Federal Subsistence Board

Wildlife Meeting Materials
April 15–17, 2014

USFWS

U.S. Fish and Wildlife
Gordon Watson
Conference Room
1011 E. Tudor Road
Anchorage, Alaska

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667 Stikine River Report

DRAFT
FEDERAL SUBSISTENCE BOARD
PUBLIC MEETING AGENDA

April 15–17, 2014
April 15, 2014 - 1:30 p.m. - 5:00 p.m.
April 16-17, 2014 - 8:30 a.m. - 5:00 p.m.
U.S. Fish and Wildlife Service
Gordon Watson Conference Room
1011 E. Tudor Rd. Anchorage, Alaska

On April 15th, prior to start of the Public Meeting, the Federal Subsistence Board will meet at 8:30 a.m. to conduct Tribal and ANCSA Corporation consultations on wildlife regulatory proposals, the Rural Determination process, and other agenda issues. The Public Meeting will start at 1:30 p.m.

Public Meeting

1. **Call to Order and Introductions**
2. **Corrections/Additions to the Agenda**
3. **Board Chair - Information Sharing**
4. **Board Discussion with the Council Chairs or their Designees**
5. **Public Comment Period on Non-Agenda Items** *(This opportunity is available at the beginning of each day)*
6. **Rural Process Review**
   a. Summary of comments received following the Federal Register Notice (12/31/2012) requesting comments
   b. Presentation of ISC Options
   c. Board deliberation of ISC Alternatives and possible recommendations to the Secretaries of the Interior and Agriculture on the Rural Determination process.
7. **2014–2016 Subparts C&D Proposals** *(Wildlife Regulations)*
   a. Tribal and ANCSA Corporation Consultation Summary - Wildlife
   b. Announcement of Consensus Agenda *(see detailed agenda that follows)* 5
   c. Public Comment Period on Consensus Agenda Items *(This opportunity is available at the beginning of each subsequent day prior to the final action)*
   d. Board deliberation and action on Non-Consensus Agenda items *(see detailed agenda that follows)* 3
   e. Adoption of Consensus Agenda
8. **Discussion of Special Action FSA 14-03 (Kuskokwim- Chinook)**

9. Stikine River 667

a. Current Events - Pacific Salmon Commission

b. Proposal FP13-19 - Deferred from 2013 Fisheries Cycle

10. Discussion on the late Secretarial Appointments

11. Extraterritorial Jurisdiction Update

12. Other Business

13. Adjourn

Note: *The meeting will be held from 8:30 a.m. to 5:00 p.m. on April 16-17, 2014 or until the Board calls a recess for the day, or completes its work. The teleconference number and the link to connect to the meeting through internet streaming will be posted to the Federal Subsistence Management Program's website (http://doi.gov/subsistence) approximately one week prior to the meeting. Updates on the Board's progress through the agenda can be obtained on the internet stream or 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**
Region 2: Southcentral		
WP14-06	Unit 6D / Goat	26
WP14-08	Unit 7 / Caribou	36
WP14-09	Unit 6 / Black Bear	49
WP14-11	Unit 7 / Moose	58
WP14-13	Units 15B, 15C/ Moose	80
WP14-16	Units 11 / Moose	93
WP14-17	Unit 7 / Moose	118
WP14-18	Unit 6C / Moose	128
Region 6: Western Interior		
WP14-30	Unit 24A / Sheep	138
Region 7: Seward Peninsula		
WP14-33	Unit 22D Kuzitrin / Muskox	Handout
WP14-35	Unit 22D Southwest / Muskox	Handout
WP14-36	Unit 22E / Muskox	Handout
WP14-38	Unit 22D Remainder/ Muskox	Handout
WP14-39	Unit 22B / Muskox	Handout
Region 8: Northwest Arctic		
WP14-41	Unit 23 Southwest/ Muskox	Handout
Region 9: Eastern Interior		

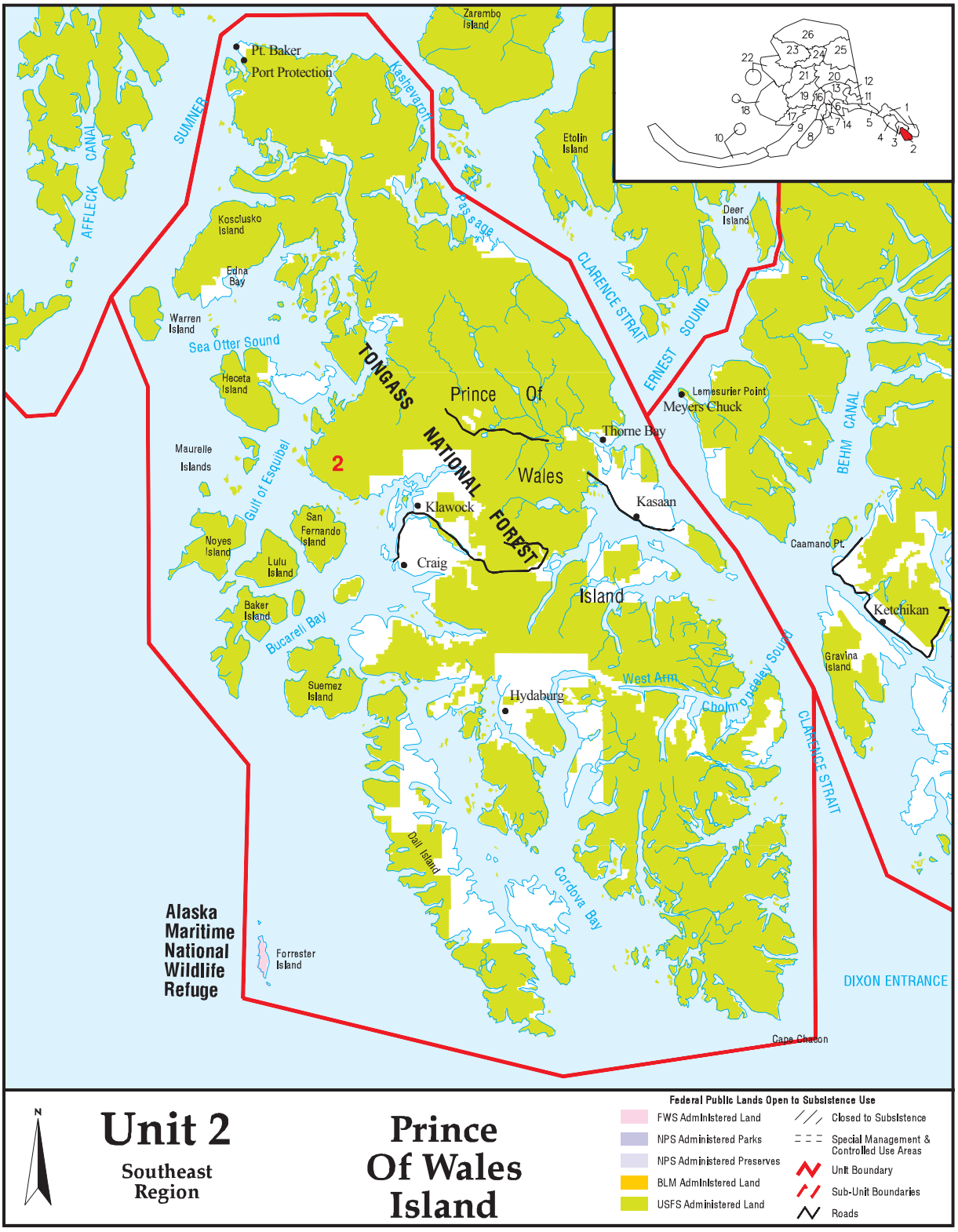
Proposal	Unit / Species	Page
WP14-50	Unit 25D / Brown Bear	152
Region 10: North Slope		
WP14-53	Unit 26A / Moose	163
WP14-54	Units 26B, 26C / Moose	174
WP14-55	Unit 26C / Moose	192
Multi-Region Crossover **Y-K Delta / Western Interior / Seward Peninsula**		
WP14-23	Unit 18 / Moose	209
Bristol Bay / Y-KDelta		
WP14-21	Unit 17A / Moose	223
Bristol Bay / Y-K Delta / Western Interior / Seward Peninsula		
WP14-22	Units 9A, 9B, 9C, 17A, 17C, 18, 19A, 19B / Caribou	238
WP14-26	Unit 18 / Caribou	267
Y-K Delta / Western Interior		
WP14-27	Unit 18 / Moose	285
WP14-28	Unit 18 / Moose	301
WP14-32	Unit 21E / Moose	310
Eastern Interior / Southcentral		
WP14-49	Unit 12 / Caribou	322
Eastern Interior / North Slope		
WP14-51	Unit 25A / Sheep	336

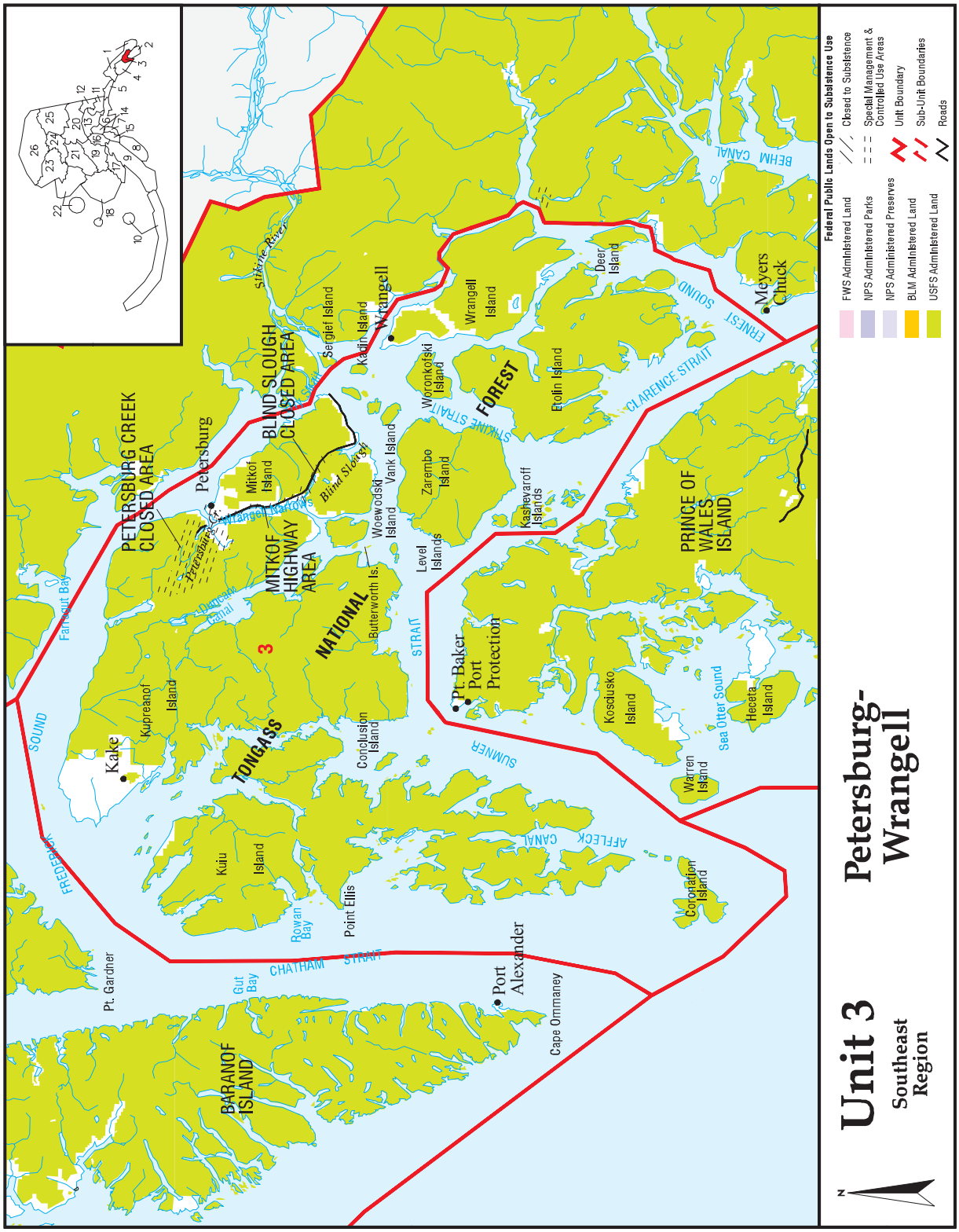
FEDERAL SUBSISTENCE BOARD
CONSENSUS AGENDA PROPOSALS

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
Statewide			
WP14-01	General Trapping Regulations	Oppose	352
Region 1: Southeast			
WP14-03	Unit 2 / Deer	Oppose (State is neutral)	365
WP14-04	Unit 2 / Deer	Oppose (State is neutral)	380
WP14-05	Unit 3 / Deer	Support	395
Region 2: Southcentral			
WP14-07	Unit 15 / Moose	Oppose	417
WP14-10	Unit 7 / Moose	Support	431
WP14-12	Unit 6D / Deer	Support (State is neutral)	442
WP14-14	Unit 11 / Goat	Support	453
WP14-15/45	Unit 12 / Caribou	Support 15 / No Action 45	465
WP14-19	Unit 15B, 15C / Moose	Support with modification	485
Region 3: Kodiak/Aleutians			
WP14-20	Unit 8 / Brown Bear	Support	510
Region 6: Western Interior			
WP14-29	Unit 24B / Moose	Support	518
WP14-31	Unit 19C / Sheep	Support (State is neutral)	531
Region 9: Eastern Interior			
WP14-42	Units 20E, 25B, 25C / Sheep	Support with modification	548
WP14-43	Units 20, 25 / Sheep	Support (State is neutral)	573
WP14-44	Unit 20F / Moose	Oppose (State is neutral)	583

Proposal	Unit / Species	Recommendation	Page
WP14-46/47	Unit 20D, 20E, 25B, 25C/ Caribou	Support (State is neutral)	590
WP14-48	Unit 25A / Moose	Oppose	609
Region 10: North Slope			
WP14-52	Unit 26A / Brown Bear	Support	630
Multi-Region Crossover			
Northwest Arctic / Western Interior			
WP14-40	Unit 23 / Brown Bear	Support with modification	640
Y-K Delta / Western Interior / Seward Peninsula			
WP14-24/25	Unit 18 / Moose	Support with modification	653


Zarembo Island
Pt. Baker
Port Protection
Kashevaroff Passage
SUMNER
AFFLECK CANAL
Etolin Island
Kosciusko Island
Edna Bay
Warren Island
Sea Otter Sound
Heceta Island
TONGASS NATIONAL FOREST
Prince Of Wales Island
2
Maurelle Islands
Gulf of Esquibel
San Fernando Island
Noyes Island
Lulu Island
Baker Island
Bucareli Bay
Suemez Island
Klawock
Craig
Hydaburg
Thorne Bay
Kasaan
Deer Island
CLARENCE STRAIT
ERNEST SOUND
Lemesurier Point
Meyers Chuck
BEHM CANAL
Caamano Pt.
Ketchikan
Gravina Island
West Arm
Cholmondeley Sound
Cordova Bay
Dall Island
Forrester Island
Alaska Maritime National Wildlife Refuge
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
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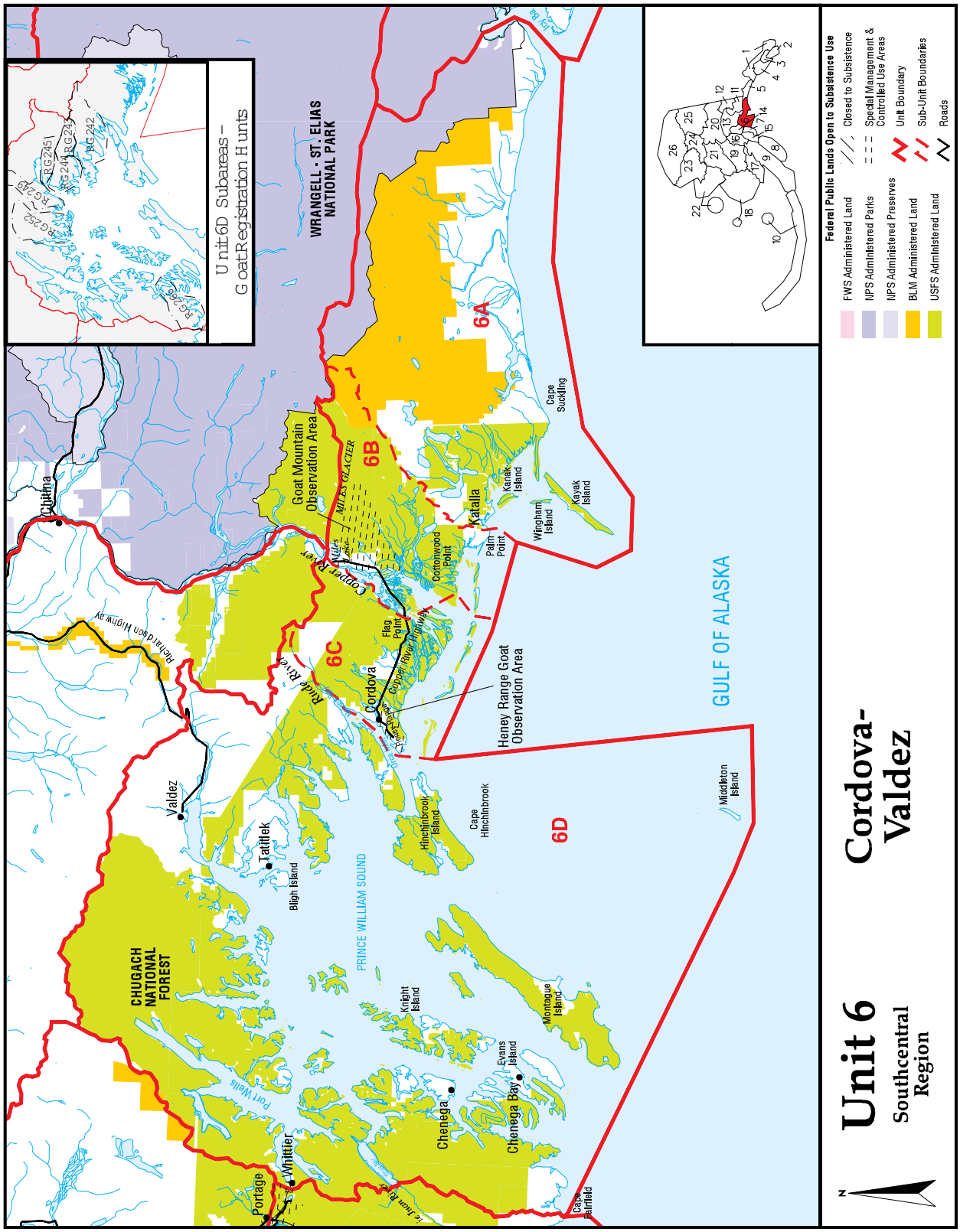
PETERSBURG CREEK CLOSED AREA
BLIND SLOUGH CLOSED AREA
MITKOF HIGHWAY AREA
TONGASS NATIONAL FOREST
BARANOF ISLAND
PRINCE OF WALES ISLAND
Petersburg
Wrangell
Kake
Pt. Baker
Port Protection
Port Alexander
Meyers Chuck
Pt. Gardner
Cape Ommaney
Sitkine River
Blind Slough
Wrangell Narrows
Frederick Sound
Farquhar Bay
Dangerous Canal
Gut Bay
Chatham Strait
Rowan Bay
Point Ellis
Summer Strait
Affleck Canal
Sea Otter Sound
Stikine Strait
Clarence Strait
Ernest Sound
Behm Canal
Kupreanof Island
Kuiu Island
Mitkof Island
Sergief Island
Kadin Island
Woronkofski Island
Wrangell Island
Deer Island
Etolin Island
Vank Island
Woewodski Island
Zarembo Island
Kashevaroff Islands
Level Islands
Butterworth Is.
Conclusion Island
Kosciusko Island
Warren Island
Heceta Island
Coronation Island


Unit 6
Southcentral Region
Cordova-Valdez
Unit 6D Subareas – Goat Registration Hunts
RG245
RG244
RG242
RG246
RG250
RG249
WRANGELL - ST. ELIAS NATIONAL PARK
CHUGACH NATIONAL FOREST
PRINCE WILLIAM SOUND
GULF OF ALASKA
Richardson Highway
Copper River Highway
Copper River
Ruby Creek
Miles Lake
MILES GLACIER
Goat Mountain Observation Area
Heney Range Goat Observation Area
Cordova
Katalla
Cape Suckling
Kanak Island
Kayak Island
Wingham Island
Palm Point
Cottonwood Point
Flag Point
Cape Hinchinbrook
Hinchinbrook Island
Middleton Island
Montague Island
Evans Island
Knight Island
Bligh Island
Tatitlek
Valdez
Chenega
Chenega Bay
Whittier
Portage
Port Wells
Cape Fairfield
Cordova
6A
6B
6C
6D
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
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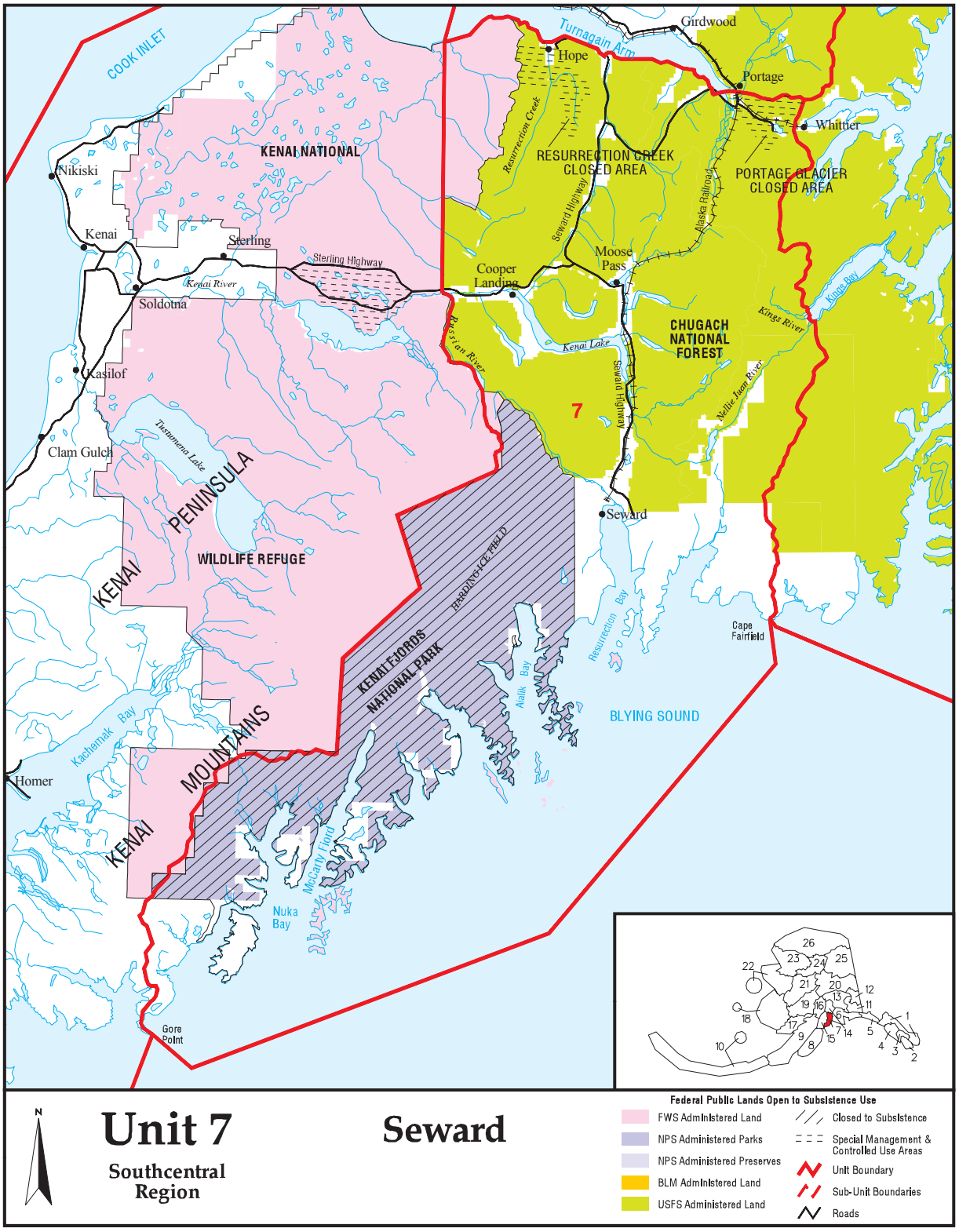
COOK INLET
Turnagain Arm
Girdwood
Hope
Portage
Whittier
Nikiski
Kenai
Sterling
Soldotna
Kasilof
Clam Gulch
Homer
KENAI NATIONAL
WILDLIFE REFUGE
KENAI PENINSULA
KENAI MOUNTAINS
Sterling Highway
Kenai River
Tustumena Lake
Resurrection Creek
RESURRECTION CREEK CLOSED AREA
PORTAGE GLACIER CLOSED AREA
Seward Highway
Alaska Railroad
Moose Pass
Cooper Landing
Kenai Lake
Russian River
CHUGACH NATIONAL FOREST
Kings River
Kings Bay
Nellie Juan River
7
Seward
HARDING ICE FIELD
KENAI FJORDS NATIONAL PARK
Resurrection Bay
Cape Fairfield
Aialik Bay
BLYING SOUND
Kachemak Bay
McCarty Fjord
Nuka Bay
Gore Point
N
Unit 7
Southcentral Region
Seward
Federal Public Lands Open to Subsistence Use
FWS Administered Land
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KENNEDY ENTRANCE
BARREN ISLANDS
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
STEVENSON ENTRANCE
Cape Douglas
Naknek
King Salmon
Shuyak Island
Ban Island
Afognak Island
Marmot Is.
Danger Bay
Raspberry Island
Koncor
Aleneva
Marmot Bay
Whale Passage
Whale Island
Spruce Island
Viekoda Bay
Uganik Island
Uganik Passage
Port Lions
Crag Pt.
Ouzinkie
Kodiak
Chiniak Bay
Chiniak
Solitary Cr.
Ugak Bay
Ugak Island
SHELIKOF STRAIT
Karluk
Uyak Bay
Larsen Bay
Amook I.
KODIAK NATIONAL WILDLIFE REFUGE
Kodiak Island
Old Harbor
Kiliuda Bay
Sitkalidak Island
Afognak Bay
Akhiok
ALITIUK PENINSULA
8
Alaktalik Island
Tugidak Island
Tugidak Passage
Sitkinak Island
TRINITY ISLANDS
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
SEMIDI ISLANDS
Chirikof Island
N
Unit 8
Kodiak/Aleutians Region
Kodiak-Shelikof
Federal Public Lands Open to Subsistence Use
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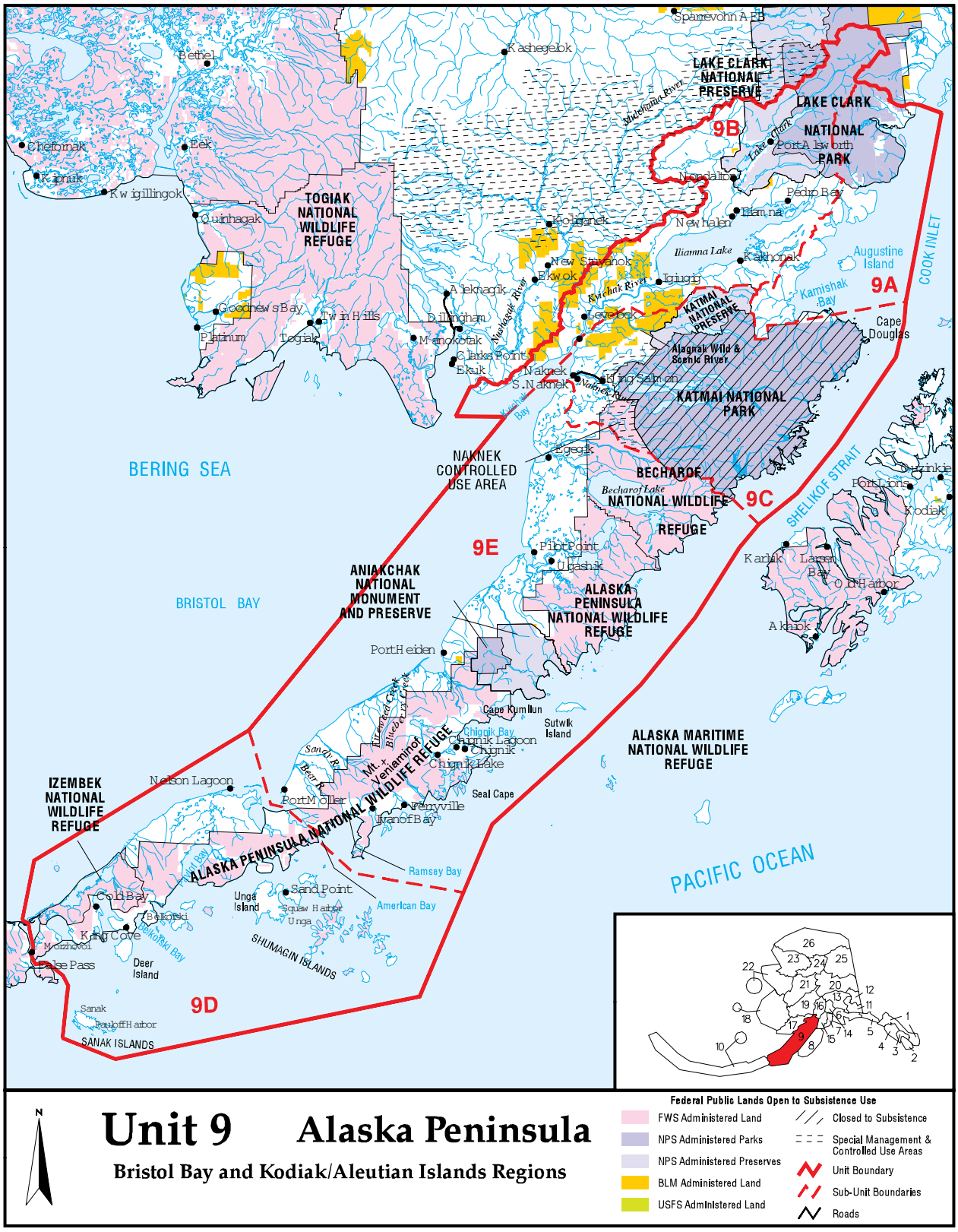
Unit 9 Alaska Peninsula
Bristol Bay and Kodiak/Aleutian Islands Regions
N
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
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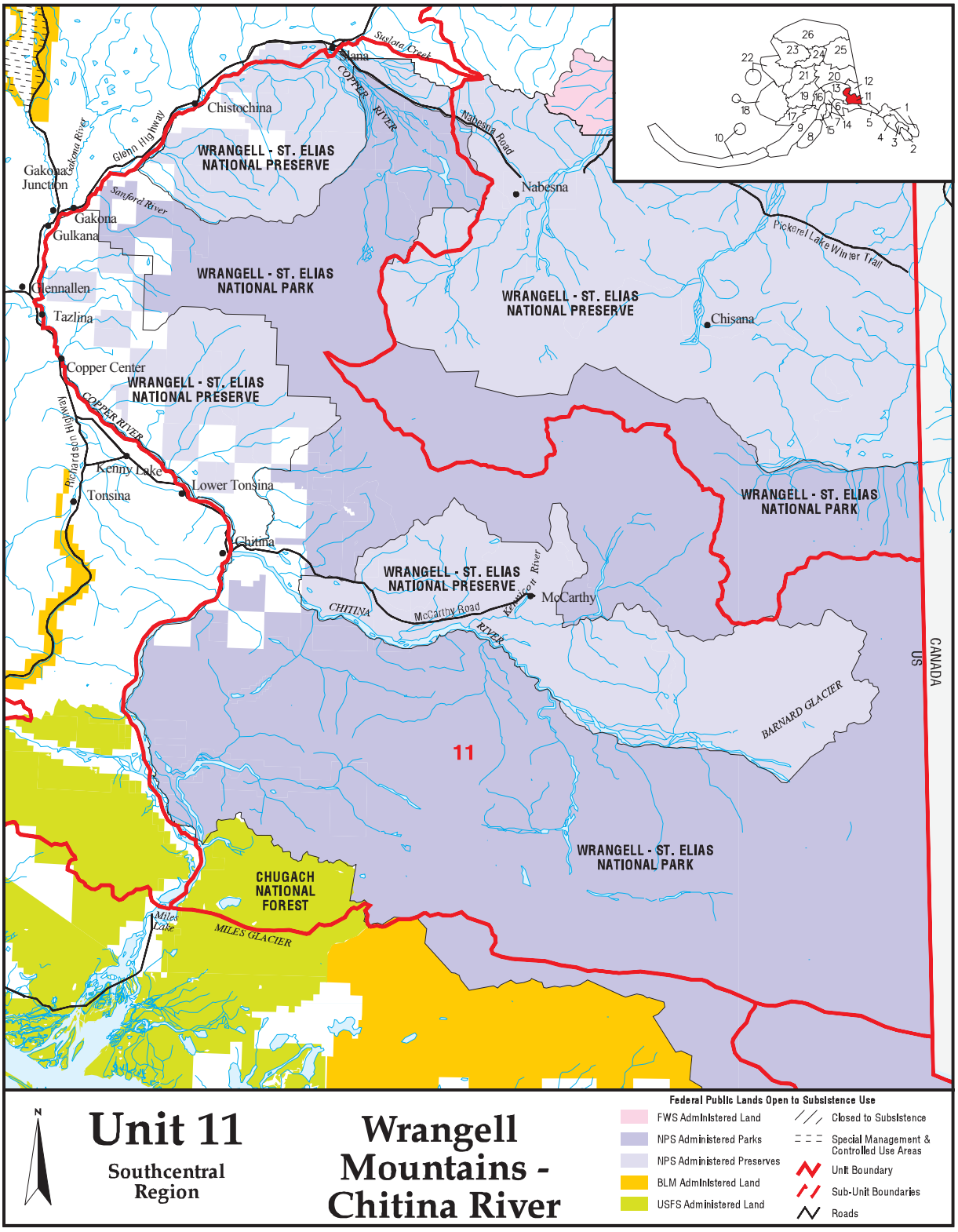
BERING SEA
BRISTOL BAY
PACIFIC OCEAN
COOK INLET
SHELIKOF STRAIT
LAKE CLARK NATIONAL PRESERVE
LAKE CLARK NATIONAL PARK
TOGIAK NATIONAL WILDLIFE REFUGE
KATMAI NATIONAL PRESERVE
KATMAI NATIONAL PARK
Alagnak Wild & Scenic River
NAKNEK CONTROLLED USE AREA
BECHAROF NATIONAL WILDLIFE REFUGE
ANIAKCHAK NATIONAL MONUMENT AND PRESERVE
ALASKA PENINSULA NATIONAL WILDLIFE REFUGE
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
IZEMBEK NATIONAL WILDLIFE REFUGE
ALASKA PENINSULA NATIONAL WILDLIFE REFUGE
SHUMAGIN ISLANDS
SANAK ISLANDS
9A
9B
9C
9D
9E
Bethel
Kashegelok
Spaniovohn A Fb
Chefornak
Bek
Kwigillingok
Quinhagak
Goodnews Bay
Platinum
Togiak
Twin Hills
Dillingham
Manokotak
Clarks Point
Ekuk
Aleknagik
New Stuyahok
Ekwok
Koliganek
Levelock
Naknek
S. Naknek
King Salmon
Igiugig
Iliamna
New Iliamna
Pedro Bay
Kakhonak
Iliamna Lake
Nondalton
Port Alsworth
Augustine Island
Kamishak Bay
Cape Douglas
Egegik
Pilot Point
Ugashik
Port Heiden
Cape Kumlun
Sutwik Island
Chignik Bay
Chignik Lagoon
Chignik
Chignik Lake
Seal Cape
Perryville
Ivanof Bay
Port Moller
Nelson Lagoon
Cold Bay
King Cove
Belkofski
Deer Island
Sand Point
Squaw Harbor
Unga
Unga Island
Ramsey Bay
American Bay
Sanak
Pauloff Harbor
Port Lions
Karluk
Larsen Bay
Old Harbor
Akhiok
Kodiak


