WP01-35 was adopted and added a cow harvest to several units, including 22D, and changed the overall harvest quotas for all subunits.

In 2006, WP06-41 established the use of a designated hunter permit for muskoxen in Unit 22 by Federally qualified subsistence users. Special provisions allowed a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user (designated hunter) to take muskoxen on their behalf, unless the recipient is a member of a community operating under a community harvest system.

Biological Background

Historical accounts of muskoxen in Alaska show they were extirpated by the late 1800s and may have disappeared from the Seward Peninsula hundreds of years earlier. Muskoxen were globally in decline which led to the decision to restore a protected population in Alaska. Thirty-four muskoxen were originally released in Fairbanks from Greenland in 1930. In 1935 and 1936, the entire herd in Fairbanks was transported to Nunivak Island where they continue to thrive. In 1970, thirty-six muskoxen were translocated from Nunivak Island to the southern portion of the Seward Peninsula in Units 22C and 22D and an additional thirty-five muskoxen from Nunivak Island were translocated in 1981 to join the existing population on Seward Peninsula. The entire current range of muskoxen in Alaska comprises many of the locations where Nunivak Island muskoxen were originally transplanted (**Figure 1**).

Muskoxen have dispersed and extended their range east throughout the Seward Peninsula (**Figure 2 and 3**) and now occupy suitable habitat in Units 22C, 22D, 22E, 22B-West, and 23-SW. Individuals and small groups are found in Units 22B-East, 22A-North, Unit 23 along the Tagagawik River and in the Purcell Mountain, Unit 21 along the Yukon River near Ruby, and in Unit 24 near Huslia (Joly 2007).

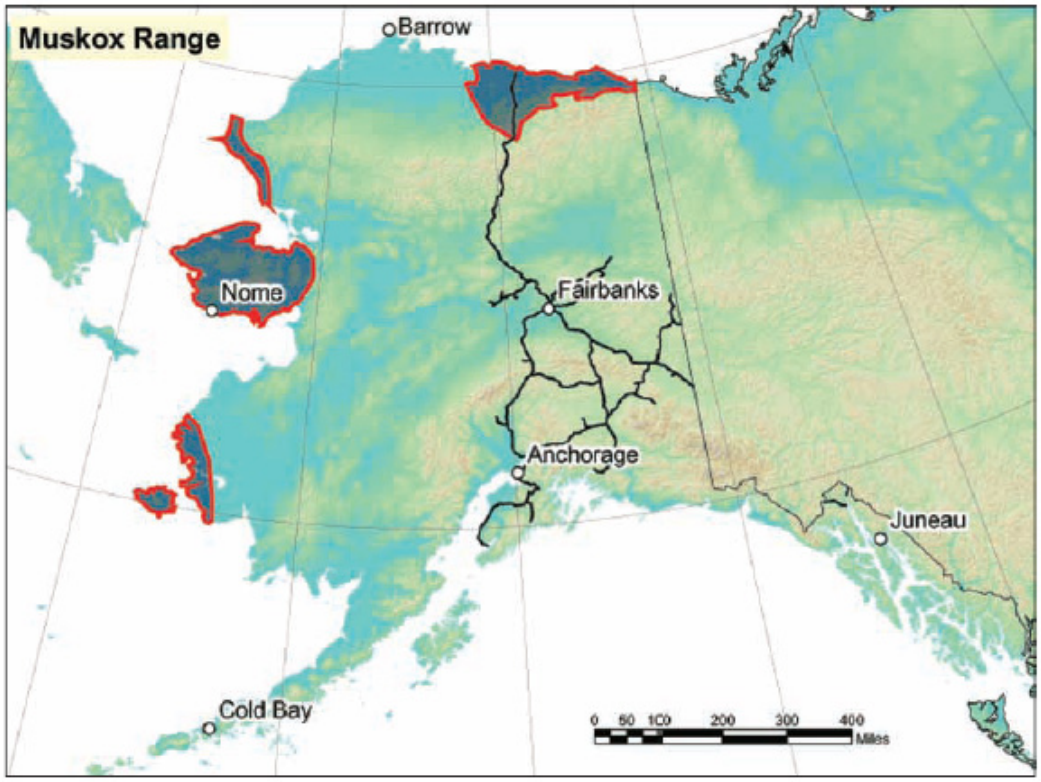

Figure 1. Current range of muskoxen in Alaska (ADF&G)