Unit 11
Southcentral Region
Wrangell Mountains - Chitina River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
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N
WRANGELL - ST. ELIAS NATIONAL PRESERVE
WRANGELL - ST. ELIAS NATIONAL PARK
CHUGACH NATIONAL FOREST
Chistochina
Gakona Junction
Gakona
Gulkana
Glennallen
Tazlina
Copper Center
Kenny Lake
Tonsina
Lower Tonsina
Chitina
Nabesna
Chisana
McCarthy
Slana
Suslota Creek
COPPER RIVER
Nabesna Road
Glenn Highway
Sanford River
Richardson Highway
Pickerel Lake Winter Trail
CHITINA
McCarthy Road
Kennicott River
RIVER
BARNARD GLACIER
MILES GLACIER
Miles Lake
CANADA
US
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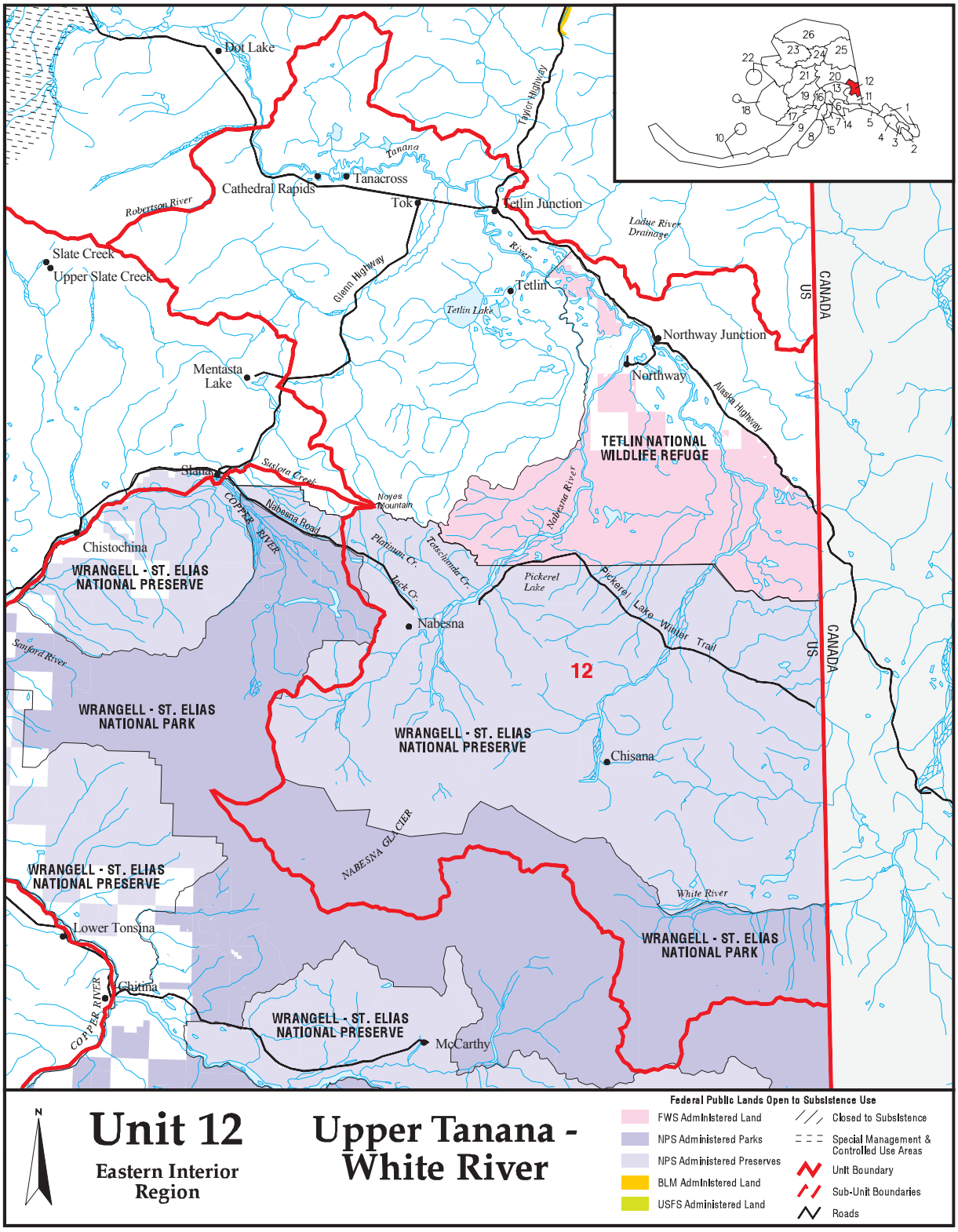
Dot Lake
Taylor Highway
Tanana
Tanacross
Cathedral Rapids
Robertson River
Tok
Tetlin Junction
Ladue River Drainage
Slate Creek
Upper Slate Creek
Glenn Highway
River
Tetlin
Tetlin Lake
Northway Junction
Northway
Alaska Highway
Mentasta Lake
TETLIN NATIONAL WILDLIFE REFUGE
Slana
Siskana Creek
Noyes Mountain
Nabesna Road
COPPER RIVER
Nabesna River
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Platinum Cr.
Tanschlorde Cr.
Jack Cr.
Pickerel Lake
Pickerel Lake Winter Trail
Nabesna
Sanford River
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WRANGELL - ST. ELIAS NATIONAL PRESERVE
Chisana
NABESNA GLACIER
WRANGELL - ST. ELIAS NATIONAL PRESERVE
White River
Lower Tonsina
WRANGELL - ST. ELIAS NATIONAL PARK
Chitina
COPPER RIVER
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
CANADA
US
CANADA
US
N
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Eastern Interior Region
Upper Tanana - White River
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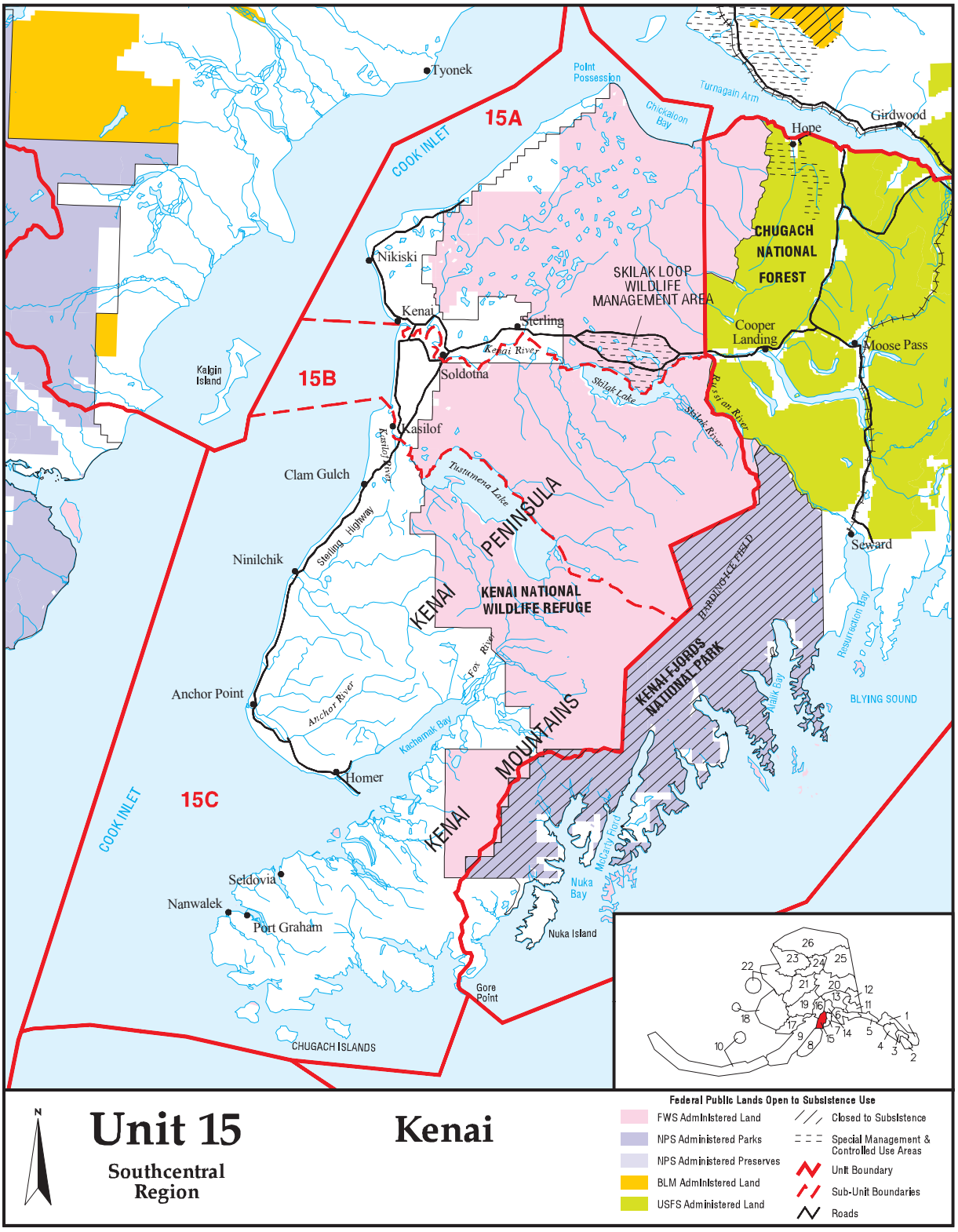
Tyonek
Point Possession
Turnagain Arm
Chickaloon Bay
Girdwood
Hope
15A
COOK INLET
CHUGACH NATIONAL FOREST
Nikiski
SKILAK LOOP WILDLIFE MANAGEMENT AREA
Kenai
Sterling
Cooper Landing
Moose Pass
Kenai River
Soldotna
Skilak Lake
Kenai River
Skilak River
Kalgin Island
15B
Kasilof
Kasilof River
Clam Gulch
Tustumena Lake
PENINSULA
Sterling Highway
Seward
Ninilchik
KENAI
KENAI NATIONAL WILDLIFE REFUGE
HARDING ICE FIELD
Fox River
KENAI FJORDS NATIONAL PARK
Resurrection Bay
Anchor Point
Anchor River
Kachemak Bay
Aialik Bay
BLYING SOUND
MOUNTAINS
Homer
15C
COOK INLET
KENAI
McCarty Fiord
Seldovia
Nuka Bay
Nanwalek
Port Graham
Nuka Island
Gore Point
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Unit 15
Southcentral Region
Kenai
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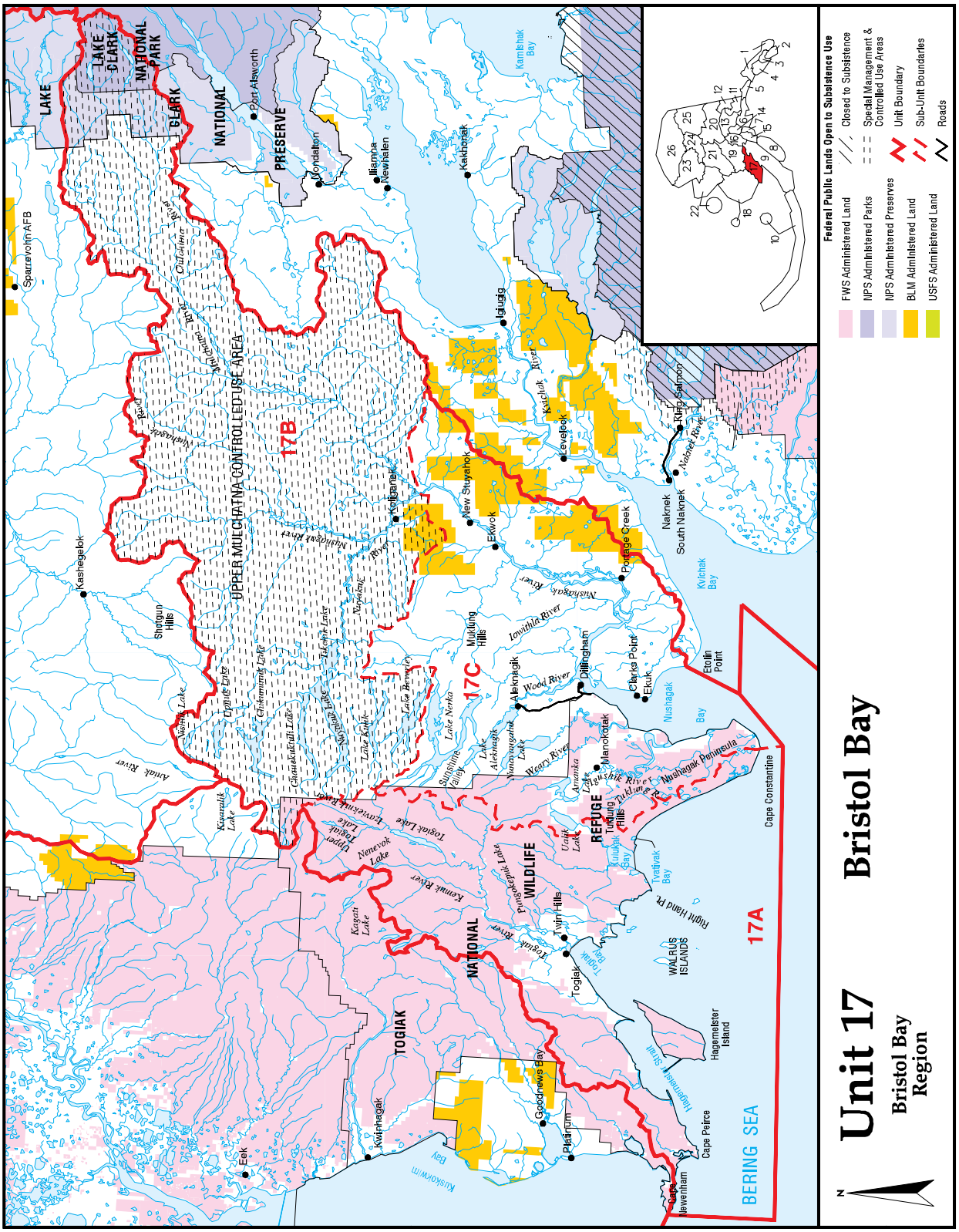
Unit 17
Bristol Bay Region
Bristol Bay
Federal Public Lands Open to Subsistence Use
FWS Administered Land
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NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
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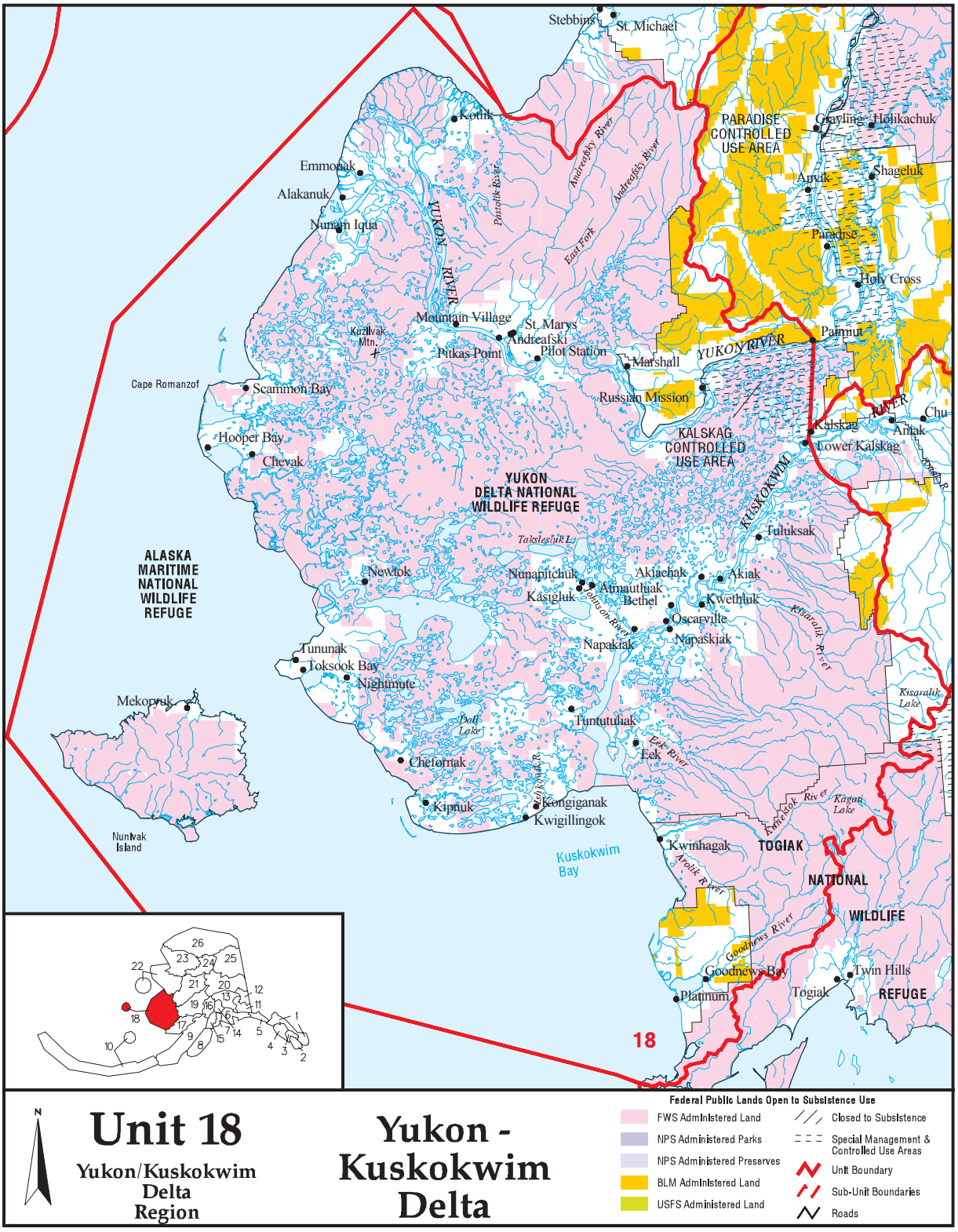
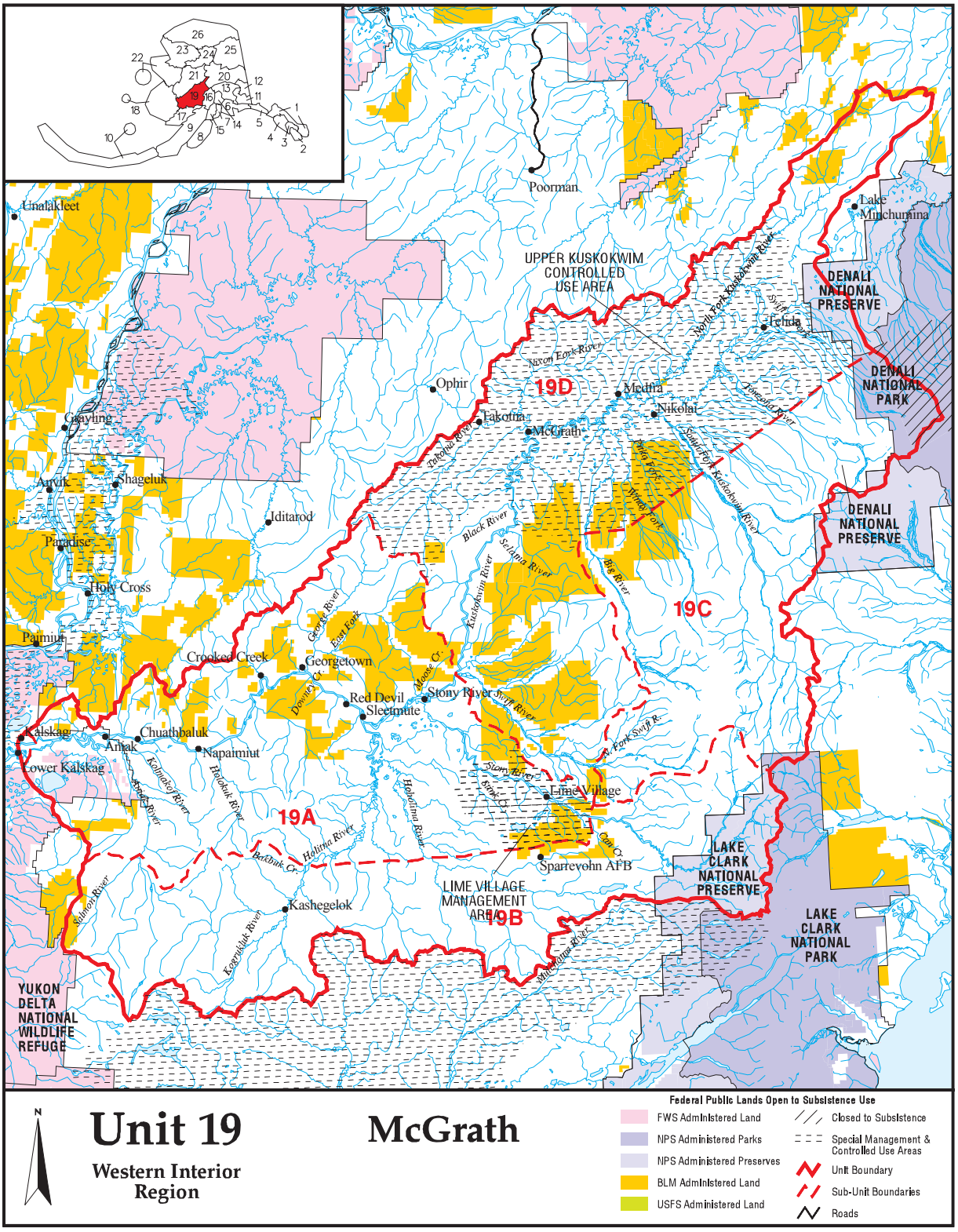
17C
BERING SEA
UPPER MULCHATNA CONTROLLED USE AREA
TOGIAK NATIONAL WILDLIFE REFUGE
LAKE CLARK NATIONAL PARK
LAKE CLARK NATIONAL PRESERVE
Sparrevohn AFB
Port Alsworth
Mondalton
Iliamna
Newhalen
Kakhonak
Igiugig
Levelock
King Salmon
Naknek
South Naknek
Pontage Creek
Clarks Point
Ekuk
Etolin Point
Dillingham
Aleknagik
Ekwok
New Stuyahok
Koliganek
Nushagak River
Mulchatna River
Kaskanak Creek
Kaskanak Lake
Kaskanak Peak
Kaskanak Pass
Kaskanak Flat
Kaskanak Mountain
Kaskanak Ridge
Kaskanak Valley
Kaskanak Bay
Kaskanak Island
Kaskanak Point
Kaskanak River
Kaskanak Lake
Kaskanak Creek
Kaskanak Falls
Kaskanak Canyon
Kaskanak Cove
Kaskanak Beach
Kaskanak Dam
Kaskanak Reservoir
Kaskanak Trail
Kaskanak Road
Kaskanak Bridge
Kaskanak Tunnel
Kaskanak Station
Kaskanak Depot
Kaskanak Yard
Kaskanak Shop
Kaskanak Office
Kaskanak Warehouse
Kaskanak Garage
Kaskanak Hotel
Kaskanak Restaurant
Kaskanak Bar
Kaskanak Store
Kaskanak Post Office
Kaskanak Church
Kaskanak School
Kaskanak Cemetery
Kaskanak Park
Kaskanak Playground
Kaskanak Ball Field
Kaskanak Golf Course
Kaskanak Airport
Kaskanak Heliport
Kaskanak Seaplane Base
Kaskanak Harbor
Kaskanak Boat Ramp
Kaskanak Fish Hatchery
Kaskanak Wildlife Refuge
Kaskanak Nature Trail
Kaskanak Interpretive Center
Kaskanak Visitor Center
Kaskanak Ranger Station
Kaskanak Fire Station
Kaskanak Emergency Medical Services
Kaskanak Sheriff's Office
Kaskanak Jail
Kaskanak Courthouse
Kaskanak City Hall
Kaskanak Municipal Building
Kaskanak Public Library


Stebbins
St. Michael
Kotlik
Emmonak
Alakanuk
Nunam Iqua
YUKON RIVER
Pastolik River
Andreafsky River
East Fork
PARADISE CONTROLLED USE AREA
Grayling
Holikachuk
Anvik
Shageluk
Paradise
Holy Cross
Mountain Village
St. Marys
Andreafski
Kuzilvak Mtn.
Pitkas Point
Pilot Station
Marshall
YUKON RIVER
Pamiut
Russian Mission
Cape Romanzof
Scammon Bay
Hooper Bay
Chevak
KALSKAG CONTROLLED USE AREA
Kalskag
Lower Kalskag
Chu
Anlak
KUSKOKWIM RIVER
YUKON DELTA NATIONAL WILDLIFE REFUGE
Tuluksak
Taksleshlik L.
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
Newtok
Nunapitchuk
Atmautluak
Akiachak
Akiak
Kasigluk
Bethel
Kwethluk
Oscarville
Napakiak
Napaskiak
Kisaralik River
Tununak
Toksook Bay
Nightmute
Mekoryuk
Kisaralik Lake
Tuntutuliak
Eek
Eek River
Chefornak
Kongiganak
Kipnuk
Kwigillingok
Kuskokwim Bay
Kwinhagak
Kanektok River
Kagati Lake
Arolik River
TOGIAK NATIONAL WILDLIFE REFUGE
Goodnews River
Goodnews Bay
Platinum
Togiak
Twin Hills
Nunivak Island
18
N
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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McGrath
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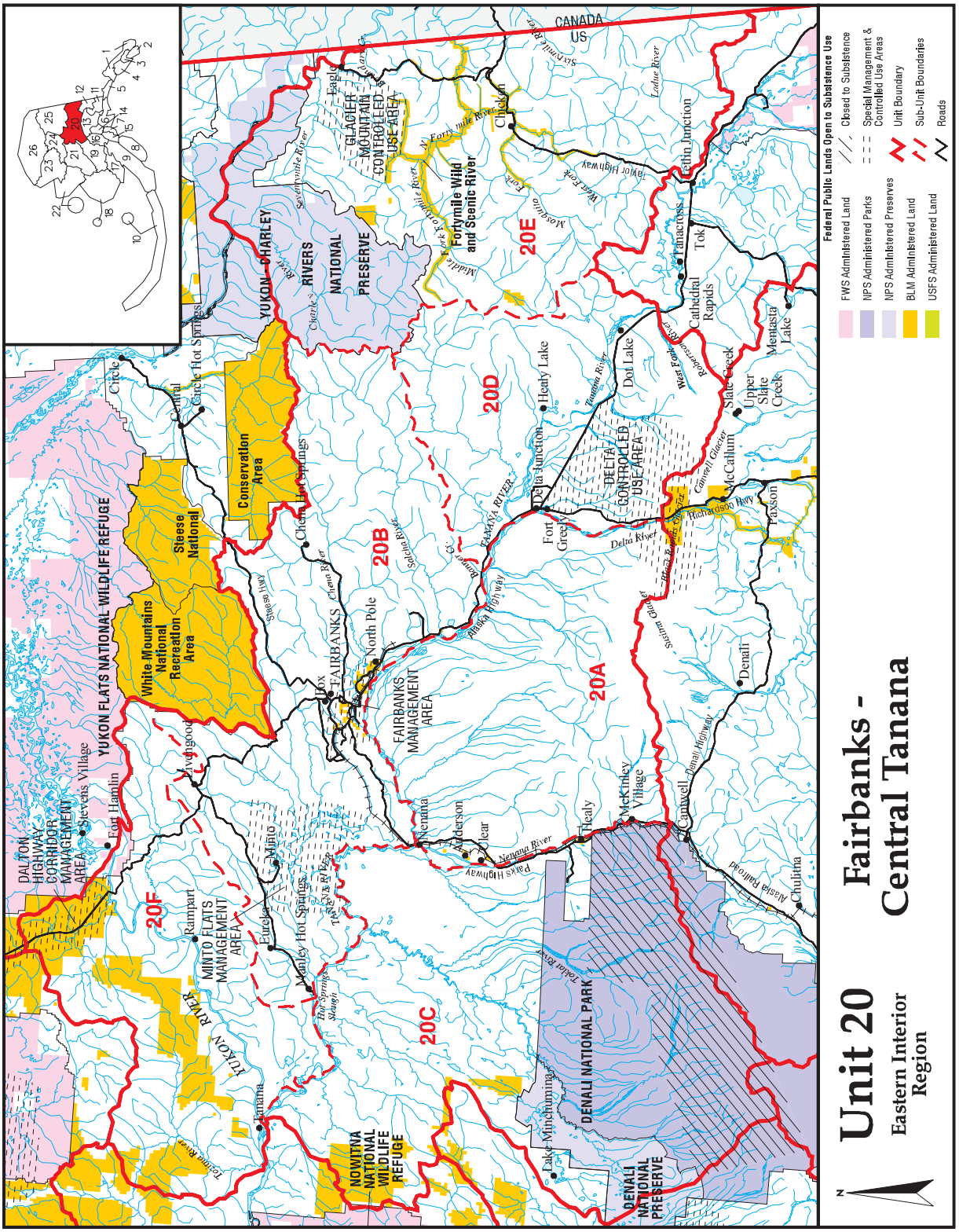
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
19A
19B
19C
19D
UPPER KUSKOKWIM CONTROLLED USE AREA
LIME VILLAGE MANAGEMENT AREA
DENALI NATIONAL PRESERVE
DENALI NATIONAL PARK
LAKE CLARK NATIONAL PRESERVE
LAKE CLARK NATIONAL PARK
YUKON DELTA NATIONAL WILDLIFE REFUGE
Poorman
Unalakleet
Lake Minchumina
Telida
Ophir
Medfra
Nikolai
Takotna
McGrath
Gaayling
Aniak
Shageluk
Iditarod
Paradise
Holy Cross
Pilot Station
Crooked Creek
Georgetown
Red Devil
Sleetmute
Stony River
Kalskag
Lower Kalskag
Chuathbaluk
Napaimiut
Lime Village
Sparrevohn AFB
Kashegelok
Paimiut
Nixon Fork River
Takotna River
Tatlawiksuk River
Big Fork
Nixon Fork
Black River
Selatna River
Kuskokwim River
Big River
Stony River
Swift River
N. Fork Swift R.
Moose Cr.
Dowell Cr.
George River
East Fork
Kalmakoff River
Stony River
Herbuck River
Holitna River
Hoholitna River
Bankhead Cr.
Salmon River
Eagle Cr.
Cem Cr.
Mulchatna River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Fairbanks - Central Tanana
Federal Public Lands Open to Subsistence Use
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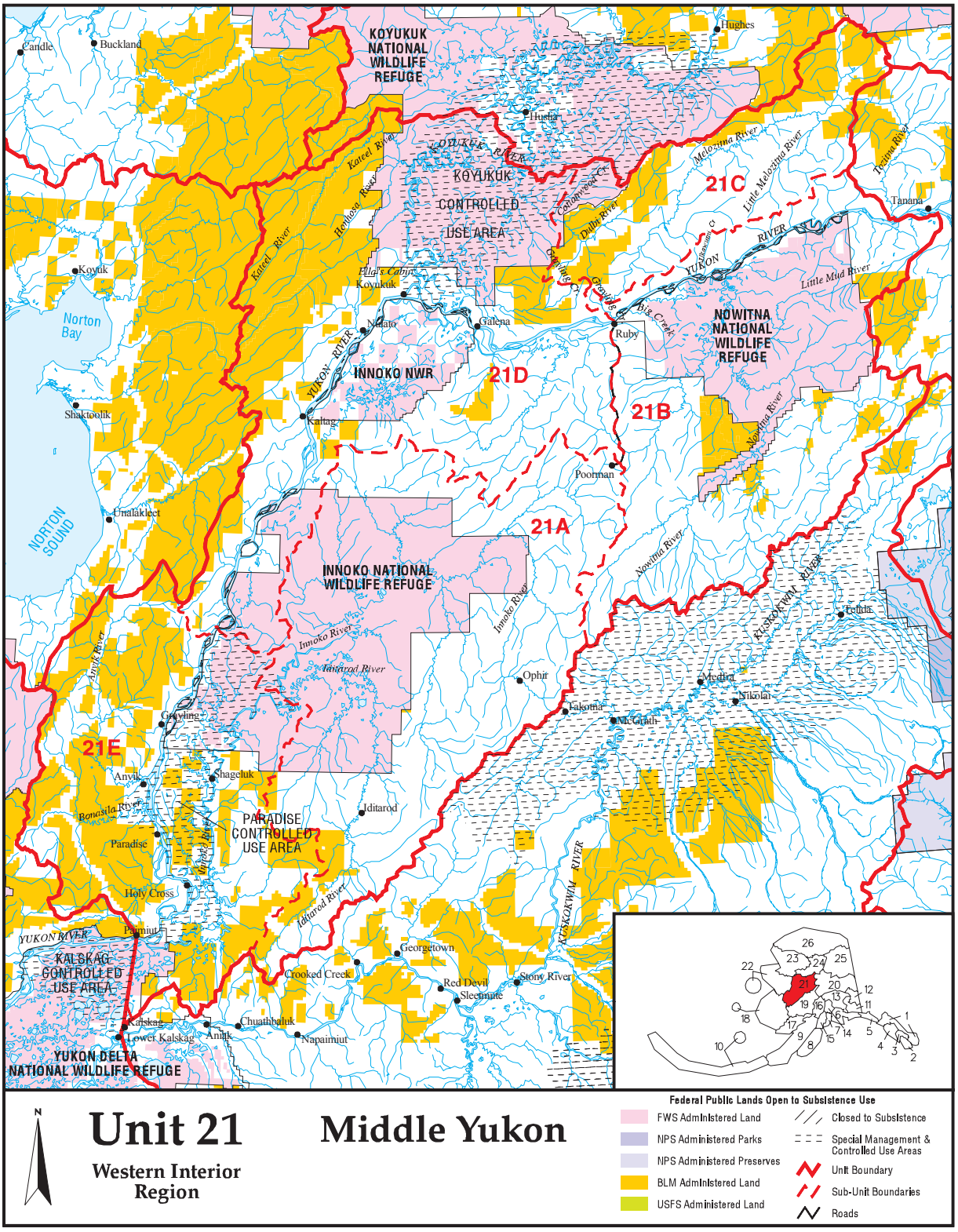
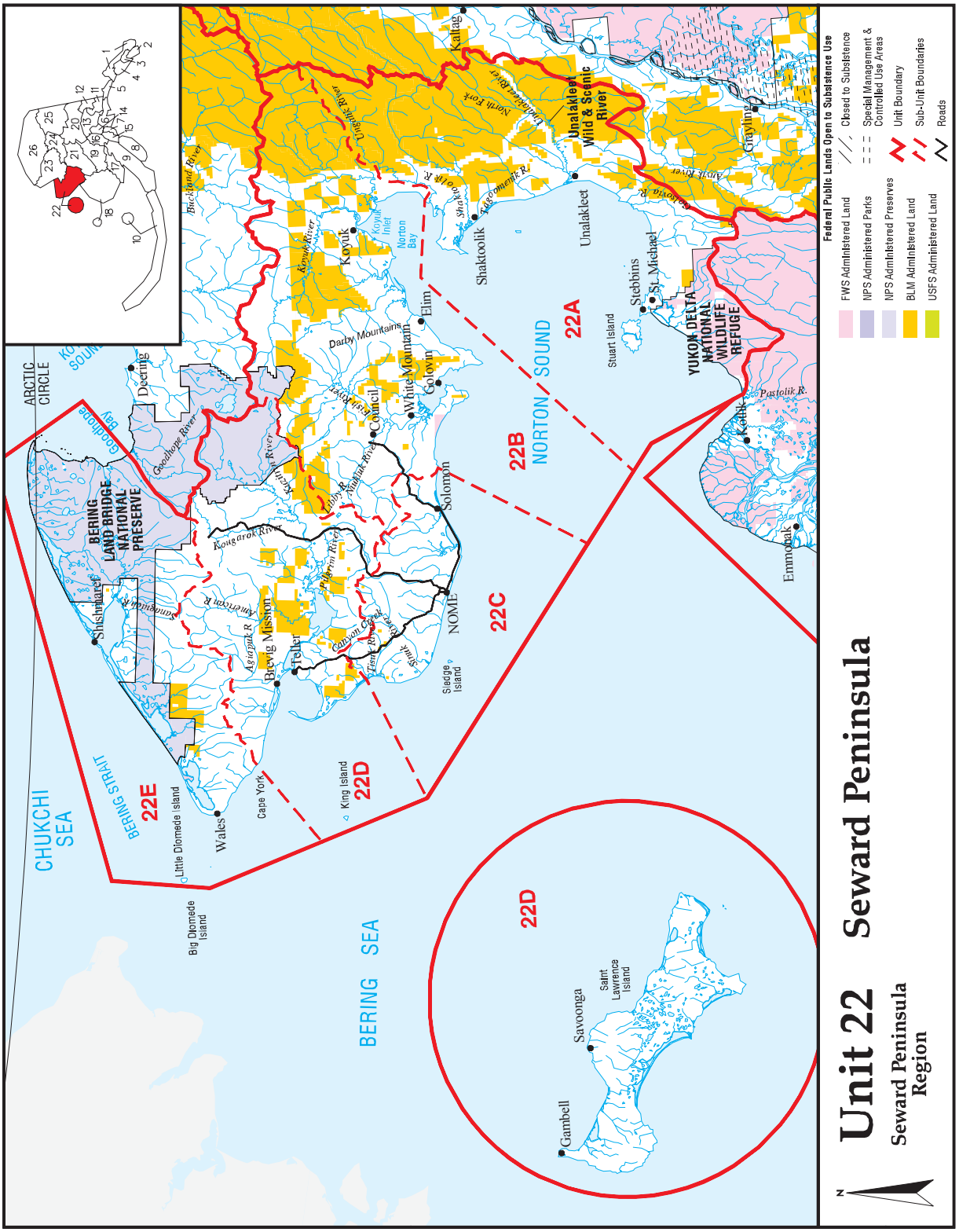
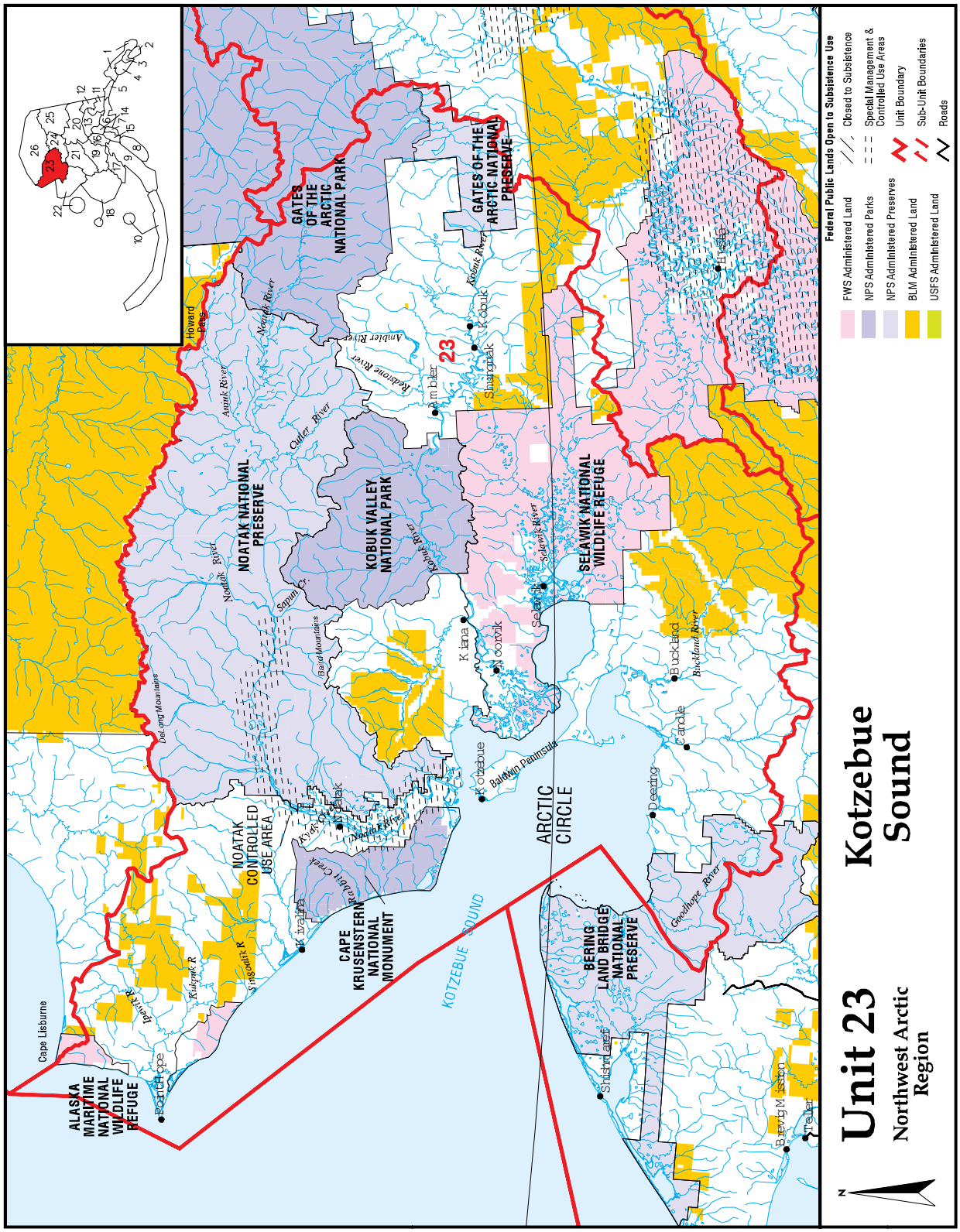
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
CANADA
US
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
GLACIER MOUNTAIN CONTROLLED USE AREA
Fortymile Wild and Scenic River
Eagle
Chicken
Tanacross
Tok
Cathedral Rapids
Mentasta Lake
Slate Creek
Upper Slate Creek
Dot Lake
Healy Lake
Delta Junction
Fort Greely
DELTA CONTROLLED USE AREA
McCallum
Paxson
Richardson Hwy
Denali
McKinley Village
Healy
Cantwell
Chulitna
Alaska Railroad
Denali Highway
Parks Highway
Nenana
Anderson
Clear
Nenana River
DENALI NATIONAL PARK
DENALI NATIONAL PRESERVE
Lake Minchumina
Tanana
Nowitna National Wildlife Refuge
Manley Hot Springs
Eureka
Minto
Rampart
MINTO FLATS MANAGEMENT AREA
Livengood
FAIRBANKS MANAGEMENT AREA
FAIRBANKS
North Pole
Fox
Chena Hot Springs
Steese National Conservation Area
White Mountains National Recreation Area
Circle Hot Springs
Central
Circle
Stevens Village
Fort Hamlin
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
YUKON FLATS NATIONAL WILDLIFE REFUGE
20A
20B
20C
20D
20E
20F

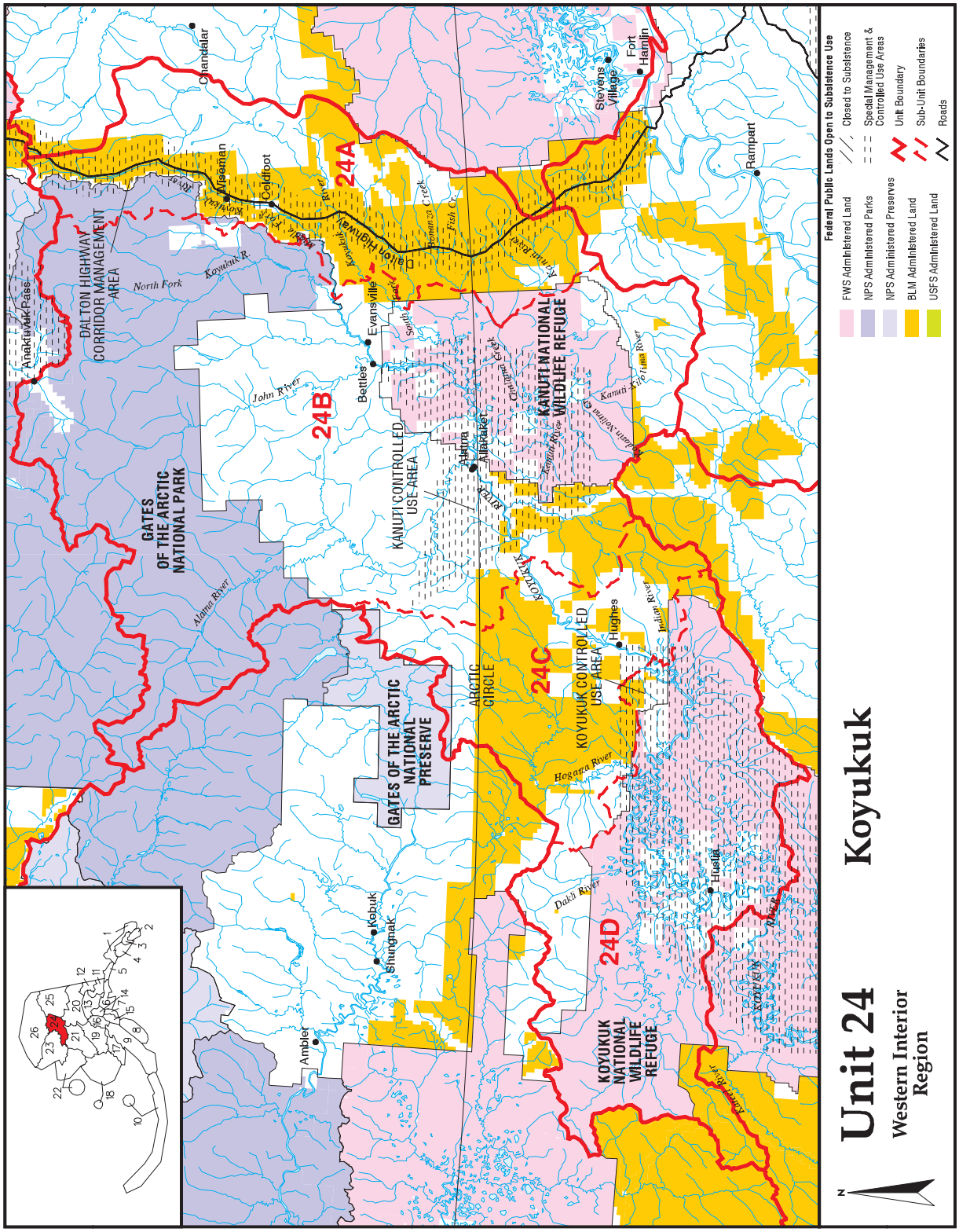


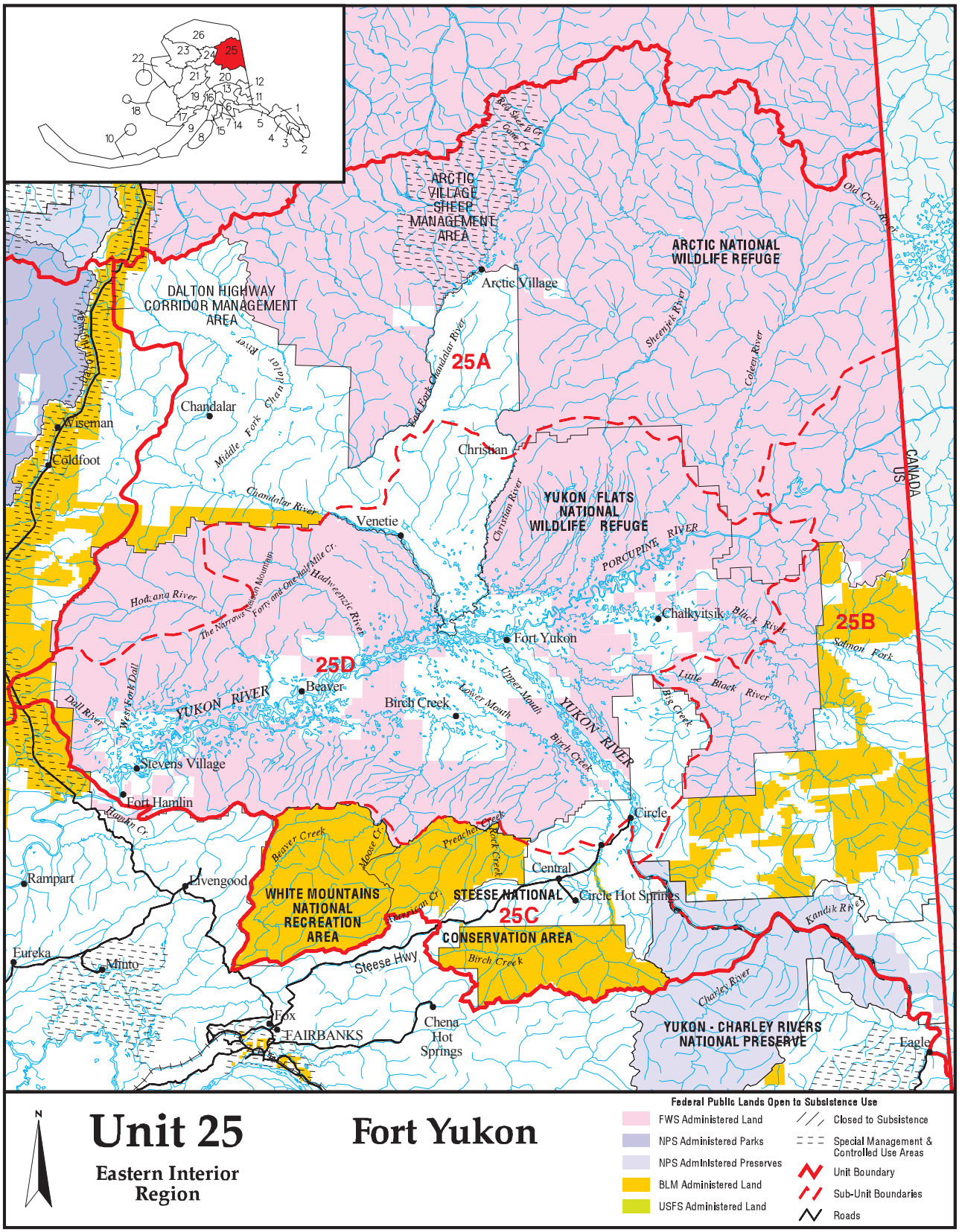
Unit 21 Middle Yukon

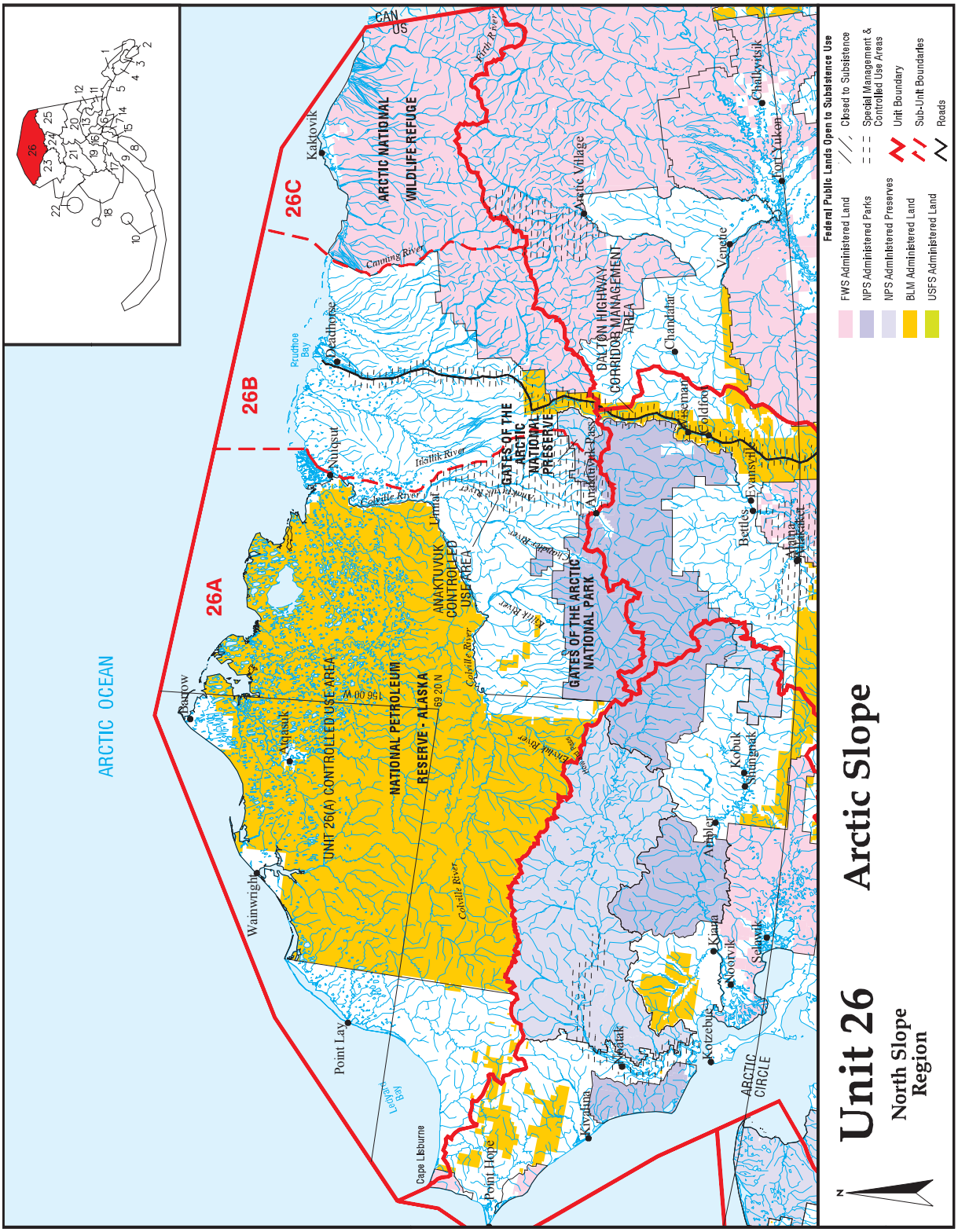
Western Interior Region


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
CHUKCHI SEA
BERING SEA
BERING STRAIT
NORTON SOUND
ARCTIC CIRCLE
BERING LAND BRIDGE NATIONAL PRESERVE
YUKON DELTA NATIONAL WILDLIFE REFUGE
Unalakleet Wild & Scenic River
22A
22B
22C
22D
22E
Shishmaref
Deering
Wales
Little Diomede Island
Big Diomede Island
Cape York
King Island
Brevig Mission
Teller
NOME
Sledge Island
Solomon
Elim
Koyuk
Shaktoolik
Kaltag
Unalakleet
Stebbins
St. Michael
Stuart Island
Grayling
Kotlik
Emmonak
Gambell
Savoonga
Saint Lawrence Island
Darby Mountains
White Mountain
Council
Golovin
Koyuk Inlet
Norton Bay
Buckland River
Kougarok River
Fish River
Pilgrim River
Canyon Creek
Tisuk River
Libby R.
Nukluk River
Sinuk River
Snake River
Agiapuk R.
Kwiniuk R.
Sinuksuk R.
Goodhope River
Tubutulik River
Tubutulik River
North Fork
Shaktoolik R.
Unalakleet R.
Norton Bay
Koyuk River
Koyuk R.
Stuart Island
Pastolik R.
Bering Sea


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
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
NOATAK NATIONAL PRESERVE
NOATAK CONTROLLED USE AREA
KOBUK VALLEY NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PARK
GATES OF THE ARCTIC NATIONAL PRESERVE
SELAWIK NATIONAL WILDLIFE REFUGE
CAPE KRUSENSTERN NATIONAL MONUMENT
BERING LAND BRIDGE NATIONAL PRESERVE
KOTZEBUE SOUND
ARCTIC CIRCLE
Cape Lisburne
Point Hope
Ivisaak
Kivalina
Noatak
Kotzebue
Kiana
Noorvik
Selawik
Ambler
Shungnak
Kobuk
Buckland
Candle
Deering
Shishmaref
Brevig Mission
Teller
Hughes
Howard Pass
Baldwin Peninsula
Delong Mountains
Baird Mountains
Noatak River
Anaktuvuk River
Kobuk River
Selawik River
Buckland River
Geddhope River
Kugrua R
Kukpuk R
Ipnavik R
Kivalina R
Kivalina Creek
Noatak Creek
Kobuk River
Ambler River
Reddstone River
Cutler River
Sapuk Cr.
Howard Pass
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
Wiseman
Coldfoot
Evansville
Bettles
Allakaket
Alatna
Hughes
Stevens Village
Fort Hamlin
Rampart
Kobuk
Shungnak
Ambler
Huslia
Aldrin River
John River
North Fork
Koyukuk R.
Dalton Highway
Kanuti River
Hogatza River
Dakli River
Indian River
Kanuti Flat
Alatna River


ARCTIC VILLAGE SHEEP MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
Arctic Village
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
25A
Chandalar
Wiseman
Coldfoot
Christian
YUKON FLATS NATIONAL WILDLIFE REFUGE
Venetie
Chalkyitsik
Fort Yukon
25B
25D
Beaver
Birch Creek
YUKON RIVER
Stevens Village
Fort Hamlin
Circle
Central
Circle Hot Springs
Rampart
Livengood
WHITE MOUNTAINS NATIONAL RECREATION AREA
STEESE NATIONAL CONSERVATION AREA
25C
Eureka
Minto
Steese Hwy
Fox
FAIRBANKS
Chena Hot Springs
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
Eagle
CANADA
US
N
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
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
ARCTIC OCEAN
26A
26B
26C
UNIT 26(A) CONTROLLED USE AREA
NATIONAL PETROLEUM
RESERVE - ALASKA
ANAKTUVUK 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
Barrow
Atqasuk
Wainwright
Point Lay
Point Hope
Cape Lisburne
Kivalina
Noatak
Kotzebue
Noorvik
Kiana
Selawik
Ambler
Shungnak
Kobuk
Bettles
Evansville
Alatna
Allakaket
Anaktuvuk Pass
Nuiqsut
Deadhorse
Kaktovik
Arctic Village
Venetie
Fort Yukon
Chalkyitsik
Chandalar
Coldfoot
Wiseman
Prudhoe Bay
Colville River
Ikpikpuk River
Etivluk River
Killik River
Kobuk River
Noatak River
Kugrua River
Utukok River
Canning River
Porcupine River
Chandalar River
Sheenjek River
Hulahula River
Katakturuk River
Ivishak River
Sagavanirktok River
Dietrich River
Koyukuk River
Kowalik Bay
ARCTIC CIRCLE
156 00 W
69 20 N

WP14-06 Executive Summary	
General Description	Proposal WP14-06 requests closing the Federal mountain goat season in Unit 6D subarea RG244, where little Federal public land exists, and opening a Federal mountain goat season in Unit 6D subarea RG245. *Submitted by the U.S. Forest Service.*
Proposed Regulation	**Unit 6D—Mountain goat** *Unit 6D (subareas RG242, RG243, ~~RG244~~, **RG245**, RG249, RG252, and RG266 only) – 1 goat by Federal registration permit only.* — *Aug. 20 – Jan. 31* *In each of the Unit 6D subareas, goat seasons will be closed when harvest limits for that subarea are reached. Harvest quotas are as follows:* *RG242 – 2 goats, RG243 – 4 goats* *~~RG244 – 2 goats~~, **RG245 – 2 goats*** *RG249 – 4 goats, RG266 – 4 goats* *RG252 – 1 goat*
OSM Conclusion	**Support** Proposal WP14-06 **with modification** to leave subarea RG244 open to goat harvest in addition to opening up harvest in subarea RG245, and share the quota of 2 goats between the 2 subareas.
Southcentral Regional Advisory Council Recommendation	**Support** Proposal WP14-06 **with modification** as described in OSM Conclusion.
Interagency Staff Committee Comments	**Support** Proposal WP14-06 **with modification** as described in OSM Conclusion and supported by the Southeast Regional Advisory Council. 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 recommendation and Federal Subsistence Board action

WP14-06 Executive Summary	
	on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-06

ISSUES

Proposal WP14-06, submitted by the U.S. Forest Service requests closing the Federal mountain goat season in Unit 6D subarea RG244, where little Federal public land exists, and opening a Federal mountain goat season in Unit 6D subarea RG245.

DISCUSSION

The proponent requests the Federal subsistence quota of 2 mountain goats in Unit 6D, subarea RG244 be eliminated and a quota of 2 mountain goats in Unit 6D, subarea RG245 be established. The proponent states there is little Federal public land within subarea RG244, limiting opportunity for Federally qualified subsistence users, particularly residents of the village of Tatitlek. Additionally, little terrain above 1500 feet in elevation, which approximates alpine mountain goat habitat, is encompassed by Federal public lands in subarea RG244 (**Map 1**).

Existing Federal Regulation

Unit 6D—Mountain goat

Unit 6D (subareas RG242, RG243, RG244, RG249, RG252, and RG266 only) – 1 goat by Federal registration permit only.	*Aug. 20 – Jan. 31*
In each of the Unit 6D subareas, goat seasons will be closed by the Cordova District Ranger when harvest limits for that subarea are reached:	
RG242 – 2 goats, RG243 – 4 goats	
RG244 – 2 goats, RG249 – 4 goats	
RG266 – 4 goats, RG252 – 1 goat	

Proposed Federal Regulation

Unit 6D—Mountain goat

*Unit 6D (subareas RG242, RG243, ~~RG244~~, **RG245**, RG249, RG252, and RG266 only) – 1 goat by Federal registration permit only.*	*Aug. 20 – Jan. 31*

In each of the Unit 6D subareas, goat seasons will be closed when harvest limits for that subarea are reached. Harvest quotas are as follows:

RG242 – 2 goats, RG243 – 4 goats

~~RG244 – 2 goats~~, ***RG245 – 2 goats***

RG249 – 4 goats, RG266 – 4 goats

RG252 – 1 goat

Existing State Regulation

Unit 6D—Mountain goat

One goat by permit available online at http://hunt.alaska.gov or in person in Anchorage, Cordova, Fairbanks, Glennallen, Palmer, or Soldotna beginning Aug 1	*RG242-RG266*	*Sept. 15 – Jan. 31*
One goat by permit available in Cordova beginning Sept 18	*RG248*	*may be announced*

Extent of Federal Public Lands

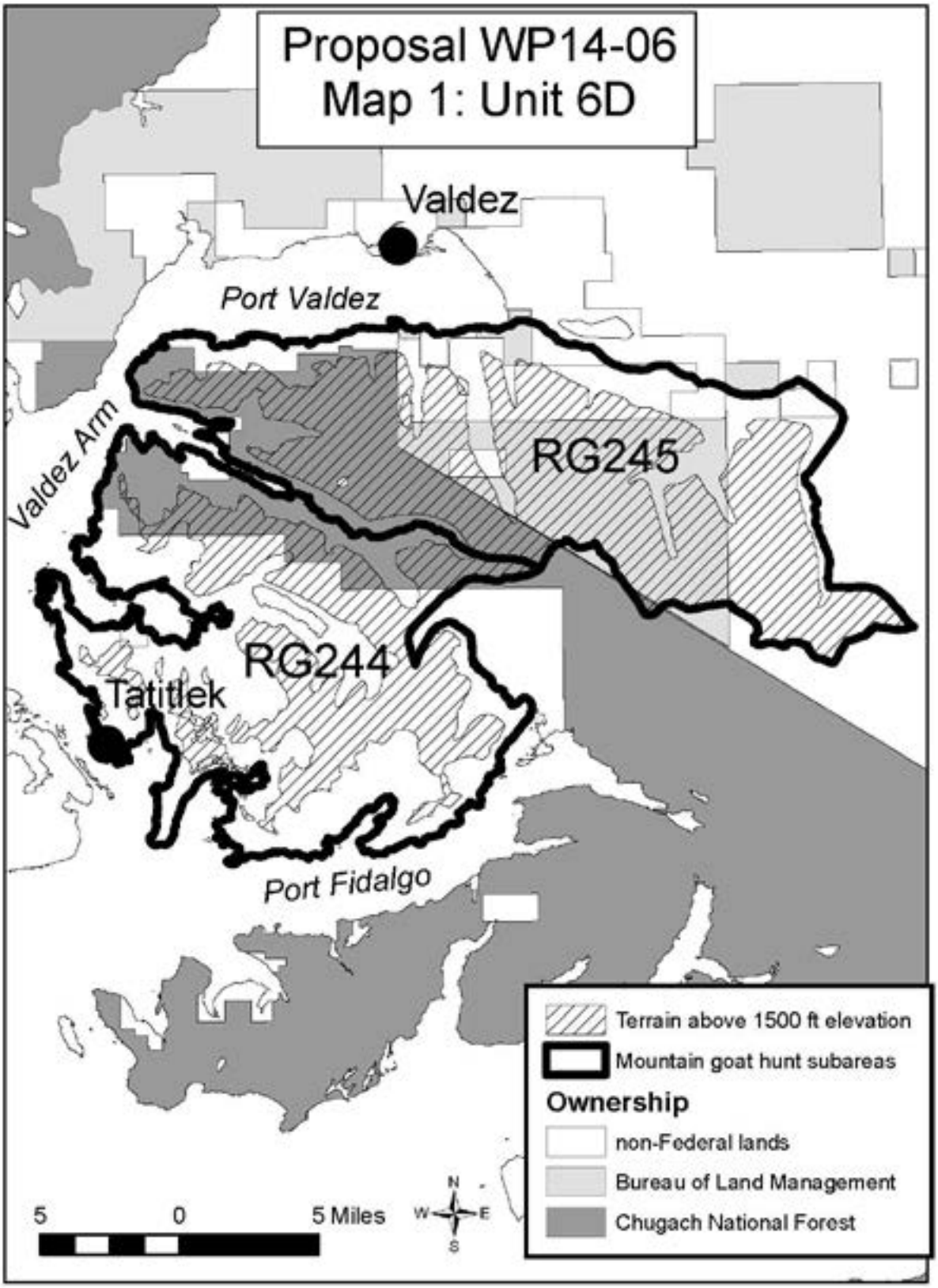
Federal public lands comprise approximately 18% of Unit 6D subarea RG244 and are comprised entirely of Chugach National Forest lands (**Map 1**). Approximately 57% of Unit 6D subarea RG245 is comprised of Federal public lands, administered by both the Chugach National Forest and the Bureau of Land Management (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Units 6C and 6D have a positive customary and traditional use determination for mountain goats in Unit 6C and 6D.

Regulatory History

Mountain goats in Unit 6D were managed solely by ADFG until 1993. Long seasons with bag limits of 1 or 2 goats were in effect from statehood through 1975. The bag limit was reduced to one goat in 1976, and the first permit hunt was established in 1980. By 1986, the present State system of registration hunts began (Crowley 2010). Management guidelines were clarified in 1993 when a harvest tracking strategy was fully implemented (Caughley 1977, Smith 1984). Implementation of the strategy provided the framework necessary to guide harvest decisions, such as setting harvest quotas for subareas within hunt units.


Proposal WP14-06
Map 1: Unit 6D
Valdez
Port Valdez
Valdez Arm
RG245
RG244
Tatitlek
Port Fidalgo
Terrain above 1500 ft elevation
Mountain goat hunt subareas
Ownership
non-Federal lands
Bureau of Land Management
Chugach National Forest
5
0
5 Miles
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W
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S

Federal subsistence management of mountain goats in Unit 6D began in 1990 with a special action by the Federal Subsistence Board (Board). Hunting was open to 1 goat by registration permit and restricted to subareas 822 (now RG242), 823 (now RG243), 824 (now RG244), 828 (now RG245), and 879 (now RG252). Federal public lands in 823 (now RG243) and 824 (now RG244) were closed to non-subsistence uses. The Federal season would close when the harvest level for each subarea was reached. The Board passed modified proposal P92-026 in 1992 which added subareas 829 (now RG249) and 830 (now RG266), and removed the public land closures in in 823 (now RG243), and 824 (now RG244). The Board adopted proposal P93-033 in 1993, closing the Federal subsistence goat season in 828 (now RG245) and closing Federal public lands to non-subsistence uses in the same subarea. In order to facilitate the closure of the season when harvest limits were met, they also established harvest quotas for each of the subareas, resulting in a total harvest limit of 13 goats available exclusively to Federally qualified subsistence users within Unit 6D. The Board in 1995 adopted proposal P95-012, closing Federal subsistence goat season in RG243 due to conservation concerns, and reducing the total goat harvest limit in Unit 6D to 11 goats.

In response to increasing mountain goat populations, the Board adopted P00-014 in 2000, re-opening RG243, and establishing larger harvest quotas in subareas RG243 and RG249, resulting in the current Federal harvest quota of 17 goats in Unit 6D. The Board adopted WP06-13 in 2006, re-opening Federal public lands within RG245 to non-subsistence users.

Biological Background

Mountain goats are endemic to the mainland in Unit 6 and to Bainbridge, Culross, and Knight Islands (Crowley 2010). Mountain goat populations in Unit 6 have fluctuated widely over the past 60 years. Mountain goat populations in Unit 6D may have been reduced in Port Wells in the 1940's, and Puget Bay in the 1950's, by military personnel stationed in Whittier and Seward, respectively (Nowlin 1996). Populations may have suffered significant natural mortality during the severe winters of 1971 and 1975 (Crowley 2010).

Goat numbers remained low during the late 1970's and 1980's because of hunter harvest (Griese 1988a) and predation (Reynolds 1981, Griese 1988b). By 1987 the estimated Unit 6 population was 3400. It declined to 3000 by 1994. In response to declining populations and low recruitment, harvest was reduced and hunting of small groups of goats (<60) was prohibited during the early and mid-1990's (Nowlin 1996). The population rebounded to approximately 4000 goats by 1999, as a result of conservative harvest and mild winters, and has been relatively stable to increasing since.

Population estimates have fluctuated between 145 and 251 mountain goats in subarea RG244 and between 117 and 134 goats in subarea RG245 between 2000 and 2010 (**Table 1**). Survey effort has been low in both areas.

Harvest History

In Tatitlek and Chenega Bay, goat hunting is considered a subsistence activity and was well integrated into the local culture. In these villages there is prestige connected with a successful goat hunt, and the

Table 1. Mountain Goat population estimates and harvest in Unit 6D, subareas RG244 and RG245, from 2000-2010 (Crowley 2006, Crowley 2010).

	Estimated goat population	Federal goat harvest	State goat harvest
RG244			
2000/2001	145	0	3
2001/2002	224	0	8
2002/2003	237	0	4
2003/2004	251	0	9
2004/2005	250	0	1
2005/2006	250	1	0
2006/2007	250	1	0
2007/2008	250	0	0
2008/2009	250	1	3
2009/2010	250	1	?
RG245			
2000/2001	117	na	5
2001/2002	117	na	5
2002/2003	117	na	4
2003/2004	134	na	5
2004/2005	134	na	4
2005/2006	134	na	3
2006/2007	134	na	0
2007/2008	134	na	1
2008/2009	134	na	2
2009/2010	134	na	?

meat is widely shared in a systematic manner (Simeone 2008). Harvest of mountain goats in subarea RG244 has ranged from 1-9 goats under State regulations, and from 0-1 goat under Federal regulations, between 2000 and 2010 (**Table 1**). Mountain goat harvest in subarea RG245, has ranged from 0-9 goats under State regulations between 2000 and 2010, and has been closed under Federal regulation, since 1993 (**Table 1**).

Effects of the Proposal

If this proposal was adopted it would close subarea RG244 to goat harvest and open subarea RG245 to the harvest of 2 goats. Although the preference for residents of Tatitlek would be to hunt mountain goats closer to their village in subarea RG244, little Federal public land exists in that unit, particularly near mountain goat habitat preferred for hunting. Since the quota of 2 goats is small and harvest history has shown low harvest rates by Federally qualified subsistence users, the effect on mountain goat population in subarea RG245 would be small.

The proposal would have little or no effect on non-Federally qualified users. The State harvest quota in RG245 should not have to be reduced by more than one goat to account for the possible small increase in Federal subsistence harvest.

OSM CONCLUSION

Support Proposal WP14-06 **with modification** to leave subarea RG244 open to goat harvest in addition to opening up harvest in subarea RG245, and share the quota of 2 goats between the 2 subareas.

The modified proposal should read:

> **Unit 6D—Mountain goat**
>
> *Unit 6D (subareas RG242, RG243, RG244, **RG245**, RG249, RG252, and RG266 only) – 1 goat by Federal registration permit only.*
>
> *In each of the Unit 6D subareas, goat seasons will be closed when harvest limits for that subarea are reached. Harvest quotas are as follows:*
>
> *RG242 – 2 goats, RG243 – 4 goats*
>
> *RG244 **and RG245 combined –** 2 goats*
>
> *RG249 – 4 goats, RG266 – 4 goats*
>
> *RG252 – 1 goat*

Justification

Adopting this proposal, as modified, would provide more opportunity for Federally qualified subsistence users to harvest mountain goats. By leaving the Federal lands of subarea RG244 open to goat hunting, some goat habitat on Federal lands nearest the Village of Tatitlek would still be open to goat harvest if the opportunity presented itself, in addition to the greater opportunities provided by opening subarea RG245. Maps illustrating the limited public lands within RG244 could be provided to steer Federally qualified subsistence users to the areas open to hunting.

LITERATURE CITED

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-06 **with modification** as described in the OSM Conclusion. The proposed regulation will provide an opportunity for subsistence users to harvest goat. There are no conservation concerns on the goat population in the Unit 6D subarea.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-08 Executive Summary	
General Description	Proposal WP14-08 requests a positive customary and traditional use determination for rural residents of Cooper Landing for caribou in Unit 7. *Submitted by Robert Gibson of Cooper Landing.*
Proposed Regulation	**Unit 7—Caribou** — **Customary and Traditional Use Determination** *Unit 7* — *Residents of* ***Cooper Landing and*** *Hope.*
OSM Conclusion	**Support**
Southcentral Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-08

ISSUES

Proposal WP14-08, submitted by Mr. Robert Gibson of Cooper Landing, requests a positive customary and traditional use determination for rural residents of Cooper Landing for caribou in Unit 7.

DISCUSSION

The proponent is requesting a positive customary and traditional use determination for caribou in Unit 7 for rural residents of Cooper Landing. The proponent states that a positive determination that permits residents of Cooper Landing to hunt caribou in Unit 7 under Federal regulations would be consistent with their traditional hunting patterns and caribou use area. Eighteen residents of Cooper Landing signed the proposal in support of the request.

Existing Federal Regulations

Unit 7—Caribou	**Customary and Traditional Use Determination**
Unit 7	*Residents of Hope.*

Proposed Federal Regulations

Unit 7—Caribou	**Customary and Traditional Use Determination**
Unit 7	*Residents of* ***Cooper Landing and*** *Hope.*

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. The Kenai Fjords National Park is closed to subsistence uses.