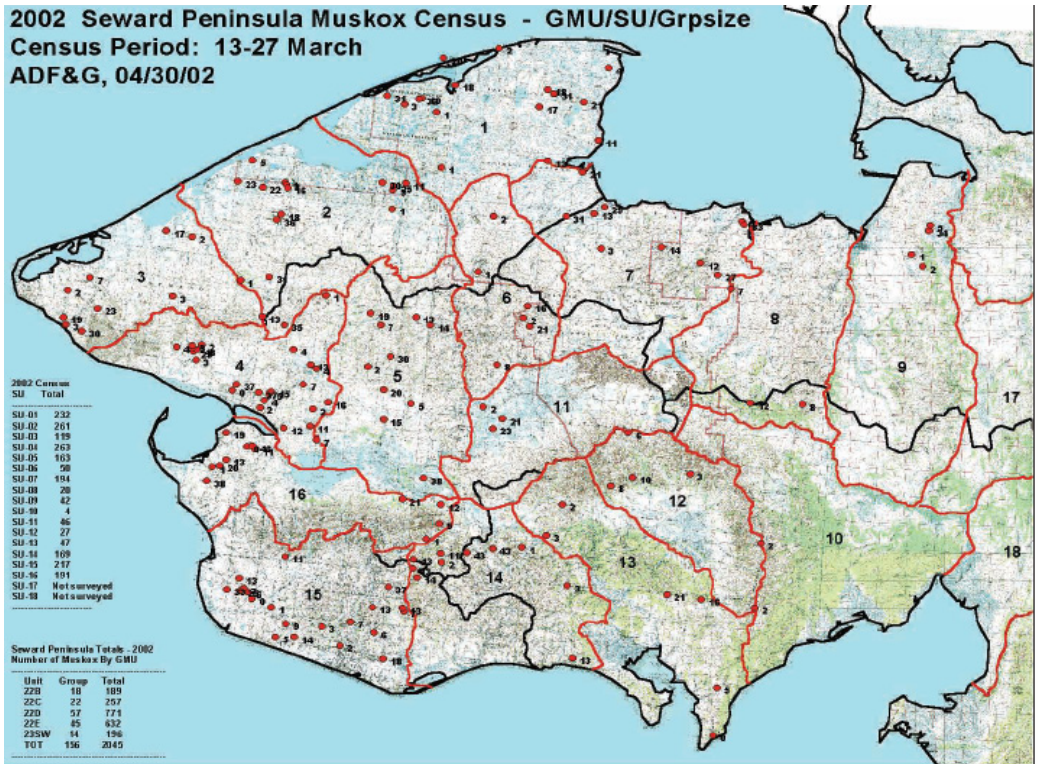

Figure 2. Seward Peninsula muskox census results, 2002 (Joly 2007, courtesy of ADF&G). Black lines are GMU (game management unit) boundaries; red lines are SU (survey unit) boundaries.