Regulatory History

The Federal Subsistence Board (Board) has discussed customary and traditional use determinations for Kenai Peninsula since the inception of the Federal Subsistence Management Program in 1990. The Board's specific actions include:

- 1990: The Federal Subsistence Management Program is established; The State's customary and traditional use determinations are adopted.

  - The State of Alaska had determined that the road-connected portion of the Kenai Peninsula—which is most of Units 7 and 15—is a non-subsistence area. As a result, the Board determined that Unit 7 had no subsistence priority for caribou.

- April 1994: The Board deferred all customary and traditional use determinations for all large mammals on the Kenai Peninsula because there was no agreed upon timeline and process set in place for making customary and traditional use determinations in the State of Alaska (FSB 1994).

- July 1995: The Board again deferred 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, the Board made positive customary and traditional use determinations for Unit 15 moose for residents of 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: The 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 University of Alaska, 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).

- 2007: The Board revised its rural determinations.

- 2010: On May 18, the Board adopted Proposal WP10-32a that recognized the customary and traditional uses of the rural residents of Hope (and Sunrise) for caribou in Unit 7 (FSB 2010:164).

Biological Background

Based on historical reports, caribou were modestly abundant on the Kenai Peninsula prior to the late 1800s (Bangs et al. 1982; Porter 1893; Sherwood 1974). Large forest fires on the peninsula in the late 1800s, including a massive fire in 1883, destroyed a substantial amount of caribou habitat and contributed to a decline in the Kenai Peninsula caribou population (Bangs et al. 1982; Leopold and Darling 1953; Miner 2002; Potkin 1997; Sherwood 1974). It is thought that caribou were extirpated, and the last sighting of caribou on the Kenai Peninsula was in 1912 (Lutz 1956; Osgood 1976 [1937]). The Kenai Mountain Caribou Herd in Unit 7, one of four herds currently ranging on the peninsula, was derived from reintroductions of 44 caribou by the Alaska Department of Fish and Game (ADF&G) in 1965 and 1966 (Bangs et al. 1982).

Harvest History

The State has managed the Kenai Mountain Caribou Herd with a regulated hunt in Unit 7 since 1972 (McDonough 2007). With the exception of three years, the State regulated caribou hunt in Unit 7 has been a limited permit drawing, which is available to both Alaska residents and nonresidents. From 1972 to 2003, the number of caribou harvested by all hunters in Unit 7 varied from six to 87 animals per year; the total number of permits issued for this period has ranged from 20 to 250, with 250 permits issued between 1997 and 2003 (ADF&G 2003). The 2013-2014 State regulations for this hunt allow harvest of one caribou of either sex during the period August 10 through the end of December.

Rural residents of Hope, Alaska can hunt this caribou herd in Unit 7 under Federal subsistence regulations by registration permit only. Residents of Hope are allowed to harvest one caribou during the period August 10 through the end of December. This is a quota hunt, and the USFS closes the Federal season when five caribou are harvested. For the period 2010-2012, the Federal Subsistence Management Program issued 64 permits to residents of Hope, and 31 residents of Hope hunted for caribou in Unit 7. During this period, residents of Hope harvested a total of four caribou while expending 278 days of hunter effort (FWS 2013).

Community Characteristics

Cooper Landing is a small, unincorporated community within the Kenai Peninsula Borough with an estimated permanent year-round population of 289 in 2010 (ADLWD 2011). It is located in the northern part of the Kenai Peninsula on the Kenai River and Kenai Lake along the Sterling Highway about 101 miles by road from Anchorage and about 57 road miles from the City of Kenai. The community is near the western edge of the Chugach National Forest (ADCRA 2008).

The Dena'ina inhabited the Cooper Landing area long before Russian explorers arrived. They would move to the area to hunt sheep and then spend the winter hunting and trapping before moving to coastal areas in the spring (Holmes 1985).

Between the late 1830s and 1918, the Dena'ina living in the Cooper Landing area were struck by a series of introduced diseases including influenza, measles, and syphilis. The Dena'ina also were affected by declining fur prices, forest fires, and reduced salmon runs due to cannery operated fish traps at the mouth of the Kenai River. By 1919, the Dena'ina had moved from the Cooper Landing area (Seitz et al. 1992).

Around 1850, Russian explorers from the Russian-American Company in search of gold were the first non-Alaska Native peoples in what today is known as the Cooper Landing area. In the 1880s, Joseph Cooper, along with others, came to the area from Ninilchik seeking gold. He established a trading post and worked some mining claims. The area was eventually named for him (Barry 1973).

Big game guiding, fox farming, and trapping eventually replaced gold mining as the primary economic activities in the area (Painter 1983). It was not until the 1920s that the general area became known as Cooper Landing. It became connected by road to Seward in 1938 and to Kenai in 1948, and the road to

Anchorage officially opened in 1951. By 1962, the community had commercially-supplied electricity (Painter 1983).

The road system has greatly enhanced the opportunity for tourists and part-time residents to enjoy the wildlife, scenery, and sport fishing (including guiding, boat rentals, campgrounds, lodging, and restaurants) available in the Cooper Landing area and has been a major factor in the area's development. Today, more than 50% of the total housing units in Cooper Landing are for seasonal, recreational, or occasional use (ADLWD 2011). This proposal only includes permanent residents of Cooper Landing.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through a framework that consists of 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 Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b); 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Subsistence Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b); 36 CFR 242.16(b)). The Board addresses conservation concerns through regulatory changes to the seasons, harvest limits, and methods or means of harvest. Conservation concerns are not considered to be a direct factor in making a customary and traditional use determination.

In the most recent household survey that examined subsistence hunting of game, Seitz et al. (1992) interviewed long-time residents of the Kenai Peninsula who reported that wild game was their primary source of meat from the late 1940s through the 1960s. According to Barry (1973:159), early residents of the Kenai Peninsula primarily sought moose, bears, Dall's sheep, mountain goats, and caribou for meat. For the early residents of Cooper Landing, hunting, fishing, trading, bartering, and trapping of wild resources were important activities (Barry 1973) and continued to be a major part of the lifestyle of Cooper Landing residents into the 1960s (Seitz et al. 1992).

On the Kenai Peninsula "hunters learned to hunt from family members or friends, either in Alaska or in other states before moving to a Kenai Peninsula community" (Fall and Seitz

1991:112). No specific data are available for Cooper landing residents regarding transmission of knowledge of caribou hunting skills, value, and lore from generation to generation. Residents of Cooper Landing depend on a wide diversity of fish and wildlife resources, harvesting an average of eight different kinds of wild resources, similar to other road-connected communities on the Kenai Peninsula (Fall et al. 2000:240–245). From August 1990 through July 1991, all households in Cooper Landing were estimated to have used at least one wild resource, and 94% harvested some kind of wild resource (Seitz et al. 1992). The average number of types of wild resources used in other communities and areas in the Kenai Peninsula ranged from about eight (North Fork Road) to 22 (Nanwalek), with Ninilchik, Voznesenka, Hope, and Nikolaevsk harvesting on average about nine different types of wild resources (Fall et al. 2000:240–245). In Cooper Landing, the per capita harvest of wild resources, measured in pounds of useable weight, was 91.5 pounds while the mean household harvest was 238 pounds. Salmon made up 43 percent of the total wild resources harvested. The next most frequently taken resources were land mammals (32%), other fish (16%), and wild plants, eggs, and marine invertebrates (10%) (Seitz et al. 1992).

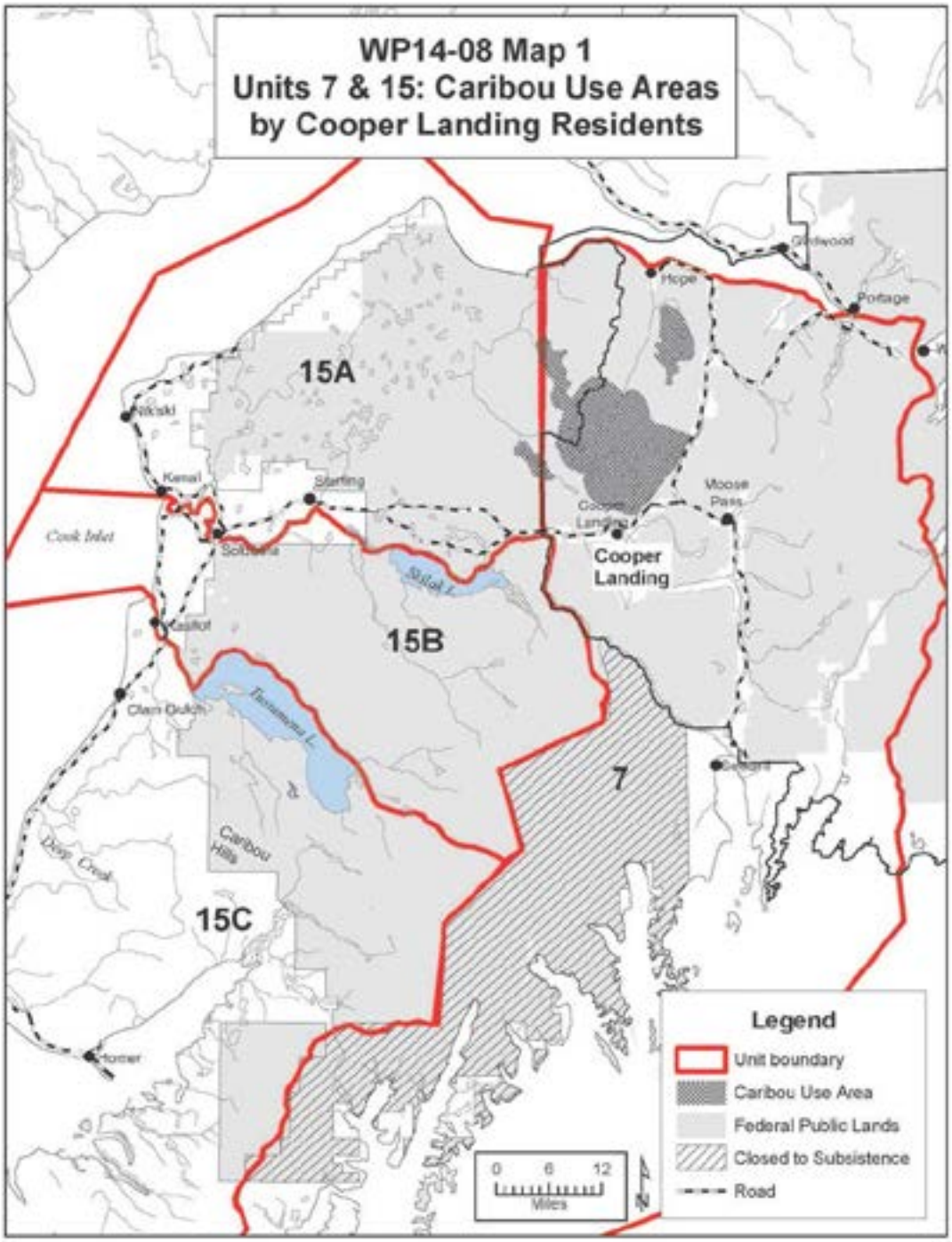
The most commonly used resource by residents of Cooper Landing was sockeye salmon (77% of households). Berries were used by 71% of the households, followed by halibut (65%), Dolly Varden (57%), coho salmon (53%), moose (43%), other plants (35%), grouse (33%), Chinook salmon (30%), lake trout (25%), and caribou (10%) (Seitz et al. 1992). From August 1, 1990 through July 31, 1991, residents of Cooper Landing harvested six caribou, providing about 904 pounds of usable meat. This was an average of 9 pounds per household or 3.5 pounds per capita (Seitz et al. 1992).

In Cooper Landing, wild foods were shared with those in need and those who were unable to fish and hunt for themselves (Seitz et al. 1992). Seitz et al. (1992) reported that most households in Cooper Landing were involved in giving or receiving wild resources. About 81% of the households received at least one kind of wild resource from another household. Seventy-two percent of the households gave away wild resources to other people. During the study period, Cooper Landing residents received an average of 3.3 different kinds of wild resources and gave away an average of 2.1 kinds. The most commonly shared resource was fish (53%).

From August 1, 1990 through July 31, 1991, caribou ranked third to moose and deer among large mammal species in frequency of use and quantity harvested by residents of Cooper Landing (FWS 1993:VIII-25; Seitz et al. 1992). About 10% of the households in Cooper Landing reported using caribou, and 7% of the households reported hunting caribou (Seitz et al. 1992). Caribou was given by about 4% of households in Cooper Landing, about 7% of households reported receiving caribou meat, while only 5% of the households actually harvested caribou (Seitz et al. 1992; ADF&G 2001).

After extirpation of caribou in 1912, Cooper Landing residents were unable to harvest caribou in Unit 7 (Lutz 1956). The interruption in their use of caribou in Unit 7 was beyond the control of the community. As a result of the State's successful reintroduction program, there are four small herds of caribou currently living on the Kenai Peninsula (ADF&G 2003). In Unit 7, the Kenai Mountain Caribou Herd

ranges in the area drained by the Chickaloon River, Big Indian Creek, and Resurrection Creek north of the Sterling Highway and west of the Seward Highway (ADF&G 2003). Land ownership is primarily USFS and USFWS (i.e., Federal public lands).



Data from the Seitz et al. (1992) survey of permanent households (n = 61 randomly selected households out of 99 total) was used to produce a map that depicts the total area used by residents of Cooper Landing

for caribou hunting. **Map 1** shows the total area used for caribou hunting by the residents of Cooper Landing (i.e., those living there in 1991) over the period in which they had been permanent year-round residents (Seitz et al 1992). As shown in **Map 1**, residents of Cooper Landing have generally hunted caribou on the Kenai Peninsula in Unit 7 north of the Sterling Highway and west of the Seward Highway (ADF&G 1991; FWS 1993: VIII-24).

The first State hunting season for caribou in Unit 7 occurred in 1972 and has continued to occur every year since. Caribou are hunted under State regulations from mid-August through December in Unit 7. Since 1977, ADF&G has managed the hunt using a limited drawing permit system that has been open to both Alaska residents and nonresidents. Generally, there have been few permits available for the relatively large number of applicants with a 10% to 12% chance of drawing a permit in recent years.

Residents of Cooper landing have participated in the State hunts and have harvested small numbers of caribou in Unit 7 (**Table 1**; FWS 2013). The Alaska Department of Fish and Game does not have data on the number of caribou harvested in Unit 7 by residents of Cooper Landing from 1972 through 1981. From 1982 through 2010, the State issued 58 permits to residents of Cooper Landing for caribou in Unit 7. During this period, 31 residents of the community hunted for caribou in Unit 7, harvesting six caribou while hunting a total of 141 days (**Table 1**; FWS 2013).

Cooper Landing residents also hunt for caribou outside Unit 7. They may have traditionally hunted for caribou in a small part of Unit 15A in the area used by the Kenai Mountain Caribou Herd (**Map 1**). During the period 1994 through 2010, the State issued 25 permits for caribou to residents of Cooper Landing for Unit 15; six residents of the community hunted caribou in Unit 15 under State regulations during this period, and they harvested three caribou while hunting for 13 days (FWS 2013). In 1998, residents of Cooper Landing harvested five caribou in Unit 9, three caribou in Unit 13, and two caribou in Unit 12 (ADF&G 2000; Fall et al. 2000).

No data are available on the methods and means used by Cooper Landing residents to harvest caribou except that the primary means of access for all hunters of the Kenai Mountain Caribou Herd is hiking in on foot or with horses due to the difficult access (FWS 1993:24).

Caribou meat was traditionally dried, smoked, or frozen outdoors. No data are available concerning contemporary methods of handling, preparing, preserving, or storing caribou meat by Cooper Landing residents. It is likely that most caribou meat is preserved by freezing (FWS 1993:25).

Effects of the Proposal

If this proposal is adopted, the residents of Cooper Landing would be added to the customary and traditional use determination for caribou in Unit 7, allowing them to harvest caribou under Federal subsistence regulations.

If this proposal is rejected, Cooper Landing residents would only be allowed to harvest caribou under State regulations. It is difficult for residents of Cooper Landing to obtain a State permit in Unit 7 because it is a drawing hunt open to all residents and nonresidents.

Table 1. State permits issued and used by residents of Cooper Landing to hunt caribou in Unit 7 since 1982 (FWS 2013).

Year	Permits issued	Permits used by hunter	Harvest	Days hunted
2010	1	0	0	0
2009	1	1	1	5
2007	2	2	0	9
2006	3	2	0	10
2005	3	1	0	10
2004	3	1	1	2
2003	1	0	0	0
2002	2	0	0	0
2001	1	1	0	3
2000	3	0	0	0
1999	3	1	0	3
1998	1	1	0	15
1997	1	0	0	0
1996	4	4	0	13
1995	3	0	0	0
1993	1	1	1	3
1990	1	1	0	5
1989	1	1	0	7
1988	2	1	0	3
1987	2	1	1	7
1986	3	3	0	10
1985	11	7	1	32
1983	2	2	1	4
1982	3	0	0	0
Total	**58**	**31**	**6**	**141**

If this proposal is adopted, it is probable that more people would hunt caribou in Unit 7, which could displace some non-subsistence hunters due to increased competition. It is also probable that more caribou would be harvested in Unit 7, and the Federal quota of five animals would more likely be reached during a hunting season. The residents of Hope, hunting under Federal regulations in Unit 7, have not reached this quota, harvesting a total of two caribou in a single season and a total of four caribou during the past three seasons. Adding the residents of Cooper Landing to this hunt could increase competition between residents of Hope and Cooper Landing for caribou in Unit 7.

OSM CONCLUSION

Support Proposal WP14-08.

Justification

Historical reports indicate that caribou were modestly abundant on the Kenai Peninsula prior to the late 1800s, and it is probable that early settlers of the Cooper Landing area used caribou as a source of meat. Cooper Landing residents' contemporary patterns of caribou hunting and harvest generally exhibit the characteristics of customary and traditional use for caribou in Unit 7. The harvest ticket database demonstrates that residents of Cooper Landing have hunted for caribou in Unit 7. From 1982 through 2010, the State of Alaska issued 58 caribou permits to Cooper Landing residents for Unit 7. Thirty-one residents of Cooper Landing hunted for caribou in Unit 7 during this period, harvesting six caribou and expending 141 total days of effort (**Table 1**; FWS 2013). Although this harvest is low, the residents of Cooper Landing have demonstrated some use of Unit 7 for caribou hunting. **Map 1** indicates that Cooper Landing residents have used part of Unit 7 north of the Sterling Highway and west of the Seward Highway for caribou hunting in the Chugach National Forest and, to a lesser degree, the Kenai National Wildlife Refuge (ADF&G 1991; Seitz et al. 1992).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-08. There was evidence to support the C&T use of caribou, no conservation concerns exist, and this would help address subsistence needs of the community.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-09 Executive Summary	
General Description	Proposal WP14-09 requests the baiting season for hunting black bear on Federal public lands in Unit 6 be extended two weeks from Apr. 15 to June 15 to Apr. 15 to June 30. *Submitted by Andy McLaughlin of Chenega Bay, Alaska.*
Proposed Regulation	**Unit 6—Black Bear** *Unit 6 —1 bear* *Sept. 1 – June 30* *(ii) Unit–Specific regulations* *__.26(n)(6)(ii)(A) You may use bait to hunt black bear between April 15 and June ~~15~~* ***30*** **Special Provisions** *__.26(a)(14)(i) Before establishing a black bear bait station, you must register the site with ADF&G* *__.26(a)(14)(ii) When using bait, you must clearly mark the site with a sign reading "black bear bait station" that also displays your hunting license number and ADF&G assigned number*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Support** Proposal WP14-09 **with modification** to extend the season to 30 June, set a quota of 20 bears, establish a Federal registration permit, and if need be establish a Federal bear bait station registration permit.
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
WP14-09

ISSUES

Proposal WP14-09, submitted by Andy McLaughlin of Chenega Bay, Alaska requests the baiting season for hunting black bear on Federal public lands in Unit 6 be extended two weeks from Apr. 15 to June 15 to Apr. 15 to June 30.

DISCUSSION

The proponent request that the bear baiting season be extended two weeks to increase the opportunity for rural residents in Unit 6 to harvest a black bear. During years of heavy snowfall and a late spring melt, black bears often do not emerge from their dens before the baiting season closes on June 15.

Existing Federal Regulation

Unit 6—Black Bear

Unit 6 —1 bear *Sept. 1 – June 30*

(ii) Unit-specific regulations:

__.26(n)(6)(ii)(A) You may use bait to hunt black bear between April 15 and June 15

Special Provisions

__.26(a)(14)(i) Before establishing a black bear bait station, you must register the site with ADF&G

__.26(a)(14)(ii) When using bait, you must clearly mark the site with a sign reading "black bear bait station" that also displays your hunting license number and ADF&G assigned number

Proposed Federal Regulation

Unit 6—Black Bear

Unit 6 – 1 bear *Sept. 1 – June 30*

(ii) Unit–Specific regulations

*__.26(n)(6)(ii)(A) You may use bait to hunt black bear between April 15 and June ~~15~~ **30***

Special Provisions

__.26(a)(14)(i) Before establishing a black bear bait station, you must register the site with ADF&G

__.26(a)(14)(ii) When using bait, you must clearly mark the site with a sign reading "black bear bait station" that also displays your hunting license number and ADF&G assigned number

Existing State Regulation

Unit 6—Black Bear

Unit 6A and Unit 6B— One bear	*Aug. 20 – Jun. 30*
Unit 6C —One bear	*Sept. 1 – Jun. 30*
Unit 6D — One bear	*Sept. 10 –Jun. 10*

Baiting Period

Units 6A, 6B, and 6C	*Apr. 15 – Jun 15*
Unit 6D	*Apr. 15 – June 10*

Extent of Federal Public Lands

Approximately 71% of the lands in Unit 6 are comprised of Federal public lands consisting of approximately 49% U.S. Forest Service (USFS) managed lands, 14% Bureau of Land Management managed lands, and 8% National Park Service managed lands.

Customary and Traditional Use Determinations

Rural residents of Yakutat and Units 6C and 6D (except residents of Whittier) have a positive customary and traditional use determination for black bear in Unit 6A. Rural residents of Units 6C and 6D (except residents of Whittier) have a positive customary and traditional use determination for black bear in Unit 6 remainder.

Regulatory History

In 1990, the Federal Subsistence Board adopted temporary subsistence regulations for black bear hunting at bait stations that aligned with State regulations. The Federal and State bear baiting season in Units 6A, 6B, and 6C has been from Apr. 15 – June 15 and since 2005 – 2006 the season in Unit 6D has been Apr. 15– June 10.

To reduce the fall harvest of female black bears which was impacting the growth of the population the Alaska Board of Game (BOG) changed the season opening for Unit 6D from Sept. 1 – June 10 to Sept. 10 – June 10, beginning in regulatory year 2009/2010. The intent of shifting the start of the season 10 days later was to reduce the harvest of black bears as they move from salmon streams to the high country during the fall. Also in 2009 the BOG approved the use of a harvest reporting system for Unit 6 in an effort to obtain more accurate and complete harvest information.

Biological Background

Black bears are common throughout Unit 6 with the exception of Kayak and Middleton Islands along the North Gulf Coast of Alaska (NGC) and Montague, Hinchinbrook, and several smaller islands in Prince William Sound (Crowley 2011). The State management goal for black bear in Unit 6 is to maintain a black bear population that will sustain a 3-year average annual harvest of 200 bears composed of at least 75% males with a minimum average skull size of 17 inches (Crowley 2011). The proportion of females taken exceeded the recommended management objective of 25% in 2006, 2007, and 2009 (Crowley 2011).

Black Bear densities tend to be highest in western Prince William Sound (Unit 6D) and lowest along the NGC and eastern Prince William Sound (Units 6A, 6B, and 6C) (McIIroy 1970; Modafferi 1978, 1982). Density estimates in good habitat in Prince William Sound range between 0.4 to 10 bears/km^2 (McIIroy 1970; Modafferi 1978, 1982) and the overall density in Unit 6D which is in the most productive black bear habitat in Unit 6, from 2004 – 2006 was 0.59 bears/km^2 (range 0.33– 0.85 bears/km^2) (Crowley 2008). Modafferi (1982) found that male black bears in Unit 6D tended to move to the beaches after emerging from winter dens to feed on new grasses and sedges whereas females concentrated on south facing slopes and avalanche chutes. Black bear populations in Unit 6 fluctuate due to the severity of winter weather, food abundance, hunting pressure (Mcllroy 1970, Schwartz et al. 1986) and in some areas competition with and predation by grizzly bears.

Harvest monitoring and assessment has been the primary method used to assess the status of the black bear population in Unit 6. In 2009 the BOG approved the use of a harvest reporting system that incorporated an assessment of effort in addition to the harvest (Crowley 2011). Since the late 1980s the Alaska Department of Fish and Game (ADF&G) has been using the skull size as a biological objective because it is thought that changes may indicate changes in population size, harvest composition, and the sustainability of harvest levels. A decreasing skull size may indicate a decline in older bears in the population which may be indicative of a population decline (Lowell 2011). To assess the population age structure, which is a measure of population health, the skull size and harvest densities are compared between 8 geographic areas which correspond to well-defined watersheds within Unit 6 (Crowley 2011). The decline in skull size of male black bears with high annual harvest during the most recent 5-year period (2005– 2009), when

compared to the previous two 5-year periods, suggests that the harvest may be impacting the age structure of the black bear population. A similar trend was not found for female harvested bears.

Harvest History

Historical and ethnographic accounts of the Alutiiq of Prince William Sound and the Eyak Indians of the Copper River Delta, the traditional inhabitants of the Chugach, indicate that black bears were an important subsistence food source (Simeone 2008). Although black bears were once a major subsistence staple for residents in Prince William Sound communities, Sitka Black-tailed deer have replaced black bears in importance according to local residents (Simeone 2008). Between 1986 and 2006, residents of Unit 6, resident hunters living outside of Unit 6, and nonresidents accounted for 11%, 58%, and 31% of the black bear harvest respectively in Unit 6. A majority of the harvest (85%) occurred in Unit 6D (Simeone 2008). From 2005 – 2010, the hunting pressure and take of black bears in Unit 6 was greatest in Unit 6D (83–86%), which coincides with greatest densities of black bears and ease of access by Anchorage hunters through the Anton Anderson Memorial Tunnel (Whittier Tunnel) (Simeone 2008, Crowley 2011). An average of 680 black bears were taken per regulatory year between 2005 and 2012 (Table 1), which far exceeds the management goal of the 3-year annual harvest of 200 black bears.

Table 1. Black Bear harvest in Unit 6 from 2005-2011 (Westing 2013, pers. comm.).

Year	Male (%)	Female (%)	Estimate of Unreported Kill	Total
2005/2006	417 (82)	90 (18)	61	568
2006/2007	434 (74)	153 (26)	71	661
2007/2008	460 (68)	214 (32)	81	758
2008/2009	476 (76)	149 (24)	75	701
2009/2010	419 (73)	156 (27)	69	648
2010/2011	386 (70)	164 (30)	66	617
2011/2012	304 (60)	205 (40)	62	575

However, without accurate population estimates it is difficult to determine if the current harvest levels are sustainable. Although it is difficult to determine the status of black bear populations using harvest data (Garshelis 1993), the decrease in age of harvested bears during the high harvest from 2005 – 2009 suggests that the harvest may be having population level effect (reducing the overall size of the population). The number of black bears taken over bait in Unit 6 by Federally qualified subsistence users from 2005 to 2011

was 10 (OSM 2013). The number of bears taken over bait almost doubled during the 5 year period between 2005 and 2011 (50 to 96) (**Table 2**) (Crowley 2011). The low harvest of black bears over bait in 2011 – 2012 was due in part to heavy snowfall and late spring melt. The percent of black bears taken over bait in Unit 6 ranged between 6.9% to 15.0% between 2005 and 2011.

Table 2. Black Bear harvest over bait in Unit 6A, 6B, 6C, and 6D from 2005-2011 (Westing 2013, pers. comm.).

Year	Unit 6A	Unit 6B	Unit 6C	Unit 6D	Total
2005/2006	12	0	4	34	50
2006/2007	8	0	4	54	66
2007/2008	11	0	4	61	76
2008/2009	13	0	4	54	71
2009/2010	21	0	9	67	97
2010/2011	17	0	8	67	92
2011/2012	0	0	7	33	40

Other Alternative Considered

Another alternative considered was to extend the black bear baiting season in Unit 6D only for two weeks until June 30, the date requested by the proponent, with a quota of no more than10 black bears during the extended period. This action was not chosen because of the conservation concern for black bears in Unit 6D; however, the option to lengthen the season could be done by special action during those years with heavy snowfall and late spring melt.

Effects of the Proposal

If this proposal is adopted it would extend the current black bear baiting season from Apr. 15 to June 15 to Apr. 15 to June 30. This extended baiting season in Unit 6 would allow 15 additional days for Federal subsistence users to harvest bears over bait.

The change in the season dates would also cause Federal and State regulations to become misaligned in Units 6A, 6B and 6C, which would increase regulatory complexity and could make it more difficult for law enforcement. Unit 6D is already out of alignment. In addition, a Federal bait station permit may be required, if the State does not want to allow Federally qualified subsistence users to use a State bait station registration permit. Given the lack of accurate population data; the relatively high levels of harvest from 2005 to 2011 (particularly in Unit 6D); past efforts by the State to reduce the take of black bears in Unit 6D; and the decrease in age of harvested male bears from 2005-2009; extending the bear baiting season by two weeks would likely to increase the take of black bears and would be a conservation concern.

OSM CONCLUSION

Oppose Proposal WP14-09.

Justification

Although it is difficult to determine if the current harvest levels are sustainable without accurate population estimates, the current harvest data, which exceeds the recommended harvest level by about three times, combined with the decrease in the age of harvested bears during the period of high harvest between 2005 and 2011 suggests that any management action that may increase black bear harvest in Unit 6 is not warranted at this time due to conservation concerns.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-09 **with modification** to extend the season to June 30, set a quota of 20 bears, establish a Federal registration permit, and, if needed, establish a Federal bear bait registration permit. The council understands there is a conservation concern for bears in the Prince William Sound area, thus the quota and federal registration permit. Additionally the permits requirement would help determine subsistence uses of bears in the area. The modification will provide additional subsistence opportunity. The bear season closes early, and some rural residents are not able to harvest bears for subsistence, some bears are still in den in early June.

The modified regulation should read:

Unit 6—Black Bear

Unit 6 – 1 bear ***by Federal registration permit only.***	*Sept. 1 –* ~~*June 15*~~ ***June 30***

(ii) Unit–Specific regulations

__.26(n)(6)(ii)(A) You may use bait to hunt black bear between April 15 and June ~~*15*~~ ***30. The annual harvest quota black bears taken at bait stations will be 20 bears.***

Special Provisions

__.26(a)(14)(i) Before establishing a black bear bait station, you must register the site with ADF&G

__.26(a)(14)(ii) When using bait, you must clearly mark the site with a sign reading "black bear bait station" that also displays your hunting license number and ADF&G assigned number

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-11 Executive Summary	
General Description	Proposal WP14-11 requests that the portion of Unit 7 that drains into Kings Bay be opened for a limited moose hunt of one bull per community (Chenega Bay, Cooper Landing, Hope, and Tatitlek) every four years. *Submitted by Andy McLaughlin of Chenega Bay, Alaska.*
Proposed Regulation	**Unit 7—Moose** **Unit 7**—that portion draining into Kings Bay. ~~No open season~~. **One bull moose every four regulatory years by Federal registration permit only, issued by the Chugach National Forest Supervisor, and per community limit as follows:** **Chenega Bay—1 bull moose;** **Cooper Landing—1 bull moose;** **Hope—1 bull moose;** **Tatitlek—1 bull moose.** Federal public lands are closed to the harvest of moose ~~by all users~~ **except to residents of Chenega Bay, Cooper Landing, Hope, and Tatitlek.**
OSM Conclusion	**Support** Proposal WP14-11 **with modification** to allow residents of only Chenega Bay and Tatitlek to harvest moose from the portion Unit 7 draining into Kings Bay while maintaining the closed season. **Unit 7—Moose** ***Unit 7*** *– that portion draining into Kings Bay. No open season.* *Federal public lands are closed to the taking of moose* ~~*by all users*~~ ***except by residents of Chenega Bay and Tatitlek****.*
Southcentral Regional Council Recommendation	**Support** Proposal WP14-11 **with modification** to allow residents of only Chenega Bay and Tatitlek to harvest moose from the portion Unit 7 draining into Kings Bay while maintaining the closed season. **Unit 7—Moose** ***Unit 7*** *– that portion draining into Kings Bay. No open season.* *Federal public lands are closed to the taking of moose* ~~*by all users*~~ ***except by residents of Chenega Bay and Tatitlek****.*
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
WP14-11

ISSUES

Proposal WP14-11, submitted by Andy McLaughlin of Chenega Bay, requests that the portion of Unit 7 that drains into Kings Bay be opened for a limited moose hunt of one bull per eligible community (Chenega Bay, Cooper Landing, Hope, and Tatitlek) every four years.

DISCUSSION

The proponent does not want Chenega Bay and Tatitlek residents to lose the occasional opportunity to harvest a moose in this area that their ancestors commonly used. The proponent estimates that the historical average moose harvest in Kings Bay drainage by residents of Tatitlek and Chenega Bay has been at least one bull moose every 10 years. Although no recent population surveys have been conducted in the portion of Unit 7 that drains into Kings Bay, the proponent states that moose move into the area on an annual basis. The lack of population surveys should not result in an absence of harvest opportunity.

Existing Federal Regulation

Unit 7—Moose

Unit 7 – that portion draining into Kings Bay *No open season*

Federal Public lands are closed to the taking of moose by all users.

Proposed Federal Regulation

Unit 7—Moose

Unit 7 – that portion draining into Kings Bay. ~~*No open season*~~. ***One bull moose every four regulatory years by Federal registration permit only, issued by the Chugach National Forest Supervisor, and per community limit as follows:***

Chenega Bay—one bull moose;

Cooper Landing—one bull moose;

Hope—one bull moose;

Tatitlek—one bull moose.

Federal public lands are closed to the harvest of moose ~~by all users~~ ***except to residents of Chenega Bay, Cooper Landing, Hope, and Tatitlek***

Existing State Regulation

Unit 7 Remainder

Residents and Nonresidents: one bull with spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Aug. 20 – Sept 20*

Extent of Federal Public Lands

Approximately 80% of the lands in Unit 7 are comprised of Federal public lands consisting of approximately 53% U.S. Forest Service (USFS) managed lands, 23% National Park Service managed lands and 2% U.S. Fish and Wildlife managed lands **(Map 1**). However, Federal public lands of the Kings Bay drainage portion of Unit 7 consist of only U.S. Forest Service managed lands within the Chugach National Forest.

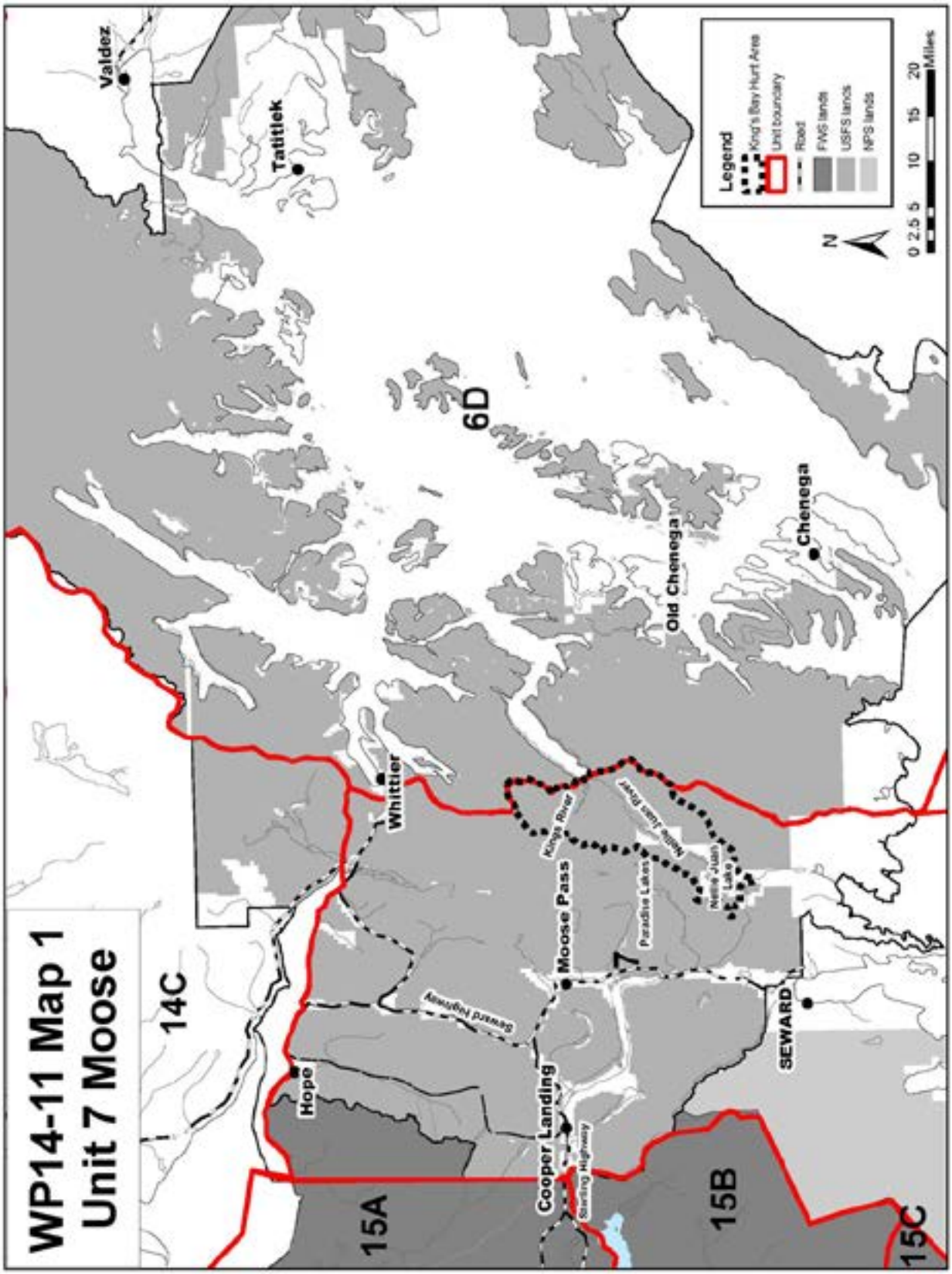
Customary and Traditional Use Determinations

Residents of Chenega Bay, Tatitlek, Cooper Landing, and Hope have a customary and traditional use determination to harvest moose in that portion of Unit 7 draining into Kings Bay.

Regulatory History

At its April 1997 meeting, the Federal Subsistence Board (Board) adopted a customary and traditional use determination for moose in the Kings Bay drainage portion of Unit 7 for the residents of Chenega Bay and Tatitlek (Proposal P97-018b) (**Map 1**). The Board adopted P97-021 with modification to create a season from Aug. 10 – Sept. 20 with a harvest limit of 2 moose per community for residents of Chenega Bay and Tatitlek, and closed Federal public lands to all other users (FSB 1997).

Special Action WSA01-02, submitted by the Chugach National Forest, U.S. Forest Service, requested that the Aug. 10 – Sept. 20 moose season in the Kings Bay drainage of Unit 7 be closed to all users. This Special Action was adopted by the Board. The Board determined that the moose population was too small to support a harvest. The Special Action lasted for one regulatory year without a proposal to continue the closure, therefore, the original Aug.10 – Sept. 20 season was re-opened.


WP14-11 Map 1
Unit 7 Moose
14C
15A
15B
15C
6D
7
Valdez
Tatitlek
Whittier
Hope
Cooper Landing
Moose Pass
SEWARD
Chenega
Old Chenega
Seward Highway
Sterling Highway
Kings River
Paradise Lakes
Legend
King's Bay Hunt Area
Unit boundary
Road
FWS lands
USFS lands
NPS lands
0 2.5 5 10 15 20
Miles
N

Wildlife Closure Review 05-03 found the moose population to be at a low density and no indication that there were any increases in the population to justify harvest except by Federally qualified subsistence users.

In 2006, Proposal WP06-16 requested a season extension from August 10 – September 20 to August 10 – February 28 and harvest antler restrictions be changed from one bull with spike-fork or 50–inch antlers or 3 or more brow tines on either antler to a moose of either sex. At the March 14-16, 2006 Southcentral Alaska Subsistence Regional Advisory Council meeting, the Council discussed changing the Kings Bay drainage moose harvest limit, harvest season, and removing the Federal closure. The Council voted to support WP06-16 with modifications to: remove the antler restrictions and retain only the bull harvest; add a permit with a 7-day reporting requirement; change the harvest dates to Sept. 1–Dec. 31; and retain the closure of Federal public lands to non-Federally qualified subsistence users. The proponent from Chenega Bay stated they had never been restricted to harvest dates before Sept. 20, primarily because that time of year (in the early season) the moose are rarely (if at all) harvestable as the snow has not yet pushed them down from higher elevations that they normally occupy in the early fall. The proponent stated the historical moose harvests by Prince William Sound rural residents in the Kings Bay drainages did not take place until later into the winter months. The Council suggested the season change to accommodate a winter harvest, but added the permit requirements of one bull harvest and the Federal closure because the Council was concerned about the small population of moose in the area. Subsequently, the Federal Subsistence Board closed Federal lands to the hunting of moose by all users due to conservation concerns at its May 2006 meeting. The Board also rejected Proposal WP12-29 which requested a moose season in Unit 7 for that portion draining into Kings Bay in 2012 for conservation concerns.

Current Events

At its meeting on November 5, 6, and 7, 2013, the Council recommended a harvest quota of only one bull moose every four years. Additionally, the Council recommended that eligibility be determined through an ANILCA Section 804 analysis (SCRAC 2013:237). The Council requested that a Section 804 analysis be conducted because of the small harvestable surplus of animals that is likely to exist in the hunt area relative to the large number of subsistence users with a customary and traditional use determination (see **Table 1**).

No moose were observed in the Kings Bay drainage portion of Unit 7 during the recent (2014) U.S. Forest Service and ADF&G survey.

At its meeting on March 11, 12, and 13, 2014, the Council, supported the Section 804 analysis conclusion, that residents of only Chenega Bay and Tatitlek would be eligible to harvest moose from the hunt area. However, based on the results of the recent moose survey of the hunt area that observed no moose, the Council supported continuing the closed hunting season.

Biological Background

The amount of moose habitat in the Kings Bay area is small, and consists of narrow riparian areas along the Kings River and Nellie Juan River. Severe winters with deep snow are common for this area and probably contribute to a high mortality rate and the relatively low moose densities (McDonough 2010). Aerial surveys in the vicinity of Kings Bay in Unit 7 were conducted during 1996/1997, 1997/1998, 1999/2000, 2001 and 2005/2006 (**Table 1)**. An aerial survey conducted by ADF&G on January 8, 1997, revealed 20 moose in the area. The herd consisted of 8 bulls, 10 cows, and 2 calves. Counting conditions were good, with heavy snow cover and excellent visibility.

The entire drainages of the Nellie Juan and Kings Rivers were flown in March 2001 by the ADF&G, from Nellie Juan Lake downstream to the head of Kings Bay and up the Kings River to the glacial headwaters. Nine moose were counted during the survey in conditions characterized as being excellent for aerial surveying (Spraker 2001, OSM 2005). The small area of moose habitat at Kings Bay is isolated with only one accessible route for moose to enter the area across the mountains from the Paradise Lakes or Nellie Juan Lake areas and then down the Nellie Juan River—a distance of 15 to 20 miles over difficult terrain. Interchange of moose with other areas is therefore likely minimal. The fact that only 9 moose were observed is significant. Black bear occur in high densities in western Prince William Sound (Crowley 2002), and brown bears are regularly present in the Kings Bay area. These two predators may elevate the importance of safe calving habitat, which appears to be limited. Productivity and viability of this small group of moose, therefore, is marginal. The restricted area used by moose in the Kings Bay area makes them vulnerable to hunters who walk up the river valley or use authorized motorized access.

Table 1. Population data from moose surveys conducted in Unit 7 in the vicinity of Nellie Juan River and Kings River which drain into Kings Bay from 1996 to 2005 (Herreman 2013).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves:100 Cows	% Calves
1996/1997	8	10	2	20	80	20	10
1997/1998	0	1	1	15[a]	-	100	6.7
1999/2000	-	-	-	7[b]	-	-	-
2000/2001	3	3	3	9	100	100	33.3
2001/2002	4	7	1	12	57	14	8.3
2005/2006	1	-	0	5[c]	20[d]	-	-
Total	16	21	7	68			
Mean	3	3.5	1.2	11.3			

[a] Age and sex data not recorded for 14 adult moose
[b] Age and sex not recorded during survey
[c] Age and sex not recorded for 4 moose
[d] Minimum estimate

A moose index survey was flown on March 27, 2006, that was funded by the U.S. Forest Service and conducted by ADF&G personnel, using the standard ADF&G moose survey protocol. The conditions were generally good for counting. Extra time was spent following moose tracks to try to obtain a better observation of the total moose numbers (Zemke 2006, pers. comm.; OSM 2011). A total of 5 moose were observed. Two were seen south of the Nellie Juan River confluence with Kings Bay and two were seen in the area between the Nellie Juan River and Kings River (Zemke 2006, pers. comm.; OSM 2011.). One bull moose was observed upstream in the Kings River watershed (Zemke 2006 pers. comm., OSM 2011). No calves were observed in the area. A majority of the moose tracks were observed within a half mile of the shoreline. The surveyors stated that, although additional moose could be present in this heavily timbered steep country, they were relatively certain there were a very limited number of moose in the area during the survey period. The number of moose in this area during the fall would be hard to predict from this late spring survey as some moose may have migrated out of the area before heavy winter snowfall. The U.S Forest Service and ADF&G are planning for an additional moose survey in this area during the winter of 2013-2014.

Harvest History

Harvest data indicate that no moose were harvested from this area 1997–2000 (OSM 2013). As of 2001, it was known that some hunting had occurred from the village of Tatitlek with no success (Vlasoff 2001, OSM 2005). The hunters of Chenega Bay informally discussed this hunt on May 5, 2001, concluding that they knew of no one from the Chenega Bay that had hunted the Kings Bay herd in recent years (Robertson 2001, OSM 2005).

According to the recollections of several hunters from Chenega Bay and Tatitlek, Kings Bay has been used for moose hunting by residents of these two villages at least since the 1960s. Moose harvests have taken place incidental to commercial fishing, seal hunting, or goat hunting. ADF&G Division of Subsistence studies of the old village of Chenega in the 1960s and the re-established village of Chenega Bay in the 1980s (Stratton and Chisum 1986); and of Tatitlek in the 1980s (Stratton 1990) also report that while moose harvests were not common, Kings Bay was the moose hunting location used by these villages.

The general hunt under State regulations was closed by the Board on Federal public lands in the Kings Bay drainage in 1997. The State's general hunt regulations apply to non-Federal public lands in the vicinity of Nellie Juan Lake, with a harvest limit of one bull with a spike at least on one side, 50-inch antlers or antlers with four or more brow tines on at least one side. The landowner (Chugach Corporation), however, has restricted access to the area. According to the corporation's permit specialist, no trespass permits for hunting have been issued by the corporation since 1997 (OSM 2011).

From 2000–2008, between 0 and 2 moose were reported harvested each year under State regulations within the Nellie Juan River drainage area (part of Unit 7 remainder in State regulations) which is near the Kings River drainage for a total of five moose. The 2000–2008 moose harvest was by non-Federally qualified subsistence users and the affected area is typically accessed by aircraft.

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. In this case, such an analysis is required because of the small harvestable surplus of animals in the proposed hunt area (**Map 1**).

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority will be implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood, 2) local residency, and 3) the availability of alternative subsistence resources. The following section addresses these criteria as they relate to rural residents with a customary and traditional use determination for moose in the proposed hunt area.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

Descriptions of the customary and traditional uses of moose in the proposed hunt area include: Clark 1984; Davis 1984; Fall 2006; Fall et al. 2000; Fall et al. 2001; Osgood 1976 [1937]; Stratton 1990; Stratton and Chisum 1986.

The Board has recognized the customary and traditional uses of moose in the hunt area by the residents of four communities, Chenega Bay, Cooper Landing, Hope, and Tatitlek. If "customary and direct dependence" is interpreted to mean that the moose provide necessary nutritional elements for "a mainstay of livelihood," then none of the communities with a customary and traditional use determination for moose meet this criterion: no resident of any of the four communities reported hunting moose in the portion of Unit 7 draining into Kings Bay 1985–2010, based on the ADF&G/FWS reporting system (see **Appendix A**) (OSM 2013).

Only hunters that are not Federally qualified have reported hunting and harvesting moose in the hunt area, and only on the limited amount of State-managed lands in the area, based on the ADF&G/FWS harvest reporting system 1985 to 2010. All reported accessing the area by airplane, and approximately 99% of these hunters were from nonrural areas of the state (see **Appendix A**) (OSM 2013).

Residents of the four communities have reported hunting moose in other management units in the state (see **Appendix B**) **(**OSM 2013**).** From 1985 to 2010, 31 Chenega Bay hunters reported harvesting 17 moose; 11 Tatitlek hunters reported harvesting 4 moose; 874 Cooper Landing hunters reported harvesting 149 moose; and 341 Hope hunters reported harvesting 69 moose. Cooper Landing and Hope hunters took about 50% of their communities' harvests from Unit 7, but outside of the Kings Bay drainage. The pattern for Chenega Bay and Tatitlek is less clear; hunting effort and harvest occurred in a range of management units, and no more than 25% of the harvest occurred in any one management subunit (see **Appendix B**) (OSM 2013).

As mentioned above, according to the recollections of several hunters from Chenega Bay and Tatitlek, the Kings Bay drainage has been used for moose hunting by residents of these two villages since at least the 1960s. Moose harvests in the Kings Bay area have typically taken place incidental to commercial fishing, seal hunting, or goat hunting. The ADF&G, Division of Subsistence, studies of the old village of Chenega in the 1960s and the re-established village of Chenega Bay in the 1980s (Stratton and Chisum 1986); and of Tatitlek in the 1980s (Stratton 1990) report that while moose harvests were not common, Kings Bay was a moose hunting location used by these villages.

2. Local Residency

Chenega Bay is closest to the hunt area. By water, Chenega Bay is approximately 70 miles from the Kings Bay drainage in Unit 7 (Burcham 2013, pers. comm.). Residents of Tatitlek are approximately 81 miles by water (Burcham 2013, pers. comm.). Chenega Bay and Tatitlek residents, especially those involved in commercial fishing, have historically used watercraft to travel. Scheduled and unscheduled air taxis have also been used to travel from the villages to the regional hubs of Valdez and Cordova and out of the region. Since 1985, 50% of hunters reported accessing large land mammal hunting areas by boat (OSM 2013). For Chenega Bay residents, 23% reported using highway vehicles, and 5% reported using airplanes. For Tatitlek, 13 reported using highway vehicles, and 3% reported using airplanes.

Residents of Cooper Landing and Hope live along the State Highway System and would have to first drive to Whittier and then travel 60 miles by boat to reach the hunt area. Otherwise, walking approximately 20 miles through the Kenai Peninsula to the Nellie Juan drainage would be necessary (Burcham 2013, pers. comm.). Since 1985, the majority of Cooper Landing and Hope hunters reported accessing moose hunting areas using highway vehicles, 72% of Cooper Landing hunters and 64% of Hope hunters (OSM 2013). For Cooper Landing residents, 13% reporting using airplanes, and 12% reported using boats. For Hope, 6% reporting using airplanes, and 10% reporting using boats.

3. Availability of Alternative Resources

Chenega Bay and Tatitlek are located in Unit 6D. The only moose endemic to Unit 6 are a small population in the Lowe River drainage in Unit 6D, numbering about 40 animals in 2009 (Crowley 2010). Most of the moose harvest in Unit 6D occurs within the Lowe River drainage which are State-managed lands (OSM 2013). The mouth of the Lowe River is adjacent to the community of Valdez. Between 2001 and 2010, from 0 to 7 moose were reported taken from the area each year (OSM 2013). Since 1985, only two Tatitlek hunters have reported using the area (see **Appendix B**). Neither was successful. Forty of 60 reported harvests in the Lowe River drainage were by residents of Valdez. While others have tried to take a moose from the Lowe River drainage, especially residents from Anchorage and Cordova, few have been successful (OSM 2013).

Most of the moose population in Unit 6 originated from moose that were trans-located from other areas of Alaska in about 1949 (Crowley 2010). These moose were released on the Cooper River delta in Unit 6C and the population expanded eastward in subsequent years (see **Unit 6 Map)**. Residents of Chenega Bay, Cooper Landing, Tatitlek, and Hope have been required to apply for a State draw permit to hunt in Unit 6C. In 2013, 471 applications were received, and only 7 permits were issued, a 1% draw rate (ADF&G

2013a). Only one Tatitlek and one Cooper Landing resident have reported hunting moose in Unit 6C since 1985 (see **Appendix B**).

Cooper Landing and Hope are located in Unit 7 remainder outside of the Kings Bay drainage. The majority of hunters took moose from Unit 7 remainder, 46% and 50% respectively, 1985–2010 (see **Appendix B**). In 2008, a Federal season opened to residents of Cooper Landing, and to residents of Hope in 2010. In Unit 7 remainder, subsistence hunters were given a preference and were allowed to harvest moose with slightly less restrictive antler conditions. From 2008 to 2012, 81 Cooper Landing hunters harvested 5 moose (2 of the 5 moose were taken under Federal regulations); and from 2010 to 2012, 48 Hope hunters harvested only one moose from Unit 7 remainder (the moose was taken under Federal regulations) (OSM 2013).

Subsistence harvest information in the following sections is limited, but the available information provides a relative picture of other available resources.

Chenega Bay

In 2010, the estimated population in Chenega Bay was 76 people (see **Table 2**). The old village of Chenega on Chenega Island, near Port Nellie Juan and relatively close to Kings Bay, was destroyed in the 1964 earthquake. A new village of Chenega Bay was established on Evans Island to the south of the old village in 1982 (Davis 1984).

Table 2. United States Census data for the communities of Chenega Bay, Cooper Landing, Hope, and Tatitlek.

US Census Population								
Unit of residence	Community	1960	1970	1980	1990	2000	2010	
		Number of people						Number of house-holds
6D	Chenega Bay CDP[a]				94	86	76	31
6D	Tatitlek CDP[a]	96	111	68	119	107	88	36
7	Cooper Landing CDP[a]	130	133	116	243	369	289	161
7	Hope CDP[a]	44	51	103	161	137	192	97
Total		174	295	287	617	699	645	325

Source: ADCCED 2013, Simeone 2006, U.S. Census 2013.
[a] CDP=Census Designated Place.

Residents rely on wild resources such as salmon, seal, halibut, herring, rockfish, clams, deer, and goat to support their subsistence way of life. Moose are an important secondary resource. Residents reported harvesting less than one moose per year 1985–2010 (see **Appendix B**), compared with 2,376 salmon, 46

seals, 4,294 lb of halibut, 50 deer, and 320 rockfish in 2003, based on household harvest surveys conducted by ADF&G (2013b).

Cooper Landing

Cooper Landing is a small, unincorporated community within the Kenai Peninsula Borough with an estimated permanent year-round population of 289 in 2010 (see **Table 2**). Many housing units in Cooper Landing are for seasonal, recreational, or occasional use (ADCCED 2013). This proposal only includes permanent residents of Cooper Landing. Residents rely on wild resources such as salmon, moose, caribou, deer, halibut and char to support their subsistence way of life. Residents reported harvesting about 9 moose per year 1985–2010 (see **Appendix B**) Household harvest surveys conducted in 1990 estimated that the permanent residents of Cooper Landing harvested 2,236 salmon, 10 moose, 6 caribou, 17 deer, 1,795 lb of halibut, and 814 char in 1990 (ADF&G 2013b).

Hope

Hope is a small, unincorporated community within the Kenai Peninsula Borough with an estimated permanent year-round population of 192 in 2010 (see **Table 2**). Many housing units in Hope are for seasonal, recreational, or occasional use (ADCCED 2013). This proposal only includes permanent residents of Hope. Residents rely on wild resources such as salmon, moose, caribou, halibut, and char. Moose are an important secondary resource. Residents reported harvesting almost 3 moose per year 1985–2010 (**Appendix B**). Household harvest surveys conducted in 1990 estimated that the permanent residents of Hope harvested 1,877 salmon, 6 moose, 8 caribou, 774 lb of halibut, and 659 char in 1990 (ADF&G 2013b).

Tatitlek

In 2010, the estimated population in Tatitlek was 88 people (see **Table 2**). Residents rely on wild resources such as salmon, herring, halibut, rockfish, seal, clams, deer, and goat to support their subsistence way of life. Moose are an important secondary resource. Residents reported harvesting 4 moose total (less than one moose a year) 1985–2010 (**Appendix B**), compared with 1,075 salmon, 87 seals, 86 gallons of herring, 1,389 lb of halibut, 30 deer, and 572 rockfish in 2003, based on household harvest surveys conducted by ADF&G (2013b).

Conclusion of Section 804 Analysis

The Board has recognized the customary and traditional uses of moose in the portion of Unit 7 draining into Kings Bay by the residents of only four communities: Chenega Bay, Cooper Landing, Hope, and Tatitlek. The seemingly low dependence on this population of moose by residents of Chenega Bay and Tatitlek is attributable, in part, to the continuously restricted hunting seasons. The low dependence on the moose population in the hunt area by the residents of Cooper Landing and Hope is likely due to restricted hunting seasons and to the difficulty accessing the area; the area is not accessible by highway vehicles. However, none of the communities is located in or immediately adjacent to the hunt area. On balance, it appears that residents of only Chenega Bay and Tatitlek should be eligible to be included in a Section 804

determination based on the three criteria, primarily on the lack of alternative populations of moose outside of the Kings Bay drainage of Unit 7 and the availability of moose in the remainder of Unit 7 and Unit 15 for residents of Hope and Cooper Landing.

Recent Events

At its meeting on November 5, 6, and 7, 2013, the Council recommended a harvest quota of one bull moose every four years. Additionally, the Council recommended that eligibility be determined through an ANILCA Section 804 analysis (SCRAC 2013:237). The Council requested the Section 804 analysis because of the small harvestable surplus of animals that is likely to exist in the hunt area relative to the large number of subsistence users with a customary and traditional use determination (see **Table 1**).

Subsequently, no moose were observed in the Kings Bay drainage portion of Unit 7 during a winter 2014 moose survey conducted by the ADF&G.

At its meeting on March 11, 12, and 13, 2014, the Council supported the Section 804 analysis conclusion, that residents of only Chenega Bay and Tatitlek should be eligible to harvest moose from the hunt area. However, based on the results of the moose when no moose were observed, the Council supported continuing the closed hunting season.

Effects of the Proposal

If this proposal is adopted, it would allow the harvest of one bull moose from Aug. 10 – Sept. 20 for each of the communities of Tatitlek, Chenega Bay, Cooper Landing, and Hope every four years. The take of 4 bull moose every four years, from this low density moose population that use the Kings Bay drainage which is estimated to be between 5 and 20, is not sustainable. The small population, very limited habitat, and presence of both brown and black bears in the area suggest that even a limited hunt in this area could have a negative impact on this local moose population.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP14-11.

Justification

There is little information on the current status of the affected moose population. Based on the 1996-1997, 2001-2002, and 2005-2006 survey results, the moose population has been at a low density and there are no indications that there have been any increases in the moose population to justify a subsistence or non-subsistence harvest. Interchange of moose with other areas is likely minimal due to the difficult terrain. Even a limited hunt of four bull moose every four years could effectively result in the loss of this local population. Therefore the continuation of this closure to hunting moose is necessary for the continued viability of this wildlife population If results from the planned U.S. Forest Service and ADF&G survey indicate a population increase then a limited hunt may be considered in the future.

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP14-11 **with modification** to support the Section 804 analysis conclusion, that residents of only Chenega Bay and Tatitlek should be eligible to harvest moose from the hunt area. However, the Council supported continuing the closed hunting season.

The modification should read:

Unit 7—Moose

Unit 7 – that portion draining into Kings Bay *No open season*

Federal public lands are closed to the taking of moose ~~by all users~~
except by residents of Chenega Bay and Tatitlek.

Justification

There is little information on the current status of the affected moose population. Based on the 1996-1997, 2001-2002, and 2005-2006 survey results, the moose population has been at a low density and there are no indications that there have been any increases in the moose population to justify a subsistence or non-subsistence harvest. Interchange of moose with other areas is likely minimal due to the difficult terrain. Even a limited hunt of four bull moose every four years could effectively result in the loss of this local population. Therefore the continuation of this closure to hunting moose is necessary for the continued viability of this wildlife population

No moose were observed in the Kings Bay drainage portion of Unit 7 during a winter 2014 moose survey conducted by ADF&G. The Council supported maintaining the closed hunting season.

At its meeting on March 11, 12, and 13, 2014, the Council, anticipating that the hunt area will open to the harvest of moose in the future, supported the conclusion of the Section 804 analysis. In the future, only a small harvestable surplus of moose is likely to exist in the hunt area relative to the large number of subsistence users with a customary and traditional use determination. The potential for harvest to exceed the harvestable surplus is considered high. The Section 804 analysis determined that residents of only Chenega Bay and Tatitlek would be eligible to harvest moose from the hunt area.

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Appendix A. The reported harvest of moose from that portion of Unit 7 draining into Kings Bay, all hunters since 1985, based on the ADF&G/FWS harvest reporting system.

MOOSE HARVEST 1985–2010 CUMULATIVE			
Year	**Community**	**Number of hunters[a]**	**Number of moose taken**
KINGS RIVER DRAINAGE—Uniform Coding Unit 901			
2010	Eagle River	1	0
2007	Eagle River	1	0
2002	Eagle River	1	0
2000	Seward	1	0
1998	Chugiak	2	0
1997	Cordova	1	0
	Palmer	1	0
1992	Anchorage	1	0
1991	Anchorage	2	0
	Eagle River	2	0
	Palmer	1	1
1990	Seward	1	0
	Wasilla	1	0
1989	Anchorage	1	0
1988	Non-Resident	1	0
	Unknown	1	0
1987	Anchorage	2	0
1986	Anchorage	3	0
	Falls Bay	1	0
1985	Anchorage	1	0
Subtotal		26	1

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Appendix A. *Continued from previous page.*

MOOSE HARVEST 1985–2010 CUMULATIVE			
Year	**Community**	**Number of hunters[a]**	**Number of moose taken**
NELLIE JUAN DRAINAGE—Uniform Coding Unit 902			
2010	Seward	1	0
2009	Eagle River	1	0
2007	Anchorage	3	1
	Seward	3	2
2005	Seward	1	0
2004	Seward	2	0
2003	Anchorage	4	1
	Eagle River	1	0
	Seward	1	0
2002	Seward	2	1
2001	Anchorage	3	2
	Eagle River	1	0
2000	Anchorage	2	0
	Nonresident	2	0
	Seward	1	1
1999	Anchorage	1	0
1998	Anchorage	2	0
	Fairbanks	1	0
	Seward	1	1
1997	Seward	2	0
1994	Anchorage	3	0
	Moose Pass	1	0
	Nonresident	1	0
	Sitka	1	0
1992	Anchorage	1	0
	Eagle River	1	1
	Fort Richardson	1	0
	Nonresident	2	2
	Seward	1	1
1991	Anchorage	1	0
1990	Seward	1	0
1989	Anchorage	1	0
	Girdwood	1	0
	Seward	1	1
1988	Seward	1	1
1987	Anchorage	1	0
1986	Elmendorf AFB	1	0
	Palmer	1	0
1985	Anchorage	1	0
	Elmendorf	1	0
Subtotal		58	15
Grand Total		**84**	**16**

Source: OSM 2013 [a] All hunters reported using an airplane to access the area.

Appendix B. The harvest of moose, based on the ADF&G/FWS reporting system, reported by residents of Chenega Bay, Tatitlek, Cooper Landing, and Hope, 1985-2010 cumulative ("Z" indicates the hunter did not report the subunit).

Moose 1985-2010 cumulative				
Unit	**Number of permits issued**	**Number of people who hunted**	**Number of moose taken**	**Percentage of moose taken**
CHENEGA BAY				
7	2	2	1	6%
14Z	1	1	0	
15A	9	9	4	24%
16A	1	1	1	6%
20A	1	1	0	
20B	1	1	1	6%
20D	4	4	4	24%
20E	9	9	4	24%
20Z	3	0	0	
21D	2	2	1	6%
24	1	1	1	6%
Unknown	41	0	0	0%
Total	75	31	17	
TATITLEK				
6A	1	1	0	
6C	1	1	1	25%
6D	2	2	0	
6Z	9	0	0	
13A	1	1	0	
13B	1	1	0	
13D	2	2	1	25%
14A	1	1	1	25%
14C	1	1	0	
20D	1	1	1	25%
Unknown	26	0	0	
Total	46	11	4	

Continued on next page

Appendix B. *Continued from previous page.*

Moose 1985-2010 cumulative				
Unit	**Number of permits issued**	**Number of people who hunted**	**Number of moose taken**	**Percentage of moose taken**
COOPER LANDING				
6C	1	1	1	1%
7	560	516	68	46%
9C	1	1	0	
9E	1	1	0	
13A	50	50	13	9%
13B	15	15	2	1%
13C	5	5	0	
13D	3	3	1	1%
13E	16	16	2	1%
13Z	5	4	0	
14A	3	3	2	1%
14C	6	6	3	2%
14Z	4	2	0	
15A	71	71	8	5%
15B	64	63	8	5%
15C	13	13	1	1%
15Z	69	13	4	3%
16A	6	6	3	2%
16B	26	26	12	8%
16Z	7	1	0	
17A	1	1	0	
17B	1	1	1	1%
17C	2	2	0	
17Z	1	0	0	
19Z	1	0	0	
20A	5	5	4	3%
20B	5	5	2	1%
20C	1	1	1	1%
20D	5	5	1	1%
20E	12	12	6	4%
20F	2	2	2	1%
20Z	8	0	0	
21D	6	6	1	1%
21E	1	1	1	1%
21Z	4	2	0	
22B	2	2	0	
22D	1	1	0	
23Z	4	4	0	
25A	2	2	0	
26Z	2	0	0	
Unknown	749	6	2	1%
Total	1,741	874	149	

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Appendix B. *Continued from previous page.*

Moose 1985-2010 cumulative				
Unit	**Number of permits issued**	**Number of people who hunted**	**Number of moose taken**	**Percentage of moose taken**
HOPE				
6B	8	8	7	10%
7	241	235	34	50%
9B	3	3	0	
13A	11	11	3	4%
13B	1	1	1	1%
13C	1	1	0	
13E	14	14	6	9%
14A	7	7	2	3%
14B	1	1	0	
14C	5	5	3	4%
14Z	1	0	0	
15A	9	9	0	
15B	1	1	1	1%
15C	4	4	2	3%
15Z	1	0	0	
16A	6	6	3	4%
16B	6	6	2	3%
17C	8	8	2	3%
19A	2	2	0	
19B	1	1	0	
19D	2	2	1	1%
19Z	3	0	0	
20A	4	4	0	
20B	1	1	1	1%
20C	1	1	0	
20E	3	3	0	
20Z	2	0	0	
Unknown	275	7	0	
Total	622	341	68	

Source: OSM 2013.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-11 **with modification** to support the Section 804 analysis conclusion, that residents of only Chenega Bay and Tatitlek should be eligible to harvest moose from the hunt area. However, the Council supported continuing the closed hunting season.

The modification should read:

Unit 7—Moose

Unit 7 – that portion draining into Kings Bay *No open season*

Federal public lands are closed to the taking of moose ~~by all users~~
except by residents of Chenega Bay and Tatitlek.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-13 Executive Summary	
General Description	Proposal WP14-13 requests that antlers from moose harvested by Federally qualified subsistence users in Units 15B and 15C be cut in half through the palm and the cut piece be turned in to the U.S. Fish and Wildlife Service. *Submitted by Dan Presley of Anchor Point, Alaska.*
Proposed Regulation	***.26(n)(15()iii) Antlers harvested under these regulations must be cut through the palm and the cut half turned into the U.S. Fish and Wildlife Service.***
OSM Conclusion	**Oppose**
Southcentral Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-13

ISSUES

Proposal WP14-13, submitted by Dan Presley of Anchor Point, Alaska requests that antlers from moose harvested by Federally qualified subsistence users in Units 15B and 15C be cut in half through the palm and the cut piece be turned in to the U.S. Fish and Wildlife Service.

DISCUSSION

The proponent states that this requirement would limit using the subsistence hunt for hunting trophy bulls. Predation by wolves and bears already severely impacts the moose population and trophy hunting just adds to the population stress. Maintaining trophy bulls in the population will help increase the moose population.

Existing Federal Regulation

There are no Federal regulations that require the destruction of antlers or horns of legally harvested animals in Units 15B and 15C.

Proposed Federal Regulation

> ***.26(n)(15()iii) Antlers harvested under these regulations must be cut through the palm and the cut half turned into the U.S. Fish and Wildlife Service.***

Existing State Regulation

Currently, there are no requirements under State regulations to destroy the trophy value of moose antlers harvested in Units 15B and C.

Extent of Federal Public Lands

Federal public lands comprise approximately 47% of Unit 15 and consist of approximately 46% U.S. Fish and Wildlife managed lands, 0.4% U.S. Forest Service managed lands, and 0.1% National Park Service managed lands. Federal public lands comprise approximately 77% of Unit 15B and consist of approximately 77% U.S. Fish and Wildlife managed lands and 0.7% U.S. Forest Service managed lands. Federal public lands comprise approximately 28% of Unit 15C and consist of approximately 28% U.S. Fish and Wildlife managed lands and 0.3% U.S. National Park Service managed lands.

Customary and Traditional Use Determinations

Rural residents of Cooper Landing, Nanwalek, Ninilchik, Port Graham, and Seldovia have a positive customary and traditional use determination for Units 15A and 15B.

Rural residents of Nanwalek, Ninilchik, Port Graham, and Seldovia have a positive customary and traditional use determination for Units 15C.

Regulatory History

There have been changes to the harvest seasons, harvest limits and customary and traditional use determinations for moose in Units 15B and 15C since 1995, but only a few proposals addressing destruction of antlers on trophy bulls. Three proposals, WP08-19, WP08-20, and WP08-21 dealing with the destruction or disposal of antlers taken by subsistence in Unit 15 were rejected by the Board in 2008 (OSM 2008). Proposal WP08-19 requested that antlers of moose harvested under Federal subsistence regulations be turned into Alaska Department of Fish and Game (ADF&G). Proposal WP08-20 requested that antlers of moose harvested during the late fall season in Units 15B and 15C be taken to the Kenai National Wildlife Refuge manager where the palm of the antler would be cut to destroy any trophy value. Proposal WP08-21 requested that moose antlers harvested under Federal subsistence regulations in Unit 15 be taken to the ADF&G and cut in half with the top half remaining with ADF&G.

Current Events Involving the Species

At its March, 2013 meeting the State Board of Game (BOG) discussed Proposal 143 which requested changes to the hunting seasons and bag limits for moose in Units 7 and 15. The proponent requested that in Units 7 and 15 a legal bull be changed from one which has antlers 50 inches or larger, or with 4 or more brow tines on at least one side to one which has antlers 50 inches or larger, or with 3 or more brow tines on at least one side. The BOG adopted an amended proposal 143B which retained requirement of an adult bull with antlers 50 inches or larger or four or more brow tines on one side, or one bull with a spike. The addition a spike via the State BOG Proposal 143B to the State regulations during the 2013 fall moose hunt in Unit 15 will provide subsistence hunters additional opportunity to take a moose which was not available during 2012.

Biological Background

Moose densities in Unit 15 vary, with the lowest densities occurring in the northern Kenai Peninsula and the greatest densities in the southern portion of the Kenai Peninsula. The distribution and abundance of moose is primarily regulated by habitat quality and quantity, winters with high snowfall, vehicle collisions and hunting. However, predation by black bears, brown bears and wolves are factors that also affect the population dynamics.

Early seral forest habitat, following fires or disturbance, are the most productive areas for moose, because they support high densities forage species including paper birch (*Betula papyrifera*), aspen (*Populus tremuloides*), and willow (*Salix sp.*). Over 50% of spruce forest on the Kenai Peninsula forested land were

killed due to infestations by the spruce bark beetle (*Dendroctonus rufipennis*) that began in 1970s and reached epidemic proportions in the 1990s (Alaska Division of Natural Resources, Division of Forestry). Landscape level fire and spruce bark beetle outbreaks will continue to be major factors of the natural disturbance affecting the forest succession on the Kenai Peninsula and will continue to be major influences affecting moose population dynamics.

Recent documented declines in bull:cow ratios within Unit 15 and the observed decline in bull:cow ratios within portions of Unit 15A and throughout Unit 15C are conservation concerns. The low bull:cow ratios, if not corrected, could lead to low productivity and potentially severe moose population declines on the Kenai Peninsula in the future. Low populations, when combined with the low bull:cow ratios, may be of significant biological concern. Moose management throughout most of Alaska intentionally skews the ratio of adults toward females and the harvest strategy on the Kenai Peninsula focused on selective harvest to facilitate recruitment into the prime breeding class and to increase bull:cow ratio (Bishop and Rausch 1974, Schwartz et al. 1992). While there is no defined bull:cow ratio that will be suitable for all populations, the ratio of males to females must be considered with moose density and distribution within the managed area. Widely distributed populations with very low densities may require higher bull:cow ratios to ensure adequate reproduction, whereas high density populations may not. The combination of antler size, form, and symmetry that cows recognize when selecting mates is not fully understood (Solberg and Saether 1993, Bowyer et al. 2001, Saether et al. 2003). However, prolonged harvests of large antlered bulls may reduce genetic variability over time and cause an irreversible loss of alleles (alternate forms of the same gene) specific to antler features (Hundertmark and Bowyer 1998, Bowyer et al. 2002).