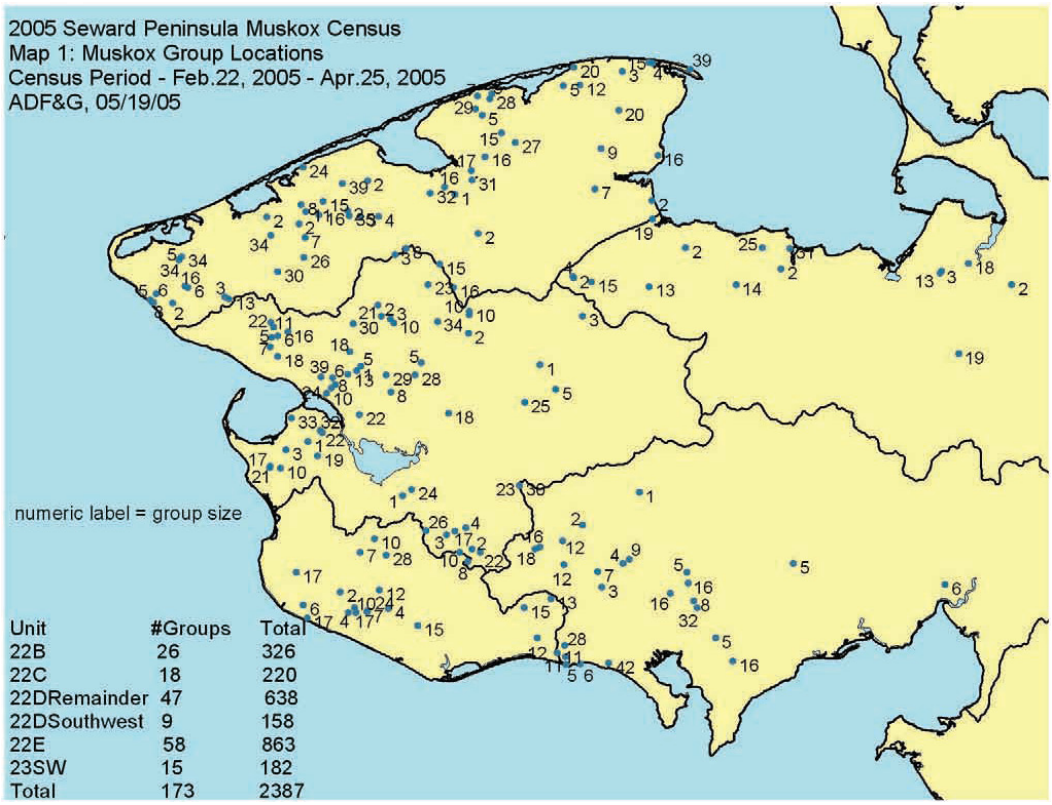

Figure 3. Seward Peninsula muskox census results, 2005 (Joly 2007, courtesy of ADF&G)

Muskoxen censuses are scheduled every three years (2007, 2010, 2013, etc) to determine population size, distribution and percentage of yearlings in the population. In 2007, the Seward Peninsula muskoxen census found 2,688 muskoxen in Unit 22 and Unit 23SW, which is a 12.6% increase from the 2005 census count of 2,387 muskoxen and a 16.4% increase in population size since 2002 when 2,050 muskoxen were counted (**Table 1**). Specifically for Unit 22D, the Seward Peninsula muskoxen census results for 1992–2007 have shown a stable population trend since 1998 (**Table 1**). In 2005, the Seward Peninsula census data showed group locations per subunits within Unit 22D (**Figure 3**). For that portion west of the Tisuk River drainage and Canyon Creek in 22D, there were a total of 9 groups located for a total of 158 muskoxen.

The most recent composition surveys for Unit 22D were completed in 2006 and 97% of the animals were classified (503 of 516 muskoxen) by sex and age (**Table 2**). The population composition for Unit 22D was 25% (131 of 516) bulls ≥3 years, 5% (28 of 516) two-year old bulls, 45% (234 of 516) cows ≥3 years, 5% (26 of 516) two-year old cows, and 16% (84 of 516) yearlings. Bulls of all age classes comprised 31% (159 of 516) of the population surveyed and cows of all age classes represented 58% (301of 516) of the animals counted (**Table 2**). The percentage of cows (50%) shows a high reproductive potential within the 22D muskoxen population. Muskoxen in Arctic National Wildlife Refuge showed the age of first reproduction ranged between two to five years with 60% (9 of 15) successfully reproducing at three years of age. Older female muskoxen (≥ 10 years) reproduced successfully 76% (13 of 17) within this population (Reynolds 2001).

Table 1. Seward Peninsula muskox census results, Units 22 and 23 Southwest, 1992–2007 (ADFG 2008 and Gorn 2007)

Year	Unit					Total Muskoxen in Unit 22 and Unit 23SW	Total % increase from previous census	Total % change from previous census in Unit 22D only	% Average Annual Change in population in Unit 22D
	22B	22C	22D	22E	23SW				
1992	3	49	340	180	134	706	n/a	n/a	
1994	11	79	405	184	246	925	31.0%	+19.1%	+9.5%
1996	51	87	308	327	178	951	0.03%	-23.9%	-11.95%
1998	27	124	714	362	205	1432	50.5%	+131%	+65.5%
2000	159	148	774	461	255	1797	25.4%	+8.4%	+4.2%
2002	189	257	771	632	201	2050	14.1%	-0.3%	-0.15%
2005	326	220	796	863	182	2387	16.4%	+3.2%	+1.06%
2007	329	445	746	949	219	2688	12.6%	-6.2%	-3.1%

Management Direction

The Seward Peninsula Muskox Cooperators Group (SPMCG) provides recommendations regarding muskoxen management on the Seward Peninsula. The SPMCG is comprised of staff from Alaska Department of Fish and Game (ADF&G), National Park Service (NPS), U.S. Fish and Wildlife Service (FWS), U.S. Bureau of Land Management (BLM), Bering Straits Native Corporation, Kawerak Inc., Reindeer Herders Association, Northwest Alaska Native Association, residents of Seward Peninsula communities, and representatives from other interested groups or organizations.