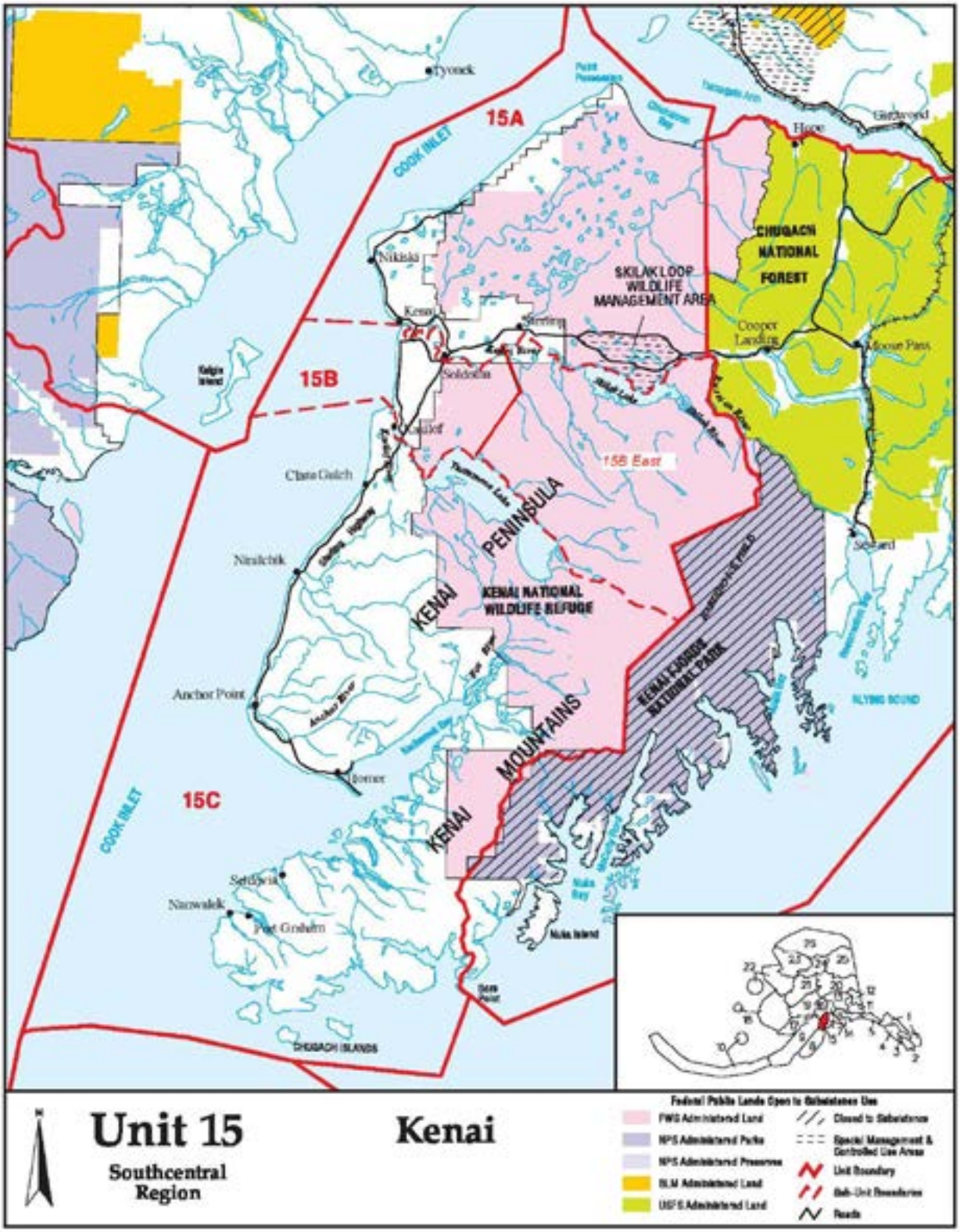
Other significant sources of mortality for moose particularly cows and calves are vehicle collisions and predation. From 2004–2011, an average of 118 moose per year, most of which are cows and calves, were killed in vehicle collisions in Units 15B and 15C (Selinger 2010). A recent study in 2012 by ADF&G in Unit 15C found that only 13% of the calves (N=54) survived and that predation accounted for 61% of the calf mortality predation. From 1978 to 1988, Schwartz and Franzmann (1991) found that black bears accounted for approximately 81% of the moose predation.

<u>Unit 15B</u>

Kenai NWR has established a minimum post-hunting season sex ratio of 25–30 bulls:100 cows within the western portion of Unit 15B and 40–60 bulls:100 cows within the eastern portion of the unit (USFWS 1996). The State's management objectives for Unit 15B, in the central Kenai Peninsula, are to maintain a bull:cow ratio of 15:100 for Unit 15B west and a bull:cow ratio of 40:100 for Unit 15B east (**Map 1**).

In 2001, an aerial survey of suitable moose habitat in Unit 15B estimated the population to be 958 (95% CI: 777–1,139) with an estimated density of 1.5 moose per mi^2. The percentage of calves during the 2001 survey was estimated to be 21% which was an increase of 10% from a previous survey conducted in 1990 (Selinger 2010). Composition counts in Unit 15B east conducted in 2010–2011 estimated a bull:cow ratio of 33:100 cows, which was a decline from 51:100 seen during 2009/2010 and below both the Federal and State management goals. The calf:cow ratios also declined from the 2009–2010 (11:100 cows) to 9 calves

per 100 cows in 2010–2011 (Herreman 2013, pers. comm). Both the 2009–2010 and the 2010–2011



calf:cow rations are below the 1990 estimate. Based on the low calf survival and low bull:cow ratio this population may be in decline. State's overall assessment is that the population is declining.

Unit 15C

Kenai NWR has established a minimum post–hunting season sex ratio of 40–60 bulls:100 cows within the Caribou Hills portion of the Unit 15C and 25–30 bulls:100 cows within the remainder (USFWS 1996). The State's management objectives for Unit 15C are to maintain a minimum post-hunting season sex ratio of 15–20 bulls:100 cows. Aerial surveys were conducted in the lowland portions of Unit 15C using two different survey designs and estimation methods, during the winter of 1992–1993 and repeated again during the winter of 2001–2002. Population estimate from the random-stratified census (Gassaway 1986) conducted in 1992–1993 was 2079 (95% CI: 1425–2734). During the winter of 2001–2002, based on a geospatial analysis in the same area (GSPE, Ver Hoef 2001) the population estimate was 2981(95% CI: 2508–3454). Results from the geospatial analysis (GSPE, Ver Hoef 2001) conducted in 2010 was 2195 and from surveys conducted in 2013 was 3204 (Herreman 2013, pers. comm.). The State's assessment is that the moose population in 15C is stable (ADFG 2013).

Bull:cow and calf:cow ratios were lower in the 2007–2008 composition surveys (12–13 bulls:100cows; 18 calves:100 cows) than they were during the 2005 composition surveys (21 bulls:100 cows; 27 calves:100cows) (Selinger 2010). The bull:cow ratio from the 2010–2011 fall composition survey was 9:100 which was much lower than the long-term average from 1990 to 2010 of 29:100. Since 2001 the average number of bulls per 100 cows was 15. The average since 2001, including the recent bull:cow ratios from 2011 (14) and from 2013 (23) (Herreman 2013, pers. comm.), is 16 which is just above the minimum State's management goal of a post hunt bull:cow ratio of 15–20 bulls per 100 cows but below the recommended guidelines from the Kenai NWR moose management plan (USFWS 1996). Minimum bull:cow ratios are required to ensure most cows conceive during their first estrous cycle and to minimize the length of rut (Schwartz et al. 1994).

Habitat

Moose densities vary throughout Unit 15 and are dependent upon the availability of suitable browse. The availability of suitable browse primarily results from fire creating a disturbance and providing conditions suitable for hardwood regeneration to occur. Following a significant disturbance such as a landslide or intense wildfire, various species of hardwood trees and shrubs will grow providing quality winter browse for moose and other species (USFWS 2001). The high moose populations in recent decades were indicative of high-quality habitat that was created by the historic burns on the Kenai Peninsula (Loranger et al. 1991). In more recent years, the hardwood browse has been replaced by spruce or has matured past suitable browse for moose (Berg 2009). The major browse species for moose on the Kenai Peninsula are paper birch, aspen, willow, alder (*Alnus sp.*), and lowbush cranberry (*Vaccinium vitisidaea*) (Oldemeyer et al. 1977). The hardwood vegetation type represents 5% of the Kenai National Wildlife Refuge (or 10% of the forests on the Refuge) and 40% is early successional and intermediate-stage hardwood (USFWS 2010).

Browse regeneration occurs after timber harvesting or other natural (e.g. spruce bark beetle outbreak) or man-made disturbances (e.g. hydroaxing). Dendrochronology studies have shown that bark beetles have

been historically active on the Kenai Peninsula at low levels, however the outbreak from 1989–2003 was of unprecedented size and intensity and infested 800,000 acres on the Kenai Peninsula (USFWS 2010). Increasing temperatures and drought stress due to climate change likely increased the rate of spruce bark beetle outbreaks on the Kenai Peninsula (Berg et al. 2006). In addition, the invasion of wetlands on the Kenai Peninsula by woody shrubs and black spruce may lead to a reduced moose population in the long-term (Klein et al. 2005). Wetlands are an important component for moose for wintering forage and the trend for vegetation succession of these habitat types is increasing (Klein et al. 2005 and Stephenson et al. 2006).

There has been little change in the habitat conditions in Unit 15B since 1890, when a wildfire burned most of the Unit. Although approximately 34,000 acres have burned from 2004–2009 (Selinger 2010) there have been no major wildfires (USFWS 2010).

In Unit 15C, heavy snowfalls can limit the amount of available moose habitat during the winters. Important wintering habitat on the lower peninsula include Ninilchik River, Stariski Creek, Anchor River, Fritz Creek, lower reaches of Fox River and Sheep Creek, and Homer Bench (Selinger 2010). Many of the wintering areas have incurred spruce bark beetle infestations. The effects on the moose habitat from the loss of spruce trees and salvage logging which has been ongoing for more than a decade are unknown. Site preparation following logging if done properly can encourage the regeneration of hardwoods, but if done improperly, can result in the establishment of blue-joint grass (*Calamagrostis canadensis*). If blue-joint grass becomes established it will initially crowd out seedlings from hardwoods and spruce thus creating lower quality moose habitat and slowing down forest succession to a mature hardwood and spruce forests (Selinger 2010).

Harvest History

An average of 472 moose were harvested in Unit 15 each year from 2001 to 2010 (OSM 2013). The number taken by Federally qualified subsistence users on Federal public lands is about 1 % of the Unit 15 average total during the last 11 years (**Table 1**). During this period, approximately 11% were taken in Unit 15B (**Table 2**) and 60% were taken in Unit 15C (**Table 3**). Excluding Unit 15A, approximately 83% were harvested in Unit 15C and 17% in Unit 15B from 2001 – 2010. In Unit 15B, the mean harvest from 2001–2010 in Unit 15B West was 42 (81%) and in Unit 15B East 10 (19%). From 2002 –2010, drawing permits for cow moose have been issued in the Homer area and have resulted in an average of 24 cows per year (range 18 to 30) between 2004 and 2008 (**Table 3**) (Selinger 2010). The cow harvest accounts for approximately 9 % of the total harvest in Unit 15C. Since 2001 the proportion of spike bull moose bulls (includes spike and spike-fork) harvested under State hunting regulations by communities that have customary and traditional use determination for Units 15B and 15C averaged 62% (**Table 4**).

Since 2001 the average moose harvest by Federally qualified subsistence users in Units 15A, 15B, and 15C has been 0.45, 1.5, and 2.0, respectively. There have been no documented reductions in the number following the rut as a result of the harvest during the early or late subsistence hunts in Units 15A, 15B, or 15C. The current antler restriction (spike/fork, or 50–inches or 3+ brow times on one antler) are regulations designed specifically to protect breeding bulls and the moose population as a whole.

Table 1. Number of Federal moose harvests permits and moose harvested between 2001–2002 and 2011–2012 in Unit 15 (OSM 2013).

Year	Number of Permits Issued	Number of Permits Hunted	Moose Harvested in Unit 15(A)	Moose Harvested in Unit 15(B)	Moose Harvest-ed in Unit 15(C)	Total Moose Harvest in Unit 15
2001/02	41	28	1	1	3	5
2002/03	43	27	0	2	5	7
2003/04	40	25	0	1	1	3
2004/05	30	19	0	1	2	3
2005/06	24	12	0	0	1	1
2006/07	92	58	2	1	2	5
2007/08	102	67	2	2	4	8
2008/09	64	41	0	3	1	8
2009/10	71	58	0	2	1	6
2010/11	63	37	0	1	2	4
2011/12	48	27	0	2	0	3
Total	618	399	5	16	22	53
Mean	56	36	0.45	1.5	2.0	4.8

Table 2. State moose harvest in Unit 15B West (general harvest area) and Unit 15B East (trophy management area: DM 530-539) from 2001–2002 to 2010–2011 (OSM 2013, Herreman 2013).

Year	**15B West** (Aug. 10–Aug. 17[archery]; and Aug. 20–Sept. 20)	**15B East** (Sept. 1–Sept. 20; and Sept. 26–Oct. 15)	**Total Unit 15B Moose Harvest**
2001/02	50	16	66
2002/03	41	12	53
2003/04	42	15	57
2004/05	37	16	53
2005/06	47	16	63
2006/07	40	9	49
2007/08	40	5	45
2008/09	33	2	35
2009/10	38	2	40
2010/11	52	3	55
Totals	420	96	516
Means	42 (81.1%)	9.6 (18.9%)	51.6

Table 3. Unit 15C State moose general harvest, regulatory years 2001/2002 to 2010/2011 (Selinger 2010, OSM 2013, Herreman 2013).

Year	Bulls	Cows	Unknown	Total
2001/02	309	1	3	313
2002/03	258	27	2	287
2003/04	310	30	1	341
2004/05	278	22	2	302
2005/06	278	27	1	306
2006/07	214	18	2	234
2007/08	211	22	0	233
2008/09	195	23	1	219
2009/10	244	28	4	276
2010/11	215	22	3	240
2011/12	25	29	3	57
Totals	2537	249	22	2801
Means	254	25	2	280

Table 4. Proportion of spike-fork moose harvest in Unit 15B and 15C by individuals who live in communities with Customary and Traditional use determination and non-Federally qualified users and harvested under the State hunting regulations. Percent represents the percentage of harvest that was a spike-fork moose within total harvest by user class (OSM 2013).

	Unit 15B Spike-fork Harvest		**Unit 15C Spike-fork Harvest**	
Year	C & T residents	Non-Federally Qualified Users	C & T residents	Non-Federally Qualified Users
2001/02	0	32 (48%)	20 (49%)	134 (46%)
2002/03	0	25 (43%)	25 (53%)	105 (40%)
2003/04	0	23 (40%)	25 (53%)	112 (36%)
2004/05	0	28 (53%)	26 (68%)	138 (50%)
2005/06	0	36 (57%)	18 (55%)	137 (49%)
2006/07	0	30 (61%)	26 (72%)	103 (50%)
2007/08	0	29 (66%)	14 (61%)	106 (48%)
2008/09	0	28 (80%)	17 (72%)	113 (56%)
2009/10	1(33%)	26 (62%)	24 (73%)	119 (47%)
2010/11	0	31 (57%)	10 (59%)	146 (70%)

Effects of the Proposal

If this proposal is adopted it would require any Federally qualified subsistence user that harvests an antlered bull moose on Federal lands under the Federal Subsistence regulations to cut the antlers in half on one side, destroying the trophy value of the antlers. If this proposal is adopted it could potentially prevent Federally qualified subsistence users from making full use of the antlers to make handicrafts. In addition, current Federal regulations require that antlers be removed from the field intact. Federal regulation also allow for the sale of moose antlers once they are detached from the skull of a legally harvested bull moose as long as they are not made to represent a trophy. Most subsistence hunters take moose that are readily available and do not actively go after very large trophy size bull moose.

OSM CONCLUSION

Oppose Proposal WP1-13.

Justification

In Unit 15 and elsewhere in Alaska, moose populations—breeding age bulls in particular—are protected from over-harvest by antler restrictions (spike/fork or 50-inches or 3 or more brow tines on one antler). Not only is this regulation a conservative approach to moose management, it focuses the harvest on a portion of the yearling bulls or, occasionally, a fully mature, large male. When Federal regulations have antler restrictions such as these in place, antlers must be removed from the field intact §___.26(g)(3). In addition, Federal regulations allow Federally qualified subsistence users to make handicrafts and sell moose antlers once they are detached from the skull of a legally harvested animal or not made to represent a big game trophy §___.25(j)(10). The proposal requests moose antlers would either have to be destroyed—by cutting the palms in half—or left with the Kenai National Wildlife Refuge; thereby diminishing or eliminating any value that could be gained through the creation of handicrafts.

There have been no documented impacts to the moose population in Unit 15 from the subsistence take of very large bulls during the normal subsistence hunt. In addition, requiring Federally qualified subsistence hunters to cut and turn in the antlers is burdensome and is not consistent with current historical subsistence practices. Keeping Federally qualified subsistence users from making full use of the antlers from the few animals they harvest is not necessary to protect the moose populations.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP14-13. No conservation concerns exist. The proposed regulation would be a burden on subsistence users and it would destroy the opportunity for the use of antlers in handicrafts.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-16 Executive Summary	
General Description	Proposal WP14-16 requests a new winter hunt for moose in the southern portion of Unit 11 from Nov. 20 to Dec. 20. *Submitted by Wrangell-St. Elias National Park Subsistence Resource Commission.*
Proposed Regulation	**Unit 11—Moose** *Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 antlered bull by joint Federal/State registration permit.* — *Aug.20–Sept. 20* *Unit 11 remainder—1 antlered bull by Federal registration permit only* — *Aug. 20–Sept. 20* ***Unit 11—that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain – 1 antlered bull by Federal registration permit.*** — ***Aug. 20–Sept. 20*** ***Unit 11—that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain – 1 bull by Federal registration permit. The annual harvest quota will be announced by Wrangell-St. Elias National Park and Preserve.*** — ***Nov. 20–Dec. 20***
OSM Conclusion	**Support** Proposal WP14-16 **with modification** to delete the regulatory language in the proposed Unit 11 moose regulation and delegate authority to Wrangell–St Elias National Park and Preserve Superintendent to open and close any portion of the season, and establish a quota for the winter moose season from Nov. 20 to Dec. 20 via a delegation of authority letter only.
Southcentral Regional Advisory Council Recommendation	**Support** Proposal WP14-16 **with modification** as described in the OSM Conclusion.

WP14-16 Executive Summary	
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** WP14-16 **with modification** to change the bag limit to one antlered bull to protect the bull segment of the population from overharvest and reduce the potential for cow harvest during the period when bulls are losing their antlers.
Written Public Comments	2 **Support**, 1 **Oppose**

STAFF ANALYSIS
WP14-16

ISSUES

Proposal WP14-16, submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission, requests a new winter hunt for moose in the southern portion of Unit 11 from Nov. 20 to Dec. 20.

DISCUSSION

Most of the moose in the proposed hunt area move from the high elevations during the fall where they are inaccessible to subsistence hunters to lower elevations along the valleys in the winter. In addition, there is limited access in the fall moose season to hunting areas south of the Chitina River due, in part, to having to cross the Chitina River. The proposed winter hunt would provide Federally qualified subsistence users the opportunity to hunt moose during the winter season when the moose are more accessible by snow machine. In addition, subsistence users in remote areas often live off the electrical grid and consequently do not have freezers to store their meat. A winter season would not only allow for better access to moose, but would allow the meat to be stored without the need of freezers.

The proposed hunt area is not directly accessible by road. In addition, much of the area is designated as National Park, and under National Park Service regulations, aircraft may not be used to access National Park lands for subsistence hunting (36 CFR 13.450).

Existing Federal Regulation

Unit 11—Moose

Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 antlered bull by joint Federal/State registration permit.	*Aug. 20–Sept. 20*
Unit 11 remainder—1 antlered bull by Federal registration permit only	*Aug. 20–Sept. 20*

Proposed Federal Regulation

Unit 11—Moose

Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 antlered bull by joint Federal/State registration permit.	*Aug.20–Sept. 20*

Unit 11 remainder—1 antlered bull by Federal registration permit only	*Aug. 20–Sept. 20*
Unit 11— that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain – 1 antlered bull by Federal registration permit.	***Aug. 20–Sept. 20***
Unit 11— that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain – 1 bull by Federal registration permit. The annual harvest quota will be announced by Wrangell-St. Elias National Park and Preserve.	***Nov. 20–Dec. 20***

Existing State Regulation

Unit 11 – Moose

Unit 11– *that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage*	*Residents: One bull*	*CM300*	*Aug. 10–Sept.20*
	Residents: One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit available in person in Anchorage, Fairbanks, Glennallen, Palmer, Slana Ranger Station or Tok	*RM291*	*Aug. 20–Sept. 17*
	Nonresidents: One bull with 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit available in person in Anchorage, Fairbanks, Glennallen, Palmer, Slana Ranger Station or Tok.	*RM291*	*Aug. 20–Sept. 17*

Unit 11–remainder	*Residents: One bull*	*CM300*	*Aug. 10–Sept.20*
	Residents and nonrersidents: One bull with spike-for antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side.	*HT*	*Aug. 20–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 88% of Unit 11 and consist of approximately 85% National Park Service managed lands, 3% National Forest Service managed lands, and 0.1% Bureau of Land Management managed lands. A majority of the proposed winter moose hunting area consists of National Park Service managed lands (**Map 1**).

Customary and Traditional Use Determinations

Residents of Units 11, 12, 13A, 13B, 13C, and 13D, Healy Lake, Chickaloon, and Dot Lake have a positive customary and traditional use determination for moose in Unit 11 north of the Sanford River, which does not overlap with the proposed winter moose hunt area.

Residents of Units 11, 13A, 13B, 13C, and 13D, and Chickaloon have a positive customary traditional use determination for moose in Unit 11 remainder.

Under the guidelines of ANILCA, National Park Service regulations identify qualified local rural subsistence users in National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and 2) identifying and issuing subsistence use (13.440) permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use. 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 1992, the Federal Subsistence Board (Board) added 10 days to the moose season in Unit 11, aligning it with the seasons in adjoining subunits in Units 6, 12, and 13. In 1999, Healy Lake was added to communities that had a positive customary and traditional use determination for moose in the portion of Unit 11 north of the Sanford River (OSM 1999a) but the Board rejected the decision in 2000 to add residents of Unit 6C for that portion of Unit 11 south of the Sanford River (OSM 1999b). In addition, the Board approved with modification a five day season extension to the Unit 11 moose season at the beginning of the season. Adding five days at the beginning of the season was done to provide additional opportunity for subsistence harvest while protecting the moose population from disruption during the breeding season and align the Federal and State season (OSM 1999b). In 2002, the Board approved the take of a moose in either Unit 11 or Unit 12 without a calf for the annual Batzulnetas Culture Camp by two hunters designated

SE Unit 11 Winter Moose Hunt Area Map

by the Mt.Sanford Tribal Consortium (OSM 2002). In May 2007, the Board rejected Proposal WP07-20 to change the season dates to September 1–30 (FWS 2007). In 2012, the Board adopted Proposal WP12-70, which divided Unit 11 into two hunt areas and created a single, joint Federal/State registration permit to administer the hunt area in Units 11 and 12 along the Nabesna Road and a Federal registration permit for Unit 11 remainder.

Biological Background

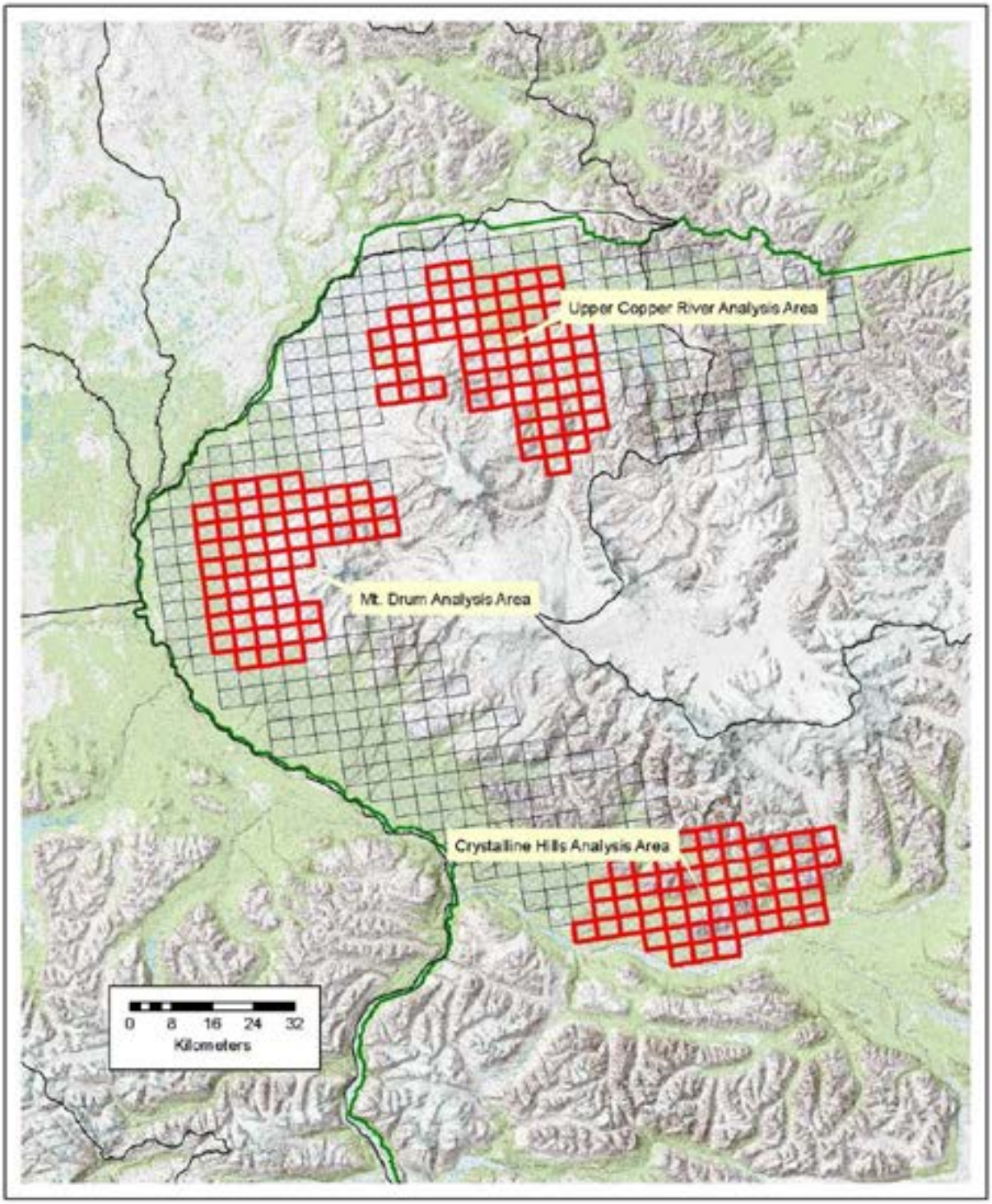
The moose population in Unit 11, which initially increased in the 1950s, has experienced two peaks, one in the early 1960s and the other in 1987, and two lows in 1979 and 2001 (Tobey 2010). Predation on moose calves by bears and wolves has been shown to be an important limiting factor in some moose populations (Tobey 2010). The relatively high brown bear numbers in Unit 11, and possibly high wolf numbers, may be contributing to the low calf:cow ratios observed in this unit, as well as the overall low, but stable density moose populations in Unit 11 (Tobey 2008).

State management goals for moose in Unit 11 are (Tobey 2010):

- To allow the populations to fluctuate based on the available habitat and predation rates.
- Maintain a population with a post hunt age/sex composition of 30 bulls (of which 10-15 are adult bulls) per 100 cows
- Provide a sustainable moose harvest opportunity consistent with the State's management and population objectives.

Three main moose survey efforts have been conducted in Unit 11. The first are ongoing surveys conducted by ADF&G in the Mount Drum area, the second are surveys conducted by Wrangell-St. Elias National Park and Preserve in the north end of Unit 11 from 2003 – 2008, and the third are Geospatial Population Estimator (GSPE) surveys conducted in 2007, 2010, and 2011 by the Wrangell-St. Elias National Park and Preserve staff throughout Unit 11 (**Map 2**).

No records could be found of a moose survey that has been conducted in the area proposed for the winter hunt in Unit 11. Aerial population and composition trend surveys are usually conducted by the Alaska Department of Fish and Game (ADF&G) every other year during late fall along the western slopes of Mount Drum (Count Area CA 11). The survey indicator area on Mt. Drum (Count Area CA 11) includes 212 mi^2 which is approximately 1.7% of Unit 11 (12470 mi^2). The total number of moose counted in CA11 averaged 158 moose per regulatory year between 1998 and 2012 (**Table 1**). Density estimates from 1999 to 2012 ranged from 0.3 to 1.0 moose/$mi^{2\ in}$ CA11 (**Table 1**) (Tobey 2004, Tobey 2010). The bull:cow ratio averaged 101bulls:100 cows from 1998 through 2012 (Tobey 2010, Schwanke 2013, pers. comm.), which exceeds the current State management goal of having a minimum of 30 bulls: 100 cows, and 15 adult bulls:100 cows. The average number of calves: 100 cows in Unit 11 between 1998 and 2012 was 20 (range 9-48) (Tobey 2010, Schwanke 2013, pers. comm.).



Map 2. Analysis areas within the count area. These areas were selected to allow comparisons with historical survey areas (Putera 2010).

Table 1. Unit 11 moose population demographics on the western slopes of Mount Drum, Wrangell-St Elias National Park and Preserve, AK, 1998-2009 – a lightly hunted population (Tobey 2004, 2008; Schwanke 2013).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves/ 100 Cows	% Calves	Moose /hour	Density Moose/ mi^2
1998-99	51	46	7	104	111	15	7	24	0.4
1999-00	58	53	11	122	109	21	9	28	0.4
2000-01	58	37	9	104	157	24	9	23	0.4
2001-02	43	46	4	93	94	9	4	19	0.3
2002-03	----	----	----	----	----	---	--	---	----
2003-04	69	60	9	138	115	15	7	30	0.5
2004-05	----	----	----	----	----	----	----	----	----
2005-06	----	----	----	----	----	----	----	----	----
2006-07	57	62	30	149	92	48	20	32	0.5
2007-08	----	----	----	----	----	----	----	----	----
2008-09	63	86	15	164	73	17	9	38	0.6
2009-10	----	----	----	----	----	----	----	----	----
2011-12	167	69	29	265	71	21	11	46	0.9
2012-13	237	25	20	282	84	13	7	46	1.0
Mean	89	54	15	158	101	20	9	32	0.56

Moose population information was also collected by Wrangell-St. Elias National Park and Preserve (WRST) staff near the north end of Unit 11 in the Upper Copper River (UCR) moose survey area, which covers the Boulder Creek drainage east to Copper Lake (**Table 2**). Although a portion of this survey area is accessible using all-terrain vehicles from the Nabesna Road, the western portion of the survey area is accessible only by aircraft. Between 2003 and 2008 (excluding 2007), an average of 297 moose were counted annually in the Upper Copper River moose survey area (**Table 2**) (Reid 2007). Results from the sex and age composition trend found that the calf:cow ratio was fairly stable, averaging 12 calves:100 cows with calves accounting for about 7% of the population. The bull:cow ratio remained fairly stable as well, averaging 46 bulls:100 cows; again, well above the management objective.

Although a moose population census for all of Unit 11 has never been conducted, population estimates from the Geospatial Population Etimator (GSPE) surveys conducted in 2007, 2010, and 2011 by the Wrangell–St Elias staff represent the most comprehensive moose population data for Unit 11 (Putera 2013, pers. comm). The geospatial method (GeoSpatial Population Estimator (GSPE), Ver Hoef 2001) developed by ADF&G is an accepted method for estimating moose populations in large areas such as Unit 11. In 2007 and 2010, WRST staff conducted GSPE surveys in Unit 11, which covered much larger areas than previous surveys (**Table 3**). Population estimates for the total survey area, bull:cow ratio, and calf:cow ratio were similar in 2007 and 2010 (**Table 3**) (Reid 2008, Putera 2010). Separate population estimates were also determined for three analysis areas that cover previous trend count survey areas. For the Mt. Drum area, the bull:cow ratio continued to remain high at 118:100 in 2007 and 55:100 in 2010 (**Table 3**). Moose density increased slightly in 2010 from the 2008 survey. Results of the 2007 and 2010 GSPE surveys for the UCR area are consistent with previous trend surveys, with 2-3 times more moose observed than in the Mt. Drum and Cystalline Hills survey areas. The calf:cow ratios were both slightly higher in 2010 (**Table 3**) than the surveys conducted in 2008, 2011, and 2012 (**Table 1**). In addition, in cooperation with ADF&G the wildlife biologists at Wrangell–St Elias National Park and Preserve conducted a GSPE survey in 2011 along the Nabesna Road corridor, an area that receives relatively high hunting pressure. The population estimate was 1272 with an estimated density of 0.79 moose/mi^2 a bull:cow ratio of 34:100 and a calf:cow ratio of 27:100. The bull:cow ratio along the Nabesna Road corridor (34:100cows) was substantially lower than the bull:cow ratios from the 2007 and 2010 GSPE surveys (**Table 3**).

Habitat

In 2009, a large fire occurred in the accessible portion of the proposed hunt area. Typically within 10 –15 years following fires or disturbance (Loranger et al. 1991), early seral forest habitat, becomes the most productive areas for moose because it supports high density of forage species such as paper birch (*Betula papyrifiera*), aspen (*Populus tremuloides*), and willow (*Salix sp.*). The severity and frequency of fires will determine how productive and when the area becomes most productive for moose (Loranger et al. 1991; Johnstone and Kasischke 2005; Brown and Johnstone 2012). The peak moose density during winter occurred approximately 15 years after the 1947 fire on the Kenai Peninsula (Loranger et al. 1991).

Table 2. Unit 11 moose population demographics in the Upper Copper River survey area, Boulder Creek to Copper Lake, Wrangell – St. Elias National Park and Preserve, AK, 2003-2008 – a relatively heavily hunted population accessible by aircraft and all-terrain vehicles (Reid 2007, 2008; Putera 2010).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves/ 100 Cows	% Calves
2003	97	215	21	333	45	10	6
2004	78	142	25	245	55	18	10
2005	92	183	11	286	50	6	4
2006	86	218	31	335	39	14	9
2008	77	186	22	285	41	12	8
Total	430	944	110	1,484			
Mean	86	189	22	297	46	12	7

Table 3. Moose Population Estimates for selected areas of Unit 11, from GSPE surveys conducted in 2007, 2010, and 2011 (Reid 2008, Putera 2010, Putera 2013).

Area	Year	Population Estimate	Moose Observed	Calf:100 Cows	Bull:100 Cows	No. Units Surveyed	Density (mi²)
Total Survey 3170 mi²	2007	1576 ± 244	500	19	52	87	0.49
	2010	1593 ± 225	623	17	50	94	0.50
Upper Copper 524 mi²	2007	403 ± 70	170	16	38	25	0.76
	2010	539 ± 106	220	14	49	19	1.02
Mt. Drum 349 mi²	2007	232 ± 65	82	11	118	8	0.66
	2010	186 ± 51	66	35	55	11	0.53
Crystalline Hills 349 mi²	2007	260 ± 93	63	29	42	9	0.74
	2010	259 ± 55	134	17	50	16	0.74
Nabesna 1602 mi²	2011	1272 ± 134	551	347	34	107	0.79

Harvest History

Moose harvest from 1963 to 1974 averaged 164 moose per year in Unit 11. During this time there was both a fall and winter season and cows made up as much as 50% of the harvest (Tobey 2010). In response to declining moose numbers the seasons were shortened, the winter season was eliminated, and the harvest was restricted to bulls only from 1975 to 1989. An average of 45 bulls (range 21-58) were harvested per year from 1975-1989. In 1990 the State season was shortened to September 5 to September 9 due to deep snow conditions. During the 1990s, the average harvest was 34 bulls (range 22-42). Since 2000, the mean harvest has been 58 bulls which include an estimate of 10 unreported each year (**Table 4**) (Tobey 2010, OSM 2013). One moose was harvested in Unit 11 under the Copper Basin Community Permit Hunt (CM300) in 2009 (OSM 2013). Since 2000, very few moose have been harvested in the proposed winter hunt area (**Table 5)**.

Table 4. State and Federal Moose harvest in Unit 11 from 2000-2011 (Toby 2010, OSM 2013).

Year	Male	Female	Unknown Sex	Estimate of Unreported Kill	Total Feder-al	Total State	Total
2000/2001	52	0	1	10	23	30	63
2001/2002	43	1	1	10	14	31	55
2002/2003	40	0	1	10	8	33	51
2003/2004	45	0	0	10	15	30	55
2004/2005	56	0	1	10	27	30	67
2005/2006	47	1	0	10	24	24	58
2006/2007	41	0	1	10	20	22	52
2007/2008	47	2	0	10	25	24	59
2008/2009	58	0	0	10	28	30	68
2009/2010	74	0	2	10	20	56	86
2010/2011	40	0	0	10	20	20	50
2011/2012[a]	26	0	0	10	27		36

[a] State data for 2011/2012 not available

Table 5. State Moose harvest in the proposed winter moose hunt area in Unit 11 from 2000-2001 to 2010-2011 (**Map 1**, OSM 2013).

Year	Alaska Residents	Rural Residents[a]	Non- Res-idents	Total
2000/2001	10	4	0	10
2001/2002	8	4	0	8
2002/2003	11	9	1	12
2003/2004	10	5	0	10
2004/2005	8	5	1	9
2005/2006	9	4	5	14
2006/2007	5	3	2	7
2007/2008	12	6	1	13
2008/2009	8	4	3	11
2009/2010	6	4	2	8
2010/2011	10	8	0	10

Determination of rural residents based on Federal Subsistence Regulations, 2012-2014 for Unit 11 remainder (rural residents of Units 11, 13A, 13B, 13C, and 13D and Chickaloon).

Effects of the Proposal

If this proposal is adopted it would establish a winter moose season from Nov. 20 to Dec. 20 in a portion of Unit 11. This season would provide Federally qualified subsistence users with an additional opportunity to harvest moose that are difficult to access during the fall season. If adopted, a Federal registration permit with a harvest quota announced by the Wrangell St. Elias National Park would be established to ensure the harvest levels are sustainable. The month long season would allow the hunters to take advantage of periods of good weather.

Although no moose population surveys have been conducted in the proposed winter hunt area. The populations in the areas of Unit 11 that have been surveyed have remained stable to slightly increasing over the last 12 years. Although the additional season would likely increase the harvest of moose, the amount of harvest can be controlled through the use of permits and the harvest quota. Even though the hunt as proposed is restricted to bulls, many of the bulls will have shed their antlers by this time of the year so the potential of inadvertently harvesting a cow will increase. Conducting GSPE surveys in the proposed area

for the winter hunt in Unit 11 would provide additional information for biologists and managers to determine a quota that is biologically sustainable.

OSM CONCLUSION

Support Proposal WP14-16 **with modification** to delete the regulatory language in the proposed Unit 11 moose regulation and delegate authority to Wrangell–St Elias National Park and Preserve Superintendent to open and close any portion of the season, and establish a quota for the winter moose season from Nov. 20 to Dec. 20 via a delegation of authority letter only (**Appendix 1**).

The modified regulation should read:

Unit 11—Moose

Unit 11—that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 antlered bull by joint Federal/State registration permit.	*Aug.20–Sept. 20*
Unit 11 remainder—1 antlered bull by Federal registration permit only	*Aug. 20–Sept. 20*
Unit 11— that portion south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain – 1 bull by Federal registration permit. However during the period Aug. 20–Sept. 20, only an antlered bull may be taken. ~~The annual harvest quota will be announced by Wrangell-St. Elias National Park and Preserve. The Wrangell-St Elias National Park and Preserve Superintendent is authorized to open or close the Nov/Dec season and establish a quota in consultation with ADF&G.~~	***Aug. 20–Sept. 20*** ***Nov. 20–Dec. 20***

Justification

Establishment of a winter moose hunt will allow subsistence users to take advantage of favorable weather and provide more opportunity to harvest moose. The hunt would occur in the winter when the weather is cooler thus making it easier for subsistence users who live off the electrical grid and don't have freezers to keep the meat from spoiling.

The moose population in areas surveyed in Unit 11 have remained relatively stable to slightly increasing during the last 12 years. The population should be able to sustain an additional small harvest of bulls

during the proposed winter harvest season. The winter moose harvest should be low and will be controlled by the use of registration permits and quotas which will be set by the Wrangell-St Elias National Park and Preserve Superintendent (**Appendix 1**).

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Appendix 1

Superintendent
Wrangell – St. Elias National Park and Preserve
P.O. Box 439
Copper Center, Alaska 99573

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Superintendent of the Wrangell – St. Elias National Park and Preserve, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within Unit 11as it applies to moose on these lands.

It is the intent of the Board that actions related to management of moose by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State managers, Federal managers of other agencies, and the Chair and applicable members of the Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Superintendent of the Wrangell – St. Elias National Park and Preserve is hereby delegated authority to issue emergency or temporary special actions affecting moose on Federal lands as outlined under 3. Scope of Delegation of this section. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To set season opening and closing dates for the moose on Federal public lands in Unit 11 south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain .

- As needed, set or adjust harvest quotas for moose on Federal Public lands in Unit 11 south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain .

This delegation may be exercised only when it is necessary to conserve the moose population or to continue subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within Unit 11 south and east of a line running along the north bank of the Chitina River, the north and west banks of the Nazina River, and the west bank of West Fork of the Nazina River, continuing along the western edge of the West Fork Glacier to the summit of Regal Mountain. The Federal lands are managed by the Wrangell–St Elias National Park and Preserve and the Chugach National Forest.

3. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

4. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no 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 maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management and coordinate with local ADF&G managers, the U.S. Department of Agriculture, U.S. Forest Service and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
National Park Service Regional Director
U.S. Forest Service, Chugach National Forest, Cordova District Ranger
Chair, Southcentral Alaska Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Coordinator, Southcentral Alaska Subsistence Regional Advisory Council
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-16 **with modification** as recommended by OSM. This proposal would provide additional subsistence opportunities and there are no conservation concerns. Harvest quota will be established by the Wrangell-St. Elias National Park Superintendent through the delegation of authority issued by the Federal Subsistence Board.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-16: We support Proposal WP14-16 to add a winter regulatory hunt for a "Unit 11 - 1 bull moose with an open season date from November 20 to December 20, with a federal registration permit and the harvest quota to be announced by Wrangell-St. Elias National Park and Preserve, and to keep the existing fall hunt. Adding a winter moose hunt in Southern portion of Unit 11 will provide for subsistence needs. Moose are in the high country during the fall months and are difficult to harvest. Harvesting a bull moose during the winter months will help local federally qualified subsistence users harvest a bull moose when it is easier to harvest and is more accessible. A quota determined by NPS Headquarters in Copper Center will ensure that Bull Moose will not be over harvested by local federally qualified subsistence users.

Ahtna Inc. Customary and Traditional Use Committee

Support Proposal WP14-16: Access to remote areas can very often mean getting your 1 bull moose for the year. Winter access for subsistence hunters that are not connected to the grid with freezers is a very important aspect of subsistence life and the success of people living on the land in remote areas.

Donald Woodruff, Eagle

Oppose Proposal WP14-16: Winter Moose Hunts within Wrangell-St. Elias National Park. The Wrangell-St. Elias National Park Subsistence Resource Commission preference should not be used to develop the winter moose hunt. Such moose management should be based on law and policy with reference to the desired future conditions. The National Park Service (NPS) should be the sole judge of what these conditions are.

Biological Concerns

- There has never been a complete documented aerial moose survey in Game Unit 11 to determine the population and/or bull-cow ratio. Before a winter moose hunt is implemented, this information is significant to the nature and healthy balance in a National Park Service (NPS) unit.

- The State Fish and Game and the NPS have based aerial moose surveys on a very small percentage of Unit 11 north of Boulder Creek that is less than two percent of Unit 11. How can a proposed winter moose hunt be justified with such a small area documented? I suggest that the NPS conduct an aerial survey of the two areas prior to the hunt to determine if the hunt should take place and that there is an adequate population and bull-cow ratio.
- The two proposed winter hunt areas are completely opposite. The north area is more suited for moose habitat whereas the southern area is more mountainous with limited moose habitat and has never been surveyed for moose management.
- The State Game Regulation allows only spike-fork or 50" antlers to harvest moose in Unit 11. Retired Glennallen State Fish and Game Biologist, Bob Toby has stated that there are already low numbers of calf- cow rations counted in Unit 11. If these proposed hunts are implemented will this action reduce the park envision as the desired future conditions for a natural and healthy moose population? Would this winter hunt disturb the potential breeding? Bull moose are easier to harvest during the rut and the potential for over harvesting is higher.
- With the proposed winter hunt some bulls will have shed their antlers and could be confused with cows and accidently killed potentially reducing future management moose options.
- In Unit 11 the present Federal moose hunt allows for 32 days of hunting for federally qualified local rural residents. Local residents have ATV access off the Nabesna Road and boating access to harvest moose in these areas. Will snow-machine motorized sound activity add additional stress on the breeding animals and winter feeding area?
- The NPS should develop well-defined desired future conditions that meet NPS law and policy. A benchmark should be set by the park to have a natural and healthy moose population plan to meet future needs. **The limited biological data does not support implementing this winter hunt.**

Public Safety

- During the month of November some of the rivers in the proposed winter moose areas have open thin and overflow ice posing a safety hazard for crossing.
- Adapted hunts will open up other issues involving trapping conflicts, wood cutting, green cabin logs to support subsistence and local needs in new non-traditional areas and increase other remote fuel storage issues. Other non-subsistence users may use the area for winter activities and increase pressure on winter wildlife populations and conflicts with trappers.

Conservation Concerns

- If the hunt is allowed with snow machines there must be adequate 6-8" snow cover before the hunt is conducted to protect the bare ground and vegetation. Are larger tracked vehicle going to be allowed?

- If the winter moose hunt is to take place the superintendent should set the harvest quota on the best biological information for natural and healthy populations with all the NPS Laws and Policies considered.

Other concerns

- Ninety-nine percent of the qualified local rural residents live on a road system and have commercial electrical power or generators to run freezers to keep moose meat during the present State and Federal moose hunts. Moose meat is also canned and dried jerky. Also these residents have access to alternate wildlife resources (BLM, USFWS and State Lands) and commercial food supplies (Tok, Glennallen, etc.).
- If the winter hunt is to take place the priority should be given to those that meet the criteria listed in Alaska National Interest Lands Conservation Act (ANILCA) Section 804. The recently established State Fireweed and Nizina subdivisions have increased the potential hunting pressure in the proposed southern winter hunting area.
- The south proposed winter hunt area is designated Park Wilderness and should be left undisturbed for natural moose population.
- Current sport and guided hunting has increased hunting pressure in Unit 11 driving wildlife into more remote and marginal park wilderness protected areas. These wilderness areas have more natural predator-prey habitat and potentially reducing the necessary bull-cow ration and cow-calf to maintain a natural and healthy population.

Jim Hannah, Retired NPS Chitina District Ranger/Pilot

Wrangell-St. Elias National Park
Subsistence Resource Commission
P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

RECEIVED

November 1, 2013

Tim Towarak, Chair
Federal Subsistence Board
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage, AK 99503

Dear Chairman Towarak:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Chistochina on October 29 and 30, 2013. The SRC reviewed the federal subsistence wildlife proposals for the Wrangell-St. Elias area being considered for the 2014-2016 regulatory cycle and would like to provide comments for the following proposals:

WP14-01: Require trap marking, trap checks every 6 days, and harvest reports (statewide)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously opposes the proposal. A statewide proposal that would make federal trapping regulations more restrictive than state regulations is not needed. Additionally, enforcing the requirement that traps be checked every six days would be difficult. If there are local problems with trappers, those problems should be addressed locally, for example by talking to the protection officer for the area. The Alaska Department of Fish and Game's annual trapper survey already collects considerable information from trappers in Alaska, and an additional reporting requirement is not needed.

WP14-14: Revise customary and traditional use determination for goat in Unit 11 to include residents of Kenny Lake
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal. Kenny Lake is surrounded on all sides by other rural communities that have a positive customary and traditional use determination (C&T) for goat in Unit 11, and Kenny Lake residents already have C&T for most other large mammal species in Unit 11. The data presented in the analysis as well as common sense support recognizing Kenny Lake as having a positive C&T for goat in Unit 11.

WP14-15 & 45: Revise list of communities and areas eligible to hunt caribou in the SE portion of Unit 12 (Chisana herd)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports WP 14-15 as written. The SRC supported the inclusion of Nabesna during the initial ANILCA

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

Section 804 analysis and continues to support its inclusion in the list of communities most dependent on this resource. Adding residents of the hunt area outside of Chisana is common sense. They live in a remote area with limited access to other resources and should be able to harvest a resource in their own back yards. The commission took no action on WP14-45.

WP14-16: Establish a winter moose hunt in the southern portion of Unit 11

The Wrangell-St. Elias National Park Subsistence Resource Commission supports the proposal with modification to add to the delegation of authority the ability to limit the number of permits and to announce the reporting period. This season would provide additional subsistence opportunity on a moose population that is difficult to access during the existing fall season and consequently lightly harvested. The delegation of authority to the park superintendent to open the season; announce the harvest quota, number of permits to be issued and reporting period; and close the season would provide the tools needed to limit the harvest to a sustainable level and thereby address any conservation concerns. Educational material could be provided to the permittees about how to distinguish antlerless bulls from cows and such a handout could also remind hunters not to harass the animals with their snowmachines.

WP14-49: Revise the season dates for the caribou hunt in the SE portion of Unit 12 and add a meat-on-the-bone salvage requirement (Chisana herd)

The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with the following modifications: (a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted. Expanding the fall season would provide additional subsistence opportunity. Hunters who prefer to hunt during August, well before the rut, would be able to do so. And hunters for whom meat storage is easier later in the season when the weather is cooler could hunt in late September. Establishing a winter season is not supported at this time due to the small harvest quota and lack of good data about where the animals are during the winter. Regarding the meat-on-the-bone requirement, there is no evidence of a meat spoilage problem, and SRC members agree that individual hunters should be able to decide whether or not to keep the meat on the bone. Hunters who make use of the bones or otherwise prefer to keep the meat on the bone would have the option to do so, but hunters who harvest meat in locations that require long distance packing would have the option of leaving some of the bones behind.

Thank you for the opportunity to comment.

Sincerely,

Karen Linnell

Karen Linnell
Chair

cc: NPS Alaska Regional Director
Superintendent, Wrangell-St. Elias National Park and Preserve
Southeast, Southcentral and Eastern Interior Regional Advisory Councils
Governor of Alaska

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

WP14-17 Executive Summary	
General Description	Proposal WP14-17 requests requests that Resurrection Creek Closed Area, which consists of Resurrection Creek downstream from Rimrock and Highland creeks, including Palmer Creek in Unit 7, be opened to the taking of moose by Federally qualified subsistence users. *Submitted by Jim Skogstad, President of the Hope Village Council.*
Proposed Regulation	**Unit 7 remainder—Moose** 1 antlered bull with spike-fork or 50–inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. Aug. 10 – Sept. 20 ~~§__.26(n)(7)(ii) In the following areas, the taking of wildlife for subsistence uses is prohibited or restricted on public lands:~~ ~~(C) You may not hunt moose in the Resurrection Creek Closed Area in Unit 7, which consists of the drainages of Resurrection Creek downstream from Rimrock and Highland Creeks including Palmer Creek.~~
OSM Conclusion	**Support**
Southcentral Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP14-17 **with modification** to align season dates and antler restrictions.
Written Public Comments	**None**

STAFF ANALYSIS
WP14-17

ISSUES

Proposal WP14-17, submitted by Jim Skogstad, President of the Hope Village Council, requests that Resurrection Creek Closed Area, which consists of Resurrection Creek downstream from Rimrock and Highland creeks, including Palmer Creek in Unit 7, be opened to the taking of moose by Federally qualified subsistence users.

DISCUSSION

The proponent states that under the current Federal Subsistence Regulations, Federally qualified subsistence users are restricted from hunting in the Resurrection Creek Closed Area, while hunters under State Regulations may hunt there. Opening the Resurrection Creek Area will allow Federally qualified subsistence users an additional 10 days of opportunity to hunt in this area that is currently closed prior to the start of the State season. In addition, there are differences in the antler restrictions between the Federal and State regulations. The Federal regulations allow for the take of moose with fork antlers and an antlered bull with 3 or more brow tines on either antler whereas the State regulations only allow an antlered bull with a spike or antlers with 4 or more brow tines on either side.

EXISTING FEDERAL REGULATION

Unit 7 remainder—Moose

1 antlered bull with spike-fork or 50–inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug. 10 – Sept. 20*

§__.26(n)(7)(ii) In the following areas, the taking of wildlife for subsistence uses is prohibited or restricted on public lands:

(C) You may not hunt moose in the Resurrection Creek Closed Area in Unit 7, which consists of the drainages of Resurrection Creek downstream from Rimrock and Highland Creeks including Palmer Creek.

Proposed Federal Regulation

Unit 7 remainder—Moose

1 antlered bull with spike-fork or 50–inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug. 10 – Sept. 20*

~~*§__.26(n)(7)(ii) In the following areas, the taking of wildlife for subsistence uses is prohibited or restricted on public lands:*~~

~~*(C) You may not hunt moose in the Resurrection Creek Closed Area in Unit 7, which consists of the drainages of Resurrection Creek downstream from Rimrock and Highland Creeks including Palmer Creek.*~~

Existing State Regulation

Unit 7–remainder

One bull with a spike on at least one side 50–inch antlers or antlers with 4 or more brow tines on at least one side	*Aug. 20 – Sept 20*

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are comprised of Federal public lands, consisting of 53% 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 2% of lands managed by the Kenai National Wildlife Refuge (NWR) (**See Unit 7 Map**). The Kenai Fjords National Park lands are not open to subsistence uses.

Customary and Traditional Use Determinations

Residents of Cooper Landing and Hope have a positive customary and traditional use determination for moose in Unit 7 remainder.

Regulatory History

Unit 7–Remainder

Prior to 2008, there was no Federal open season in Unit 7 remainder and no Federal subsistence priority. In 2008, the Federal Subsistence Board (Board) adopted Proposal WP08-22b establishing a harvest season from Aug. 10 –Sept 20 for one antlered bull with spike-fork or 50–inch antlers or with 3 or more brow tines on either antler. In addition, a Special Provision, which closed an area around Resurrection Creek to the taking of moose (Resurrection Creek Closed Area), was established for conservation concerns. The closed

area consists of Resurrection Creek downstream from Rimrock and Highland Creeks including Palmer Creek (**Map 1**).

Concerns for the moose population in Units 7 and 15 with low and declining bull:cow ratios (9 bulls:100 cows in a portion of the combined area) prompted the Alaska Board of Game (BOG) at the March 2011 meeting to remove the spike-fork option and change the antler restrictions to for an adult bull moose from 3 tines to 4 or more brow tines on either side. The removal of the spike-fork provision was anticipated to reduce the high harvest of yearling bulls (an average >60% of the harvest in Units 7 and 15 each year) and increase the bull:cow ratios with the intent of increasing the overall productivity of the moose populations (BOG 2011).

In July 2011, the Federal Subsistence Board (Board) adopted Emergency Special Action WSA11-02, which eliminated the take of spike-fork moose; increased the antler restriction from 3 brow tines to 4; and added a sealing requirement for moose taken in Unit 7 remainder.

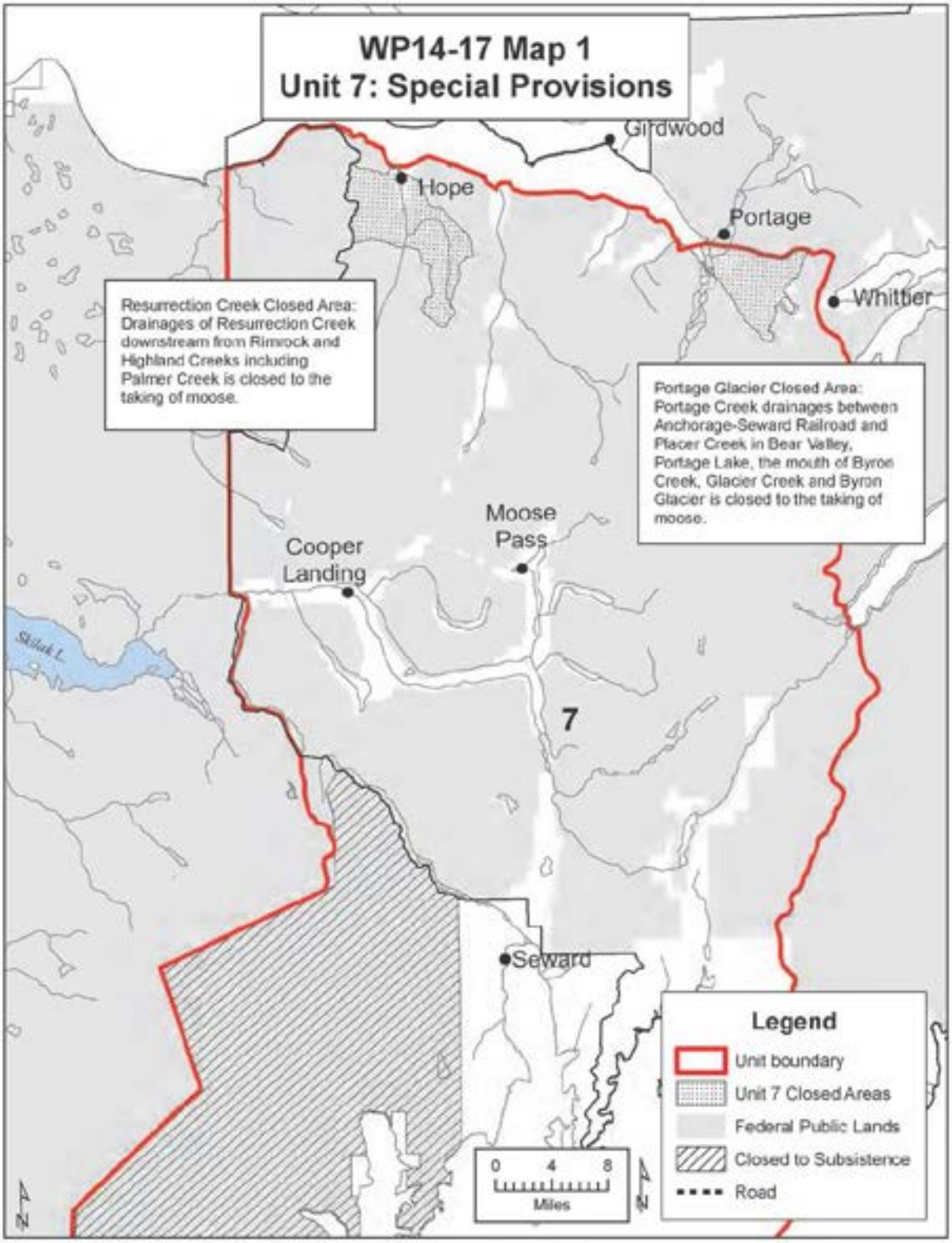
State Proposal 179, which requested the Resurrection Creek Closed Area be eliminated, was submitted to the Alaska Board of Game for consideration at its March 2011 meeting (BOG 2011). The Alaska Department of Fish and Game (ADF&G) stated that there were no biological concerns for moose in the area around the Resurrection Creek Closed Area to warrant the closure and that this proposal was primarily an allocation issue. Proposal 179 was adopted by the Alaska Board of Game, which eliminated the Resurrection Creek Closed Area under State regulations.

In July 2012, the Board adopted an Emergency Special Action (WSA12-03), which allowed Federally qualified subsistence users to harvest moose in Resurrection Creek Closed Area from August 10 to September 20, 2012. This aligned the State and Federal regulations allowing for moose harvest in the Resurrection Creek Closed Area, although with different seasons and bull-moose antler configuration. The Board also provided delegated authority to the Seward District Ranger in Unit 7 remainder during the 2012 season. This provided the District Ranger with the authority to take any actions needed to modify the season dates and/or harvest provisions due to conservation concerns.

Current Events Involving the Species

The community of Hope submitted proposal 151 to the Alaska Board of Game in 2013 to reinstitute the Resurrection Creek Closed Area under the State regulations. Any closure for safety concerns is the responsibility of land managers or the Federal Subsistence Board. The proposal was rejected thus leaving the area open to moose hunting under State regulations.

At its March 2013 Meeting the Board of Game discussed Proposal 143 which requested changes to the hunting seasons and bag limits for moose in Units 7 and 15. The proponent requested that in Units 7 and 15 a legal bull be changed from one which has antlers 50 inches or larger, or with four or more brow tines on at least one side to one which has antlers 50 inches or larger, or with three or more brow tines on at least one side. The Alaska Board of Game adopted an amended proposal 143B which retained requirement of an


WP14-17 Map 1
Unit 7: Special Provisions
Girdwood
Hope
Portage
Whittier
Resurrection Creek Closed Area: Drainages of Resurrection Creek downstream from Rimrock and Highland Creeks including Palmer Creek is closed to the taking of moose.
Portage Glacier Closed Area: Portage Creek drainages between Anchorage-Seward Railroad and Placer Creek in Bear Valley, Portage Lake, the mouth of Byron Creek, Glacier Creek and Byron Glacier is closed to the taking of moose.
Moose Pass
Cooper Landing
Skilak L.
7
Seward
Legend
Unit boundary
Unit 7 Closed Areas
Federal Public Lands
Closed to Subsistence
Road
0 4 8
Miles
N

adult bull with antlers 50 inches or larger or four or more brow tines on one side, or one bull with a spike. The addition of a spike to the State regulations during the 2013 fall moose hunt in Units 7 and 15 will provide subsistence users additional opportunity to take a moose which was not available during 2012.

Biological Background

Federal public lands within Unit 7 are managed by the Chugach National Forest. The Chugach National Forest Management Plan (USFS 2002) lists moose as a Management Indicator Species and an important subsistence species in Unit 7.

The ADF&G management objective for Unit 7 is to maintain a healthy population of moose with a minimum bull–to–cow ratio of 15:100. Due to budget constraints there has been very little monitoring or research on moose in Unit 7 since the 1970s and early 1980s (McDonough 2006, 2010). However, the moose population in Unit 7 is known to be at a low density relative to the other units on the Kenai Peninsula (McDonough 2010). Winters with deep snow are typical for this area and probably contribute to the mortality and/or low reproduction of the moose population in the unit. There are no recent population estimates for Unit 7.

A comprehensive survey has never been completed in Unit 7. However, based on limited composition surveys (**Table 1**) and harvest reports by the ADF&G, there are indications that the moose population has remained relatively stable during the past decade (McDonough 2006, 2008, 2010). The most recent moose composition surveys in Unit 7 were conducted in 2001–2002, 2003–2004, and 2005–2006 (**Table 1**) (McDonough 2006, 2008, 2010).

In addition to hunting, moose populations may be further reduced by lack of suitable habitat to sustain them through the winter, predation, vehicle collisions, disturbance, severe winter conditions, and loss of riparian habitat due to succession.

Table 1. Moose composition survey results for the Eastern Kenai Peninsula, 2001-2006 (McDonough 2006, 2008, 2010).

Regulatory Year	Bulls: 100 Cows	Calves: 100 Cows	% Calves	Adults	Total	Estimated Population
2001-2002	30	13	9	141	203	700-1000
2003-2004	24	27	18	249	304	700-1000
2005/2006	23	11	8	422	465	700-1000

Habitat

Moose densities vary throughout Unit 7 and are dependent upon the availability of suitable browse. The availability of suitable browse primarily results from fire creating a disturbance and providing conditions suitable for hardwood regeneration to occur. Following a significant disturbance such as a landslide, logging, or intense wildfire, various species of hardwood trees and shrubs will grow providing quality winter browse for moose and other species (USFWS 2001). The high moose populations in recent decades

were indicative of high-quality habitat that was created by the historic burns on the Kenai Peninsula (USFWS 2010). While moose may benefit from greater availability of post-fire browse in the short-term, mature hardwoods are relatively fire-resistant and may become the prevalent forest type. In more recent years, the hardwood browse has been replaced by spruce or has matured past suitable browse for moose (Berg et al. 2009).

In addition, the invasion of wetlands on the Kenai Peninsula by woody shrubs and black spruce may lead to a reduced moose population in the long-term (Klein et al. 2005). Wetlands are an important component for moose for wintering forage and the trend for vegetation succession of these habitat types is increasing (Klein et al. 2005 and Stephenson et al. 2006).

Harvest History

Hunters from Hope and Cooper Landing in Unit 7–remainder, harvested an average of 2.6 moose (range 1-4) for a total of 17 moose from 2004–2010. The average yearly total State harvest from 2004/2005 to 2010/2011 was 37 (**Table 2**). Residents from Cooper Landing and Hope harvested an average of 6.5% (17/260) of the total moose on an annual basis. Only two moose were harvested under the Federal permit (FM0004) from 2004 to 2010 regulatory years.

Table 2. Number of moose harvested and recorded by registration permits (residents and non-residents) for the State in Unit 7 and hunters from villages of Cooper Landing and Hope for regulatory years 2004/2005 to 2010/2011 (OSM 2013).

Year	State and Federal Harvest Cooper Landing and Hope Unit 7 remainder[a]	Harvest under State regulations Unit 7
2004/2005	1	37
2005/2006	4	44
2006/2007	4	31
2007/2008	3	24
2008/2009	2	38
2009/2010	1	48
2010/2011	2	38

[a] Prior to 2008 there was no Federal Subsistence priority or season in Unit 7 remainder

Effects of the Proposal

Adoption of this proposal would eliminate the Resurrection Creek Closed Area, which is open to both residents and non-residents under State regulations. Current harvest under the Federal subsistence

regulations in Unit 7 remainder is low and this proposal would increase the subsistence opportunity for hunting moose in this area by opening the area to subsistence hunters 10 days earlier than the State season and increase the potential harvest opportunities due to fewer antler restrictions. Given the past harvest rates by Federally qualified subsistence users, the impact on the moose population should be minimal. Opening the Resurrection Creek Closed Area to moose hunting would also align the State and Federal regulations, although with different seasons and antler restrictions.

OSM CONCLUSION

Support Proposal WP14-17.

Justification

This proposal will provide additional subsistence opportunity for Federally qualified users to harvest moose in Unit 7 remainder. Although moose composition surveys have not been conducted in Unit 7 since 2005–2006, it is not expected that a there will be a significant increase in the harvest based on past harvest rates, therefore there should be minimal impacts to the moose population in the area.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-17. The area is currently open under state regulations, federal regulations are more restrictive, and opening the area would provide additional subsistence opportunities.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-18 Executive Summary	
General Description	Proposal WP14-18 requests a late season for antlerless moose that were not harvested during the early season in Unit 6C, and closing Federal Public Lands November 1 through December 1, to the harvest of moose except by Federally qualified subsistence users holding a Federal subsistence permit for Unit 6C moose. *Submitted by Tom Carpenter of Cordova.*
Proposed Regulation	**Unit 6C—Moose** *1 antlerless moose by Federal drawing permit only.* — *Sept. 1 – Oct. 31;* ***permits for the portion of the antlerless moose quota not harvested Sept. 1 – Oct. 31 may be available for redistribution Nov. 1–Dec. 31*** *1 bull by Federal drawing permit only.* — *Sept. 1 – Dec. 31* *Only one moose permit may be issued per household. A household receiving a State permit for Unit 6C moose permit may not receive a Federal permit. The annual harvest quota will be announced by the U.S. Forest Service, Cordova Office, in consultation with ADF&G. The Federal harvest allocation will be 100% of the antlerless moose permits and 75% of the bull permits.* ***Federal Public Lands shall be closed to the harvest of moose except by Federally qualified hunters holding a Federal Subsistence permit for Unit 6C moose, November 1 through December 31.***
OSM Conclusion	**Support**
Southcentral Regional Advisory Council Recommendation	**Support**

WP14-18 Executive Summary	
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-18

ISSUES

Proposal WP14-18, submitted by Mr. Tom Carpenter of Cordova, requests a late season for antlerless moose that were not harvested during the early season in Unit 6C, and closing Federal Public Lands November 1 through December 1, to the harvest of moose except by Federally qualified subsistence users holding a Federal subsistence permit for Unit 6C moose.

DISCUSSION

The proponent requests a late season opportunity (November 1 through December 31) to harvest the portion of the antlerless moose quota that was not harvested during the regular season (September 1 through October 31). The portion of the quota not harvested during the early season could be redistributed to other Federally qualified subsistence users through a random drawing, should the need exist to harvest the remaining animals in the quota. Additionally, Federal Public Lands would be closed November 1 through December 31, to the harvest of moose except by Federally qualified subsistence users holding a Federal Subsistence permit for Unit 6C moose.

Table 1. Moose population estimates, bull:cow ratios, and harvest in Unit 6C from 2001-2012 (Crowley 2006, Crowley 2010, Westing 2013).

Year	Estimated population	bulls:100 cows	Federal cow harvest/# permits	Federal bull harvest/# permits	State bull harvest/# permits
2001/2002	341	-	5/5	0/0	19/20
2002/2003	-	-	4/5	15/15	5/5
2003/2004	-	63	5/5	15/15	5/5
2004/2005	-	-	4/5	27/27	8/9
2005/2006	488	30	4/5	24/26	9/9
2006/2007	560	-	40/40	25/27	9/9
2007/2008	430	36	45/50	52/54	13/18
2008/2009	353	-	22/25	35/38	12/13
2009/2010	296	14	10/10	31/38	11/13
2010/2011	398	22	13/15	13/18	4/6
2011/2012	601	-	10/10	9/15	6/13

Currently, demand for moose in Unit 6C exceeds the number of moose that can be harvested. From 600 to 900 Cordova residents have annually applied for between 5 and 104 Federal subsistence draw permits for moose in Unit 6C (**Table 1**). The current Federal regulations for moose in Unit 6C, generated with great community support, have worked well since adopted in its current form by the Federal Subsistence Board (Board) in 2002. The intention of the current Federal regulation is clear: that all allowable antlerless moose harvest and 75% of the allowable bull moose harvest in Unit 6C will take place by

Federally qualified subsistence users of Units 6A, 6B, and 6C, specifically, residents of Cordova. The recent proposal passed by the Alaska Board of Game (Proposal 129) would open some of the antlerless moose harvest to all state residents through a State registration hunt. Some of the harvest would likely go to non-Federally qualified subsistence users, reducing opportunity for Cordova residents.

Title VIII, § 815(3) of the Alaska National Interest Lands Conservation Act (ANILCA) addresses the restriction on the take of fish and wildlife for non-subsistence uses. The Secretaries have empowered the Board to implement Title VIII of ANILCA. Title § 815(3) of ANILCA states,

Nothing in this title shall be construed as—

(3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on the public lands (other than national parks and park monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in §816, to continue subsistence uses of such populations, or pursuant to other applicable law

Existing Federal Regulation

Unit 6C—Moose

1 antlerless moose by Federal drawing permit only.	*Sept. 1 – Oct. 31*
1 bull by Federal drawing permit only.	*Sept. 1 – Dec. 31*
Only one moose permit may be issued per household. A household receiving a State permit for Unit 6C moose permit may not receive a Federal permit. The annual harvest quota will be announced by the U.S. Forest Service, Cordova Office, in consultation with ADF&G. The Federal harvest allocation will be 100% of the antlerless moose permits and 75% of the bull permits	

Proposed Federal Regulation

Unit 6C—Moose

1 antlerless moose by Federal drawing permit only.	*Sept. 1 – Oct. 31**;*** ***permits for the portion of the antlerless moose quota not harvested Sept. 1 – Oct. 31 may be available for redistribution Nov. 1–***

	Dec. 31
1 bull by Federal drawing permit only.	*Sept. 1 – Dec. 31*
Only one moose permit may be issued per household. A household receiving a State permit for Unit 6C moose permit may not receive a Federal permit. The annual harvest quota will be announced by the U.S. Forest Service, Cordova Office, in consultation with ADF&G. The Federal harvest allocation will be 100% of the antlerless moose permits and 75% of the bull permits. ***Federal Public Lands shall be closed to the harvest of moose except by Federally qualified hunters holding a Federal Subsistence permit for Unit 6C moose, November 1 through December 31.***	

Existing State Regulation

Unit 6C—Moose

One bull by permit	*DM167*	*Sept 1 – Oct 31*
One moose by permit available in person in Anchorage and Cordova (season may be announced Nov 1 – Dec 31)	*RM169*	*may be announced*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 6C and 100% of the Federal lands are managed by the Chugach National Forest (**Map 1**).