Management goals for muskoxen in Unit 22 are to allow for continued growth and range expansion while providing for a limited harvest of muskoxen in accordance with State and Federal laws. Muskoxen along the Nome road systems of subunits 22B and 22C are managed for viewing, education, and other nonconsumptive uses.

Current management objectives for muskoxen in Unit 22 require a complete census throughout the unit to be completed at 3-year intervals for population and distribution changes. A census is completed in one subunit (22B, 22C, etc) on an annual basis to determine changes in age and sex structure of the population. A resident drawing hunt is administered in Unit 22D remainder and 22D Southwest and registration hunts are administered in the remaining subunits of Unit 22.

Harvest History

In 2005–2006 the allowable harvest rates recommended for Unit 22D by the SPMCG and adopted by the Alaska Board of Game were 5% in Unit 22D remainder (including up to 2% cow harvest) and 8% in Unit 22D southwest. In March 2006, a State Emergency Order was issued to close the Tier II hunt (TX 103) when the harvest quota of 8 bull muskoxen was exceeded, which was the first time for this Tier II hunt (**Table 3**). However, the quota was exceeded only after the State issued 75% more permits than the quota due to consistently lower success rates than the harvest quota (Gorn 2007).

Prior to 2008, the State administered a Tier II subsistence hunt in Unit 22D. In regulatory year 2008–2009, the State changed the Tier II subsistence hunt to a Tier I registration hunt (RX 103) which is open

Table 2. Age and sex composition of Seward Peninsula **muskoxen** groups in Unit 22D (Gorn 2007)

Year	Total Sampled	Males ≥4 yrs old (%)	Males 3 yrs old (%)	Males 2 yrs old (%)	Females ≥4 yrs old (%)	Females 3 or 4 yrs old (%)	Females 3 yrs old (%)	Females 2 yrs old (%)	Yearlings (%)	Unk (%)	Bull:cow ratio [a]	Yearling: cow ratio [b]
2002	454	70 (15%)	17 (4%)	30 (7%)	157 (35%)	9 (2%)	49 (11%)	33 (7%)	88 (19%)	2 (0.4%)	33:100 [c]	41:100
2006	516	99 (19%)	32 (6%)	28 (5%)	193 (37%)	0 (0%)	41 (8%)	26 (5%)	84 (16%)	13 (3%)	42:100	36:100

(%) is of total sampled population
[a] Number of males ≥ 4 years old/100 cows ≥ 3 years old
[b] Number of yearlings/100 cows ≥ 3 years old
[c] In 2002, 59% of the population was sampled and favored larger groups. Smaller groups were likely to be all bulls; therefore the number of bulls is probably underestimated. This bull:cow ratio should be seen as a minimum.

Table 3. Results of state and federal muskox hunts in Unit 22D on the Seward Peninsula 2006–2008 (ADFG 2009 and FWS 2009)

Hunt #	Year	22D Tisuk Drainage Quota [a]	# of State Permits Issued (TX103[b] or RX103)	# of State hunters who hunted	State Bull Harvest	State Cow Harvest	# of Federal Permits Issued (RX118[c])	# of Federal hunters who hunted	Federal Bull Harvest	Federal Cow Harvest
TX103 and RX118	2006	8	21	14	12	0	0	0	0	0
TX103 and RX118	2007	11	19	10	9	0	0	0	0	0
RX103 and RX118	2008	7	5	4	4	0	0	0	0	0

[a] Combined State and Federal quotas (Gorn 2005 and 2007)
[b] TX103 was for the SW portion of Unit 22D and was changed from a Tier II hunt to a Tier I subsistence registration hunt (RX103) effective starting the 2008–2009 regulatory year
[c] RX118 is for the portion west of the Tisuk River drainage and Canyon Creek

to all Alaska residents. When compared to other Alaskan residence communities, the successful residents for harvesting muskoxen in Unit 22D Southwest were predominately from Nome (**Table 4**). In 2008, the State changed the Tier II subsistence hunt (TX103) to a Tier I registration hunt (RX103), which is open to all Alaskan residents regardless of community residence. However, despite this opportunity there were no residents outside Unit 22 that were successful for muskoxen harvest (**Table 4**). In addition, there were no Federal permits issued to hunt muskoxen in Unit 22D Southwest (**Table 3**), presumably due to the low amount of Federal public land.

Table 4. Alaskan residence community for Unit 22D Southwest, State muskoxen hunt on the Seward Peninsula 2006–2008 (ADF&G 2009b and FWS 2009)

City	Total Muskox Harvest 2006	Total Muskox Harvest 2007	Total Muskox Harvest 2008
Nome	9	5	2
Teller	1	1	2
Unalakleet	2	2	n/a

Federal permits were given to residents of Brevig Mission and Teller but harvest was not successful (2006–2008) as shown in Table 2
n/a represents no hunt attempt by member of this community

In addition to the State and Federal registration hunts, the State administers a drawing hunt for bulls only for portions of Unit 22D including 22D Southwest starting in the 2008–2009 regulatory year. From 2004–2008 a total of seven bulls were harvested and the average hunter success rate has been approximately 97% (ADFG 2009).

Effects of the Proposal

In 2008, the State changed the Tier II subsistence hunt (TX103) to a Tier I registration hunt (RX103), which is open to all Alaskan residents regardless of community residence. This is a new regulation system by the State and while there was no harvest success by residents outside Unit 22 in 2008, potential does exist to have harvest predominated from outside communities. Despite this potential, Federally qualified subsistence users within Unit 22 request the closure be rescinded to allow more opportunity to harvest muskoxen under Federal and State regulations on Federal public lands.

OSM CONCLUSION

Support Proposal WP10-108

Justification

Harvest quotas are rarely met for this portion of Unit 22D which potentially leaves a harvestable surplus of muskoxen. In addition, there have been no Federal permits issued since 2006 to hunt muskoxen in Unit 22D Southwest, presumably due to the low amount of Federal public land. By rescinding the Federal closure to allow harvest under both State and Federal regulations in Unit 22D for that portion west of the Tisuk River drainage and Canyon Creek, more harvest opportunity would be created with minimal impact to the muskoxen population because harvest quotas are in place.

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-108. The musk ox population has increased in Unit 22D, and opening hunts on federal lands will give more opportunity for harvest. There is a quota system in place which should address any conservation concerns. Brevig Mission and Teller do not use Unit 22D southwest (on the road system) too much, mostly use the other areas.

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-108

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.

Comments WP10-108
April 30, 2010; Page 1 of 1

Alaska Department of Fish and Game
Comments to the Federal Subsistence Board

Wildlife Proposal WP10-108: This proposal requests changing the Unit 22D Southwest federal subsistence muskox season by removing the closure of federal public lands to non-federally qualified subsistence users. This allows more hunters to participate in the Unit 22D Southwest hunt. Note that Unit 22D Southwest is defined as: that portion west of the Tisuk River drainage and Canyon Creek.

Introduction: Muskox populations in Unit 22D Southwest have increased over the past 15 years and now support hunting harvest through federal subsistence and state hunts. This proposal requests the reopening Unit 22D federal public lands to non-federally qualified users for the hunting of muskox. If adopted, more hunters could participate in the hunt.

Impact on Subsistence Users: None.

Opportunity Provided by State: In Unit 22D Southwest the following muskox hunting regulations were effective in 2009-2010:

> Unit 22D Southwest:
> One muskox by registration permit RX099; residents only; season January 1 through March 15; season will be closed by emergency order when harvest quota is reached; permits available at Nome Alaska Department of Fish and Game and license vendors in Unit 22D beginning July 24; tag required; no fee for required tag; trophy destruction of boss horn within 72 hours by Alaska Department of Fish and Game; trophy destruction required if other skulls (with horns) removed from Unit 22.
>
> RX099 Harvest Quota:
> Unit 22D Southwest: Total combined quota is 7 muskox (including up to 5 cows).
>
> Drawing hunt DX103 has a January 1 through March 15 season for resident or nonresident hunters with drawing permit; bag limit is one bull 4 years old or older by permit; tag fee required.

Conservation Issues: None, due to hunting by permit with established harvest quotas. Harvest quotas are not always reached in Unit 22D Southwest, so allowing additional opportunity is a way to increase annual harvest with harvest quota management.

Recommendation: Support.