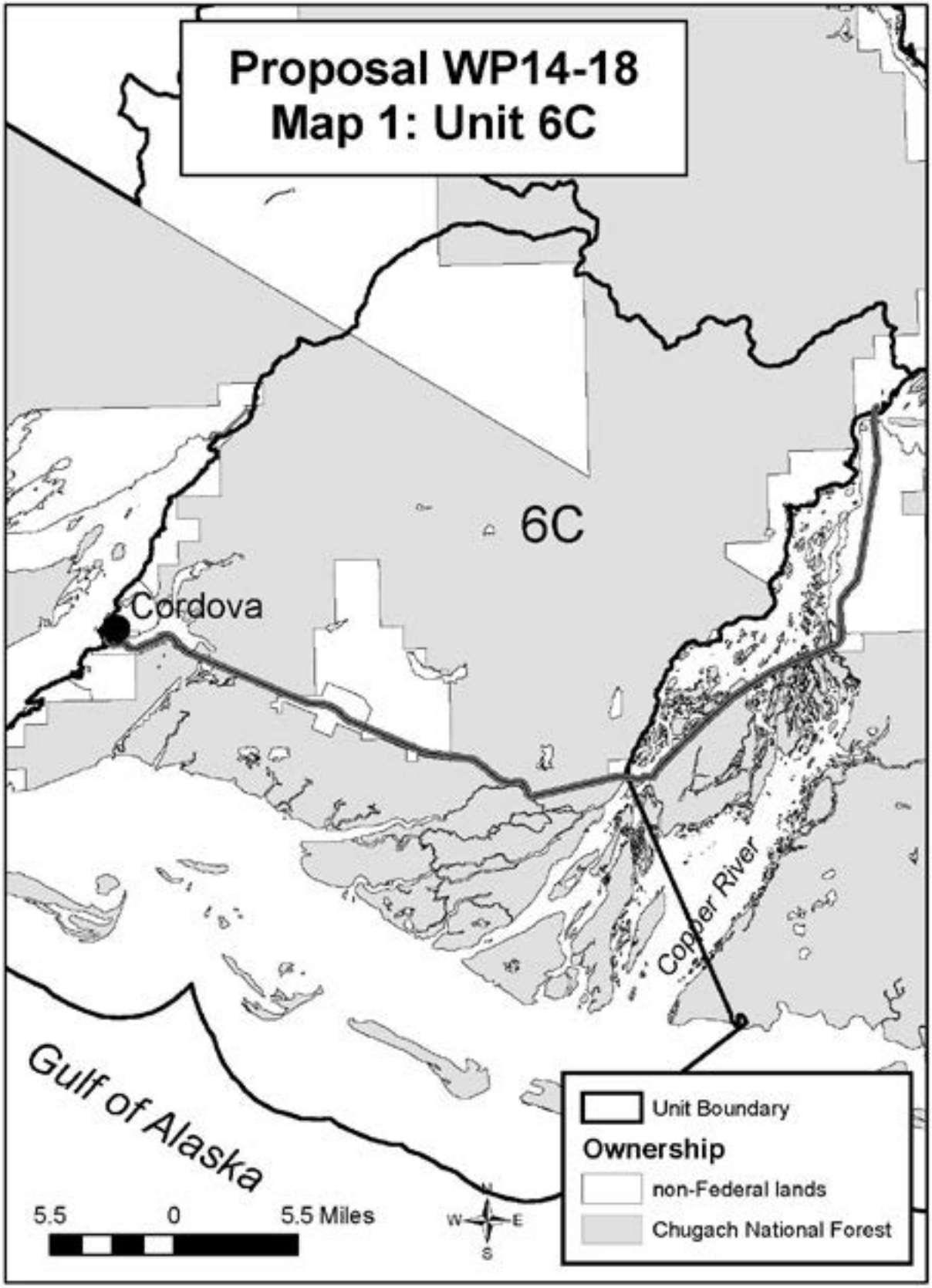
Customary and Traditional Use Determinations

Residents of Units 6A, 6B, and 6C have a positive customary and traditional use determination for moose in Unit 6B and 6C.

Regulatory History

Prior to 2000, under State regulation, State residents could take one moose by drawing permit in Unit 6C from September 1-October 31. In 2000, the Native Village of Eyak submitted proposal P00-17 to establish a Federal subsistence hunt for moose in both Units 6B and 6C. The Board adopted the modified proposal, allowing draw permits to be issued for 5 cow moose in Unit 6C under the Federal subsistence management program (the total allowable cow moose harvest at that time), but left the rest of the State-managed moose harvest in place for both Units 6B and 6C.

In 2002 the Board received proposal WP02-48, this time requesting that 100% of the bull moose harvest in Unit 6C become Federal subsistence draw permits and changing the season start date from August 15


Proposal WP14-18
Map 1: Unit 6C
6C
Cordova
Copper River
Gulf of Alaska
5.5
0
5.5 Miles
N
W
E
S
Unit Boundary
Ownership
non-Federal lands
Chugach National Forest

to September 1. The Board adopted the modified proposal allocating 75% of the allowable bull moose harvest for Unit 6C, and 100% of the allowable cow moose harvest for Unit 6C, to the Federal subsistence program. Additionally, the cow moose season closing date was changed from December 31 to October 31. This decision recognized the importance of cow moose in Unit 6C to Federally qualified subsistence users. The Board's decision to split the bull moose harvest allocation in Unit 6C with the State (75% and 25% of allowable harvest in Federal and State management programs, respectively) was, in part, in recognition of the presence of non- Federal lands within the unit.

In Unit 6C, hunters currently have the opportunity to harvest moose on Federal public lands under both the State and Federal seasons and on private and other non-federal ownership under the State season.

Current Events Involving the Species

At its Southcentral Regional meeting in Kenai, March 15-19, 2013, the Alaska Board of Game passed amended Proposal 129 to authorize a State registration hunt for moose in Unit 6C, with a bag limit of 1 moose, November 1 – December 31,at the request of the Alaska Department of Fish and Game. This amendment to Proposal 129 was unanimously rejected by the Copper River/Prince William Sound State Advisory Committee on February 1, 2013. The State's proposal was intended to harvest moose allocated to the Federal quota that may not be taken during the Federal subsistence hunt.

Biological Background

The moose population in Unit 6 originated from 24 moose calves that were transplanted to the west Copper River Delta from 1949 through 1958, as a cooperative effort of the Cordova Chapter of the Isaac Walton League, other local citizens, and the USFWS (Nowlin 1998). This introduced population rapidly expanded eastward, reaching a record high of 1,600 moose in 1988 (Griese 1990). The first moose hunt was held in 1960 and has occurred yearly since 1962. The Unit 6C moose hunt became a State drawing permit in 1984 (Stratton 1989).

During the 1990s, the Copper River-Prince William Sound Advisory Committee, local residents, and ADF&G developed a Cooperative Moose Management Plan. The resulting plan encompassed long-term needs of the community (Cordova), population biology, maximizing hunting opportunity, and the variable access in Unit 6. The current management strategies in Unit 6 are a direct result of this Moose Management Plan. Current cooperative moose management objectives are to maintain a post-hunting population of 400 moose with a bull:cow ratio of 15:100 for Unit 6C (Nowlin1998).

Moose population estimates have ranged between 341and 601 moose from 2001 to 2012 (**Table 1**). While moose numbers are again increasing and approaching all-time highs, the bull cow ratio is still low (**Table 1**) and bull moose harvest has consisted almost entirely of young bull moose in recent years.

Harvest History

Because of relatively easy access to Unit 6C, especially by road and airboat, hunter success often approaches 100% for moose permit holders. Between 25 and 122 moose permits have been issued

between 2001 and 2012, depending on the relationship of the estimated population to the management objective (**Table 1**). Beginning in 2006, the number of harvest permits was increased to account for the growing population, however, appears to have resulted in overharvest of the population by 2010, especially the bull moose component. Reduced permit numbers, beginning in 2008 have allowed the population to grow to current levels

Effects of the Proposal

Proposal WP14-18 would allow a fixed number of Federally qualified subsistence users an opportunity to harvest antlerless moose that were not harvested during the early season, if it was deemed necessary for controlling the moose population. Closing Federal Public Lands between November 1 and December 31 to those holding a State permit for Unit 6C moose would serve to limit the effect of the State's late moose hunt on Cordova residents, by restricting those users to state and private lands within Unit 6C while the majority of productive moose habitat in Unit 6C occurs on Federal Lands.

OSM CONCLUSION

Support Proposal WP14-18

Justification

Proposal WP14-18 aligns with the intentions of existing Federal regulations, which allocate 100% of the harvest quota for antlerless moose in Unit 6C to Federally qualified subsistence users. As a result of the State's recently adopted Proposal 129, Federally qualified subsistence users could see a reduced opportunity to harvest antlerless moose in Unit 6C. This proposal would allow additional antlerless moose harvest by Federally qualified subsistence users, should the need exist to harvest additional moose after the regular season ends on October 31. It would also limit the effect of the new State regulation, by restricting those without a valid Federal permit for Unit 6C moose to hunt on private and State lands within Unit 6C.

Section 815(3) of ANILCA allows for restrictions on the taking of fish and wildlife for non-subsistence uses public lands only if necessary for the conservation of healthy fish and wildlife populations, to continue subsistence uses of such populations, or pursuant to other applicable law.

As directed by the Board's closure policy, use by non-Federally qualified subsistence users may be reduced or prohibited for the conservation of healthy populations of fish and wildlife, when a fish or wildlife population is not sufficient to provide for both Federally qualified subsistence users and other users (FSB 2007). Providing the opportunity for additional harvest of antlerless moose and closing Federal public lands to moose hunters without a valid Federal permit for Unit 6C moose from November 1 to December 31, would maintain the Federal subsistence priority and continue subsistence uses on the Federal public land.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-18. There are no conservation concerns, the proposal will provide additional subsistence opportunities and Section 815(3) criteria are addressed in the proposal analysis. Federal registration permit allows control and monitoring of the harvest.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14–30 Executive Summary	
General Description	Proposal WP14-30 requests the harvest limit for sheep in Unit 24A, except that portion within the Gates of the Arctic National Park, be changed from 1 ram with 7/8 curl horn or larger to 1 ram under Federal regulations. *Submitted by the Western Interior Regional Advisory Council.*
Proposed Regulation	**Unit 24—Sheep** *Unit 24A and 24B—(Anaktuvuk Pass residents only)—that portion within Gates of the Arctic National Park—community harvest quota of 60 sheep, no more than 10 of which may be ewes and a daily possession limit of 3 sheep per person, no more than 1 of which may be a ewe.* — *July 15 – Dec. 31* *Unit 24A and 24B—(excluding Anaktuvuk Pass residents)—that portion within the Gates of the Arctic National Park—3 sheep.* — *Aug. 1–Apr. 30* *Unit 24A—except that portion within the Gates of the Arctic National Park—1 ram ~~with 7/8 curl or larger horn~~ by Federal registration permit only.* — *Aug. 20–Sept. 30* *__.26(n)(24)(ii)(A) You may not use firearms, snowmobiles, licensed highway vehicles, or motorized vehicles, except aircraft and boats, in the Dalton Highway Corridor Management Area, which consists of those portions of Units 20, 24, 25, and 26 extending 5 miles from each side of the Dalton Highway from the Yukon River to milepost 300 of the Dalton Highway, except as follows: Residents living within the Dalton Highway Corridor Management Area may use snowmobiles only for the subsistence taking of wildlife. You may use licensed highway vehicles only on designated roads within the Dalton Highway Corridor Management Area. The residents of Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, and Stevens Village, and residents living within the Corridor may use firearms within the Corridor only for subsistence taking of wildlife.*
OSM Conclusion	**Support**
Western Interior Regional Council Recommendation	**Support**

WP14–30 Executive Summary	
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-30

ISSUES

Proposal WP14-30, submitted by the Western Interior Subsistence Regional Advisory Council, requests the harvest limit for sheep in Unit 24A, except that portion within the Gates of the Arctic National Park, be changed from 1 ram with 7/8 curl horn or larger to 1 ram under Federal regulations.

DISCUSSION

The proponent states the Federal regulations are not providing a reasonable opportunity to harvest Dall sheep; and the Federal harvest limit should be changed from 1 ram with 7/8 curl or larger to 1 ram, or 1 ram with 1/2 curl or larger, on Federal public lands in Unit 24A, except those portions within the Gates of the Arctic National Park. The proponent believes large numbers of guided and resident sport hunters are taking most of the full curl rams; and several of the 7/8 curl rams accidentally. The proponent states that ram groups are displaced away from valley corridors by an increased number of individuals hunting under State regulations. Rams with 7/8 curl horns are not easily found without the use of aircraft, which Federally qualified subsistence users do not use to locate Dall sheep.

The proponent states the Federal sheep regulation in the affected portion of Unit 24A is one of the most restrictive for Federally qualified subsistence users on Federal public lands in Alaska. State Dall sheep regulations for subsistence hunts in Units 13D, 14A, 14C, portions of 23, portions of 24B, 25A, 26A, and 26C allow the harvest of either 1 ram or 1–3 sheep. Current Federal regulations in Units 9B, 23, 24A, 24B, and 26C have harvest limits of 1 sheep, 1 ram, or 1 ram with 3/4 curl.

Existing Federal Regulation

Unit 24—Sheep

Unit 24A and 24B—(Anaktuvuk Pass residents only)—that portion within Gates of the Arctic National Park—community harvest quota of 60 sheep, no more than 10 of which may be ewes and a daily possession limit of 3 sheep per person, no more than 1 of which may be a ewe.	*July 15 – Dec. 31*
Unit 24A and 24B—(excluding Anaktuvuk Pass residents)—that portion within the Gates of the Arctic National Park—3 sheep.	*Aug. 1–Apr. 30*
Unit 24A—except that portion within the Gates of the Arctic National Park—1 ram with 7/8-curl or larger horn by Federal registration permit only.	*Aug. 20–Sept. 30*

Note: That portion of Unit 24A within the Dalton Highway Corridor Management Area has Special Provisions, as follows:

__.26(n)(24)(ii)(A) You may not use firearms, snowmobiles, licensed highway vehicles, or motorized vehicles, except aircraft and boats, in the Dalton Highway Corridor Management Area, which consists of those portions of Units 20, 24, 25, and 26 extending 5 miles from each side of the Dalton Highway from the Yukon River to milepost 300 of the Dalton Highway, except as follows: Residents living within the Dalton Highway Corridor Management Area may use snowmobiles only for the subsistence taking of wildlife. You may use licensed highway vehicles only on designated roads within the Dalton Highway Corridor Management Area. The residents of Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, and Stevens Village, and residents living within the Corridor may use firearms within the Corridor only for subsistence taking of wildlife.

Proposed Federal Regulation

Unit 24—Sheep

Unit 24A and 24B—(Anaktuvuk Pass residents only)—that portion within Gates of the Arctic National Park—community harvest quota of 60 sheep, no more than 10 of which may be ewes and a daily possession limit of 3 sheep per person, no more than 1 of which may be a ewe.	*July 15 – Dec. 31*
Unit 24A and 24B—(excluding Anaktuvuk Pass residents)—that portion within the Gates of the Arctic National Park—3 sheep.	*Aug. 1–Apr. 30*
Unit 24A—except that portion within the Gates of the Arctic National Park—1 ram ~~with 7/8-curl or larger horn~~ by Federal registration permit only.	*Aug. 20–Sept. 30*

__.26(n)(24)(ii)(A) You may not use firearms, snowmobiles, licensed highway vehicles, or motorized vehicles, except aircraft and boats, in the Dalton Highway Corridor Management Area, which consists of those portions of Units 20, 24, 25, and 26 extending 5 miles from each side of the Dalton Highway from the Yukon River to milepost 300 of the Dalton Highway, except as follows: Residents living within the Dalton Highway Corridor Management Area may use snowmobiles only for the subsistence taking of wildlife. You may use licensed highway vehicles only on designated roads within the Dalton Highway Corridor Management Area. The residents of Alatna, Allakaket, Anaktuvuk Pass, Bettles, Evansville, and Stevens Village, and residents living within the Corridor may use firearms within the Corridor only for subsistence taking of wildlife.

Existing State Regulation

Unit 24A—Sheep

Residents and nonresidents:	*One ram with full-curl horn or larger*	*Harvest ticket*	*Aug. 10–Sept. 20*

Note: The State has special Dalton Highway Corridor Regulations for Unit 24. They are:

- *Within five miles of each side of the Dalton Highway north of the Yukon River, hunting is allowed by certified bowhunters only.*
- *Licensed highway vehicles are allowed only on publicly maintained roads.*
- *Any hunter traveling on the Dalton Highway must stop at any check station operated by the Department of Fish and Game within the Dalton Highway Corridor Management Area.*

Extent of Federal Public Lands

Federal public lands comprise approximately 73% of Unit 24A, and consist of 60% BLM, 11% NPS, and 2.5% FWS managed lands (**Map 1**).

Customary and Traditional Use Determinations

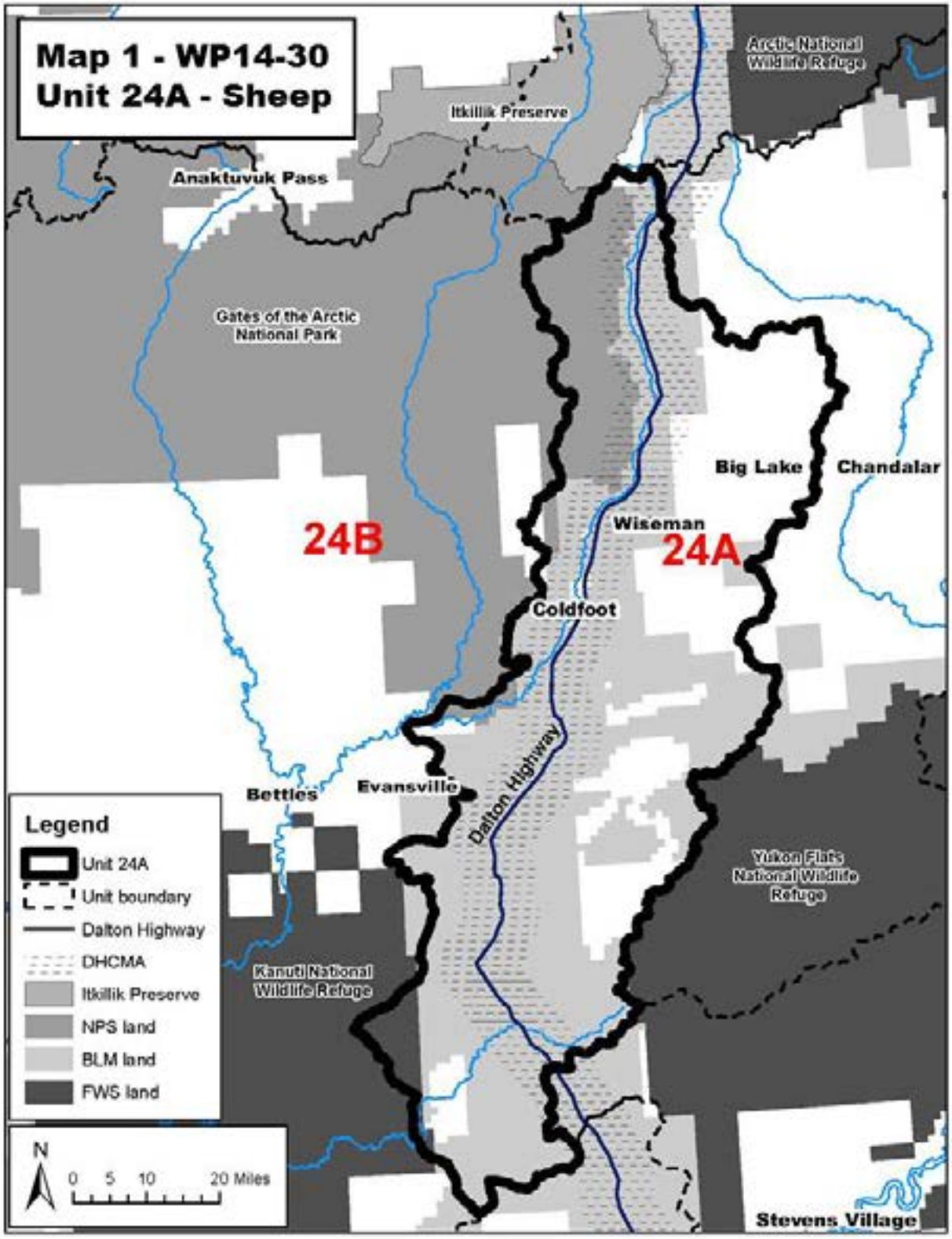
Rural residents of Unit 24 residing north of the Arctic Circle, Alatna, Allakaket, Hughes, and Huslia have a positive customary and traditional use determination to harvest sheep in Unit 24.

Regulatory History

In 1992, the Federal Subsistence Board (Board) adopted Proposal 118 establishing a hunting season for sheep in Unit 24 remainder for one ram with 7/8 curl or larger and a season of Aug. 10–Sept. 20.

In 2004, the Board adopted Proposal WP04-57, which requested a shift of the harvest season for sheep in a portion of Unit 24 (that portion within the Dalton Highway Corridor Management Area (DHCMA) except for Gates of the Arctic National Park) from Aug. 10–Sept. 20 to Aug. 20–Sept. 30. The shift of the season provided additional subsistence hunting opportunity after the end of the moose season, recognizing that there would be little to no increase in sheep harvested due to the limited number of qualified hunters, the horn restriction, and the current harvest limit.

In 2006, the Board adopted Proposal WP06-69, submitted by the Alaska Department of Fish and Game (ADF&G), which requested that sheep regulations for Unit 24 be modified to reduce regulatory complexity. Unit 24 had recently been split into subunits under State regulations and the proposal requested incorporating the new unit description into Federal regulations. The regulatory language established the


Map 1 - WP14-30
Unit 24A - Sheep
Arctic National Wildlife Refuge
Itkillik Preserve
Anaktuvuk Pass
Gates of the Arctic National Park
Big Lake
Chandalar
Wiseman
24B
24A
Coldfoot
Dalton Highway
Bettles
Evansville
Yukon Flats National Wildlife Refuge
Kanuti National Wildlife Refuge
Stevens Village
Legend
Unit 24A
Unit boundary
Dalton Highway
DHCMA
Itkillik Preserve
NPS land
BLM land
FWS land
N
0 5 10 20 Miles

current area descriptor for the Federal hunt in Unit 24A to exclude that portion within Gates of the Arctic National Park and Preserve.

In 2007, Proposal WP07-34 requested that the Federal sheep season be changed from Aug. 20–Sept. 30 to Aug. 10–Sept. 20 for Unit 24A, except that portion within the Gates of the Arctic National Park. The intent of the proposal was to allow all users equal access to affected sheep populations before users hunting under State regulations had disturbed the animals. The proponent stated that access to sheep became more difficult after the animals had been hunted for 10 days under State regulations. The proposal was rejected by the Federal Subsistence Board, following the recommendation of the Western Interior Subsistence Regional Advisory Council. Also in 2007, Proposal WP07-55, requested that Federally qualified subsistence hunters be required to use a bow and arrow to hunt sheep in the DHCMA during the period of time when the State of Alaska had an archery-only season. The proposal was rejected by the Federal Subsistence Board at its May 2007 meeting.

In 2012, Proposal 179, submitted to the Alaska Board of Game, requested the creation of a sheep drawing permit (8 permits) for nonresidents in Units 24A and 26B within the DHCMA (Alaska Board of Game 2012). The proponent stated that within the last two to three years, guided sheep hunts for nonresidents have increased within the DHCMA resulting in serious user conflicts between these hunters and resident hunters. ADF&G had no recommendation on this proposal, because it was viewed as an allocation issue. Additionally ADF&G felt there were no biological concerns for the sheep population within the DHCMA as the population was considered stable and harvest by nonresidents within the DHCMA was low. The proposal was rejected by the Alaska Board of Game.

Special action WSA12-01 requested the harvest limit for sheep in Unit 24A, except that portion within Gates of the Arctic National Park, be modified from one ram with 7/8 curl or larger to one ram with 1/2 curl or larger. The proponent stated that few 7/8 curl rams were available due to harvest pressure and harvest of sublegal rams by non-Federally qualified users hunting under State regulations. The Special Action was approved by the Board in June 2012 because the liberalized harvest limit would likely have little impact on the sheep population due to low Federal harvest rates and the Special Action would be in effect for one season (2012/2013).

Biological Background

Dall sheep are found throughout the Brooks Range. There were an estimated 13,000 sheep in the eastern Brooks Range in 1985 (Heimer 1985). Populations declined during the 1990s throughout the range, most likely due to a combination of severe winters and increased predation. Sheep populations are thought to have been stable since the late 1990s, but surveys have been sporadic in most areas and populations appear to be below levels observed in the 1980's (Hollis 2011, Caikoski 2011).

Survey data and ongoing research on lamb survival rates for sheep in the central Brooks Range suggest that populations are stable, albeit at lower densities than those observed historically, with good lamb production and adequate numbers of large rams, indicating that rams of 7/8-curl or larger are represented in the population (Hollis 2011, Stout 2012, pers. comm.) In eastern Unit 24A and western Unit 25A, surveys were conducted annually, except 2008, to count sheep within the upper Chandalar River drainage between

2002 and 2009. Minimum counts ranged from 989–1,539 sheep (**Table 1**), but suggest the population remained relatively stable (Caikoski 2011). The source of the variability in counts was unknown, but was most likely related to variation in sheep survival and recruitment, and sheep movement and measurement errors associated with surveys (Caikoski 2011). During aerial surveys, 199–436 sheep were classified as rams, with 31–50 rams (10%-24% of observed rams) having full-curl or larger horns (**Table 1**). Recruitment was variable between 2002 and 2009, with lambs comprising 12%-25% of observed sheep (**Table 1**) or ratios of 18–43 lambs:100 ewe-like sheep (ewes, yearlings, and less than 1/2 curl rams) observed (Caikoski 2011).

Table 1. Aerial sheep composition surveys conducted in late June to early July in the upper Chandalar River drainage of eastern Unit 24A and Unit 25A, 2002–2009 (Caikoski 2011).

			Rams			
Year	Ewe-like[a]	Lambs	<Full curl	≥Full curl	Unknown[b]	Total sheep
2002	57%	14%	25%	3%	0%	1,539
2003	63%	12%	21%	3%	1%	989
2004	62%	12%	22%	3%	1%	1,460
2005	58%	19%	18%	4%	0%	1,099
2006	56%	15%	21%	3%	5%	1,517
2007	59%	25%	12%	4%	0%	1,310
2008	-	-	-	-	-	-
2009	59%	19%	19%	2%	0%	1,535

[a] Ewe-like sheep included adult females, plus yearlings and two-year old sheep of both sexes.
[b] Classified as rams, but size class could not be determined.

In July 2012, the BLM collaborated with the ADF&G in a joint survey for sheep in the Central Brooks Range that included both sides of the Dalton Highway in Unit 24A. During surveys, 288 sheep were observed within the DHCMA, including 103 rams (15 full-curl rams, 56 less than full-curl rams, and 34 unclassified rams) (Arthur 2012). Between 2006 and 2010, the NPS counted 37 full curl or larger rams and 70 rams with less than a full curl within the DHCMA portion of Unit 24A (Rattenbury 2012, pers. comm.). Preliminary results from surveys conducted by the BLM during 2013 in areas within and adjacent to the DHCMA in Unit 24A showed similar numbers of total sheep and legal rams, higher numbers of ewe-like sheep, and an approximate 50% decline in lambs from the 2012 surveys (McMillan 2014, pers. comm.).

The majority of sheep surveys conducted in the central Brooks Range have occurred within Gates of the Arctic National Park and Preserve (GAAR), including GAAR-wide surveys in 2009 and 2010, and surveys of the Itkillik Preserve in 2005 and 2008–2012. The sheep population within GAAR was estimated to be approximately 11,000-12,000 animals in the early 1980s (Singer 1984). The population was thought to be low in the 1970s, followed by an increase from 1982 to 1987, and then dramatic declines by 1996 and 1997

(Whitten 1997, Brubaker and Whitten 1998). Estimates of the sheep population within GAAR in 2010 showed a population of just over 10,000 animals (Schmidt et al. 2012).

The Itkillik Preserve is in the northeast corner of GAAR and includes the NPS portion of Unit 24A (**Map 1**). From 1983-2008, the sheep population in the Itkillik Preserve of GAAR consisted of 53-80 full curl or larger rams, 224-351 half-curl to less than full-curl rams, 683-1,167 ewe-like individuals, and 276-371 lambs, though these numbers are hard to compare due to different search intensity, aircraft, and coverage between survey efforts (Rattenbury and Lawler 2010). Distance sampling surveys from 2009 to 2012 suggest sheep abundance in the Itkillik Preserve has been stable with estimates ranging from 1,669 to 1,898 sheep (**Table 2**). The percentage of rams with horns greater and less than a full curl represented similar proportions of the estimated population in 2011 and 2012 (**Table 2**). Preliminary estimates from a 2013 survey show as much as a 50% decline in total sheep, low lamb productivity and a decline in the ewe-like category (Rattenbury 2013, pers. comm.). However, estimates of rams with 1/2 curl or larger horns showed little change from 2009–2013 (Rattenbury 2013, pers. comm.).

Table 2. Sheep abundance and percentages of age and sex composition estimated via distance sampling surveys conducted during July in the Itkillik Preserve, within Gates of the Arctic National Park and Preserve, 2009–2012 (Rattenbury 2013, pers. comm.).

			Rams		
Year	Ewe-like [a]	Lambs	<Full curl	≥Full curl	Total sheep (95% CI)
2009	-	-	-	-	1,898 (1,421-2,578)
2010	-	-	-	-	1,854 (1,342-2,488)
2011	54%	26%	18%	2%	1,669 (1,339-2,120)
2012	65%	14%	18%	3%	1,706 (1,297-2,285)

[a] Ewe-like sheep included adult females, plus yearlings and two-year old sheep of both sexes.

Habitat

Habitat quality for sheep is poorly understood in much of the species range (Caikoski 2011). Sheep are found at high elevations with sparse vegetation where predation and competition for forage with other ungulates are reduced (Krausman and Bowyer 2003). Much of the area includes important habitat for Dall sheep including a combination of open alpine ridges, meadows and steep slopes that provide areas of feeding and resting, as well as escape terrain. Unit 24A is used by sheep year-round for summering, wintering, and lambing (Craig and Leonard 2009). During the summer, rams in Areas of Critical Environmental Concern (ACEC) within the DHCMA were found at high elevations (mean = 1,194 m, SD = 265 m) and elevations did not vary much between locations (Craig and Leonard 2009).

Harvest History

Harvest in Unit 24A has generally been low, but harvest pressure from non-Federally qualified subsistence users has been increasing in the region. Federally qualified subsistence users have harvested an average of

1.9 sheep per year in all of Unit 24A between 2005 and 2011, with an average of 14 Federal permits issued annually during this time period (**Table 3**); however, there are some indications that Federal harvests are larger than are being reported (WIRAC 2012). State harvest in all of Unit 24A averaged approximately 18 sheep per year during this time same period (**Table 3**). The number of hunters and the harvest of full-curl rams in eastern Unit 24 have increased since 2006 under State regulations. Between 1999/2000 and 2005/2006, an average of 40 hunters reported hunting in the area with an average annual harvest of 15 sheep. Then, between 2006/2007 and 2009/2010, an average of 55 hunters reported hunting the area and an average of 19 sheep were annually harvested (Caikoski 2011) The increased harvest pressure from hunters using State regulations may cause rams to disperse to areas that are more difficult to hunt.

Table 3. Federal and State Dall sheep harvest in Unit 24A, 2005-2011 (USFWS 2012, Stout 2012, pers. comm.)

Year	Federal Permits Issued	Federal Harvest	State Permits Issued	State Harvest
2005	14	2	41	16
2006	12	4	55	12
2007	15	3	48	14
2008	17	0	60	27
2009	13	0	53	17
2010	14	3	53	23
2011	15	1	55*	16*

*Preliminary results

Non-Federally qualified subsistence users hunting in the area have additional requirements that affect their ability to harvest sheep. Within the DHCMA, which includes a portion of Unit 24A, firearm restrictions are in place and all non-Federally qualified sheep harvest is via bow and arrow. Between 2005 and 2012, a total of 32 sheep have been reportedly harvested within the DHCMA by both State and Federal users (**Table 4**). Nonresident users hunting under State regulations are also required to be accompanied by a guide in Unit 24. BLM authorized Special Recreation Permits in 2012 to allow 4 guides to take a total of 12 clients to hunt sheep on BLM managed lands in the affected area. To reduce competition with Federally qualified subsistence users, the permit stipulations restricted hunting away from the west side of the Dalton Highway, which is preferred by Federal users (BLM 2012). Only nonresidents are required to hunt with a guide in the area, and Alaska residents hunting under State regulations are not affected by the BLM permit stipulations.

Table 4. Federal and State Dall sheep harvest within the DHCMA (Unit 24A, 25A and 26B), 2005-2011 (OSM 2013, Stout 2013, pers. comm.)

Year	Sheep Harvest
2005	0
2006	0
2007	8
2008	7
2009	3
2010	8
2011	2
2012	4*

*Preliminary results

Little information is available regarding the harvest of sub-legal rams, which was identified as a reason for the lack of 7/8-curl rams available for Federally qualified subsistence users. Dan Dahl, the Alaska State Trooper for the area, reported that two sublegal sheep were known to be harvested in the DHCMA in the fall of 2009; however, he knew of no other illegal harvests that were verified within the DHCMA (Dahl 2013, pers. comm.). Under State regulations, the sheep harvest within the DHCMA is

limited to bow hunting, which should reduce the probability of harvesting sublegal rams because of the close range required to harvest with that method. Furthermore, nonresident bow hunters are required to use a guide, which should further reduce the chances of sublegal harvest.

Other Alternative Considered

In the rationale for submitting the proposal, the proponent stated there is a need to modify the harvest limit in the affected portion of Unit 24A to one ram or one ram with a 1/2-curl or larger horn. The Board also approved the recent emergency special action (WSA12-01) to temporarily modify the harvest limit of one ram with 1/2-curl or larger horn for the 2012/2013 regulatory cycle. Thus, modifying the harvest limit to one ram with 1/2-curl or larger horn was considered in addition to the one ram harvest limit. However, due to low harvest rates by Federally qualified subsistence users within the and the stable sheep population, the proponent's initial request of a one ram harvest limit seems reasonable.

Effects of the Proposal

If this proposal is adopted, it would make a larger segment of the sheep population available for harvest by Federally qualified subsistence users by changing the harvest limit from one ram with 7/8-curl or larger horn to one ram in Unit 24A, except that portion within the Gates of the Arctic National Park. It is not anticipated that the proposed regulations will results in large impacts to the sheep population, but liberalizing the harvest limit could result in a higher annual harvest by Federally qualified subsistence users, as the average annual reported harvest success with the current horn-size restriction was 13% (range: 0% - 33%) 2005 and 2011 for those using the Federal registration permit. In addition, more Federally qualified subsistence users may attempt hunting in the area with the new harvest limit; however, the number of individuals with customary and traditional use determination is limited (*see* Customary and Traditional Use Determination) and there are other hunt areas nearby with more liberal harvest regulations (e.g., Units 24A and 24B—that portion within the Gates of the Arctic National Park has a harvest limit of 3 sheep from Aug. 1–Apr. 30). Spreading the harvest among the ram classes could help protect some of the larger breeding individuals from harvest.

OSM CONCLUSION

Support Proposal WP14-30

Justification

Liberalization of the horn requirement from one ram with 7/8-curl or larger horn to one ram will likely result in some impacts to the sheep population, including increased harvest; however, past harvest rates of sheep by Federally qualified subsistence users have been low. Allowing Federally qualified subsistence users to harvest any ram may result in harvest being spread among the different age classes, rather than focusing on larger rams. The sheep population appears to be relatively stable, albeit at densities lower than historical levels, and survey and harvest data indicate that full curl rams continue to be recruited into the population, which is inconsistent with the proponent's assertion that the 7/8-curl class is missing.

However, harvest pressure from non-Federally qualified subsistence users has been increasing and may cause rams to disperse to areas that are less accessible.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-30. The data does not accurately reflect the subsistence harvest of sheep from the Wiseman and Brooks Range area subsistence harvest. Why can't a subsistence user kill one ram? Full is preferred, but some meat is better than no meat. Prior to 2010, hunting guides could not hunt in the corridor. After 2010, planes began camping on the road system and hunting every legal ram on the corridor. This action drove away or killed the legal full curl sheep. Other resources are getting scarce-Brooks Range communities rely on large game animals and cannot rely solely on caribou and their migration. Sheep is not a sport issue for local residents-those are animals that are relied on for subsistence.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-50 Executive Summary	
General Description	Proposal WP14-50 requests that brown bears be allowed to be hunted over bait in Unit 25D. *Submitted by the Eastern Interior Subsistence Regional Advisory Council*
Proposed Regulation	**WP14-50** **Unit 25D – Brown Bear** *Aug. 10 – June 30* (iii)(A) You may use bait to hunt black bear **and brown bear** between April 15 an June 30 and between August 1 and September 25; you may use bait to hunt wolve on FWS and BLM lands.* *Note: The intent of the proposal is to allow baiting of brown bears during the existing season of Aug. 10 – June 30, not the dates listed in the above language.
OSM Conclusion	**Oppose** Proposal WP14-50.
Eastern Interior Regional Council Recom-mendation	**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** on methods and means, **Support** alignment with State seasons
Written Public Comments	1 **Support**

STAFF ANALYSIS
WP14-50

ISSUES

Proposal WP14-50, submitted by the Eastern Interior Subsistence Regional Advisory Council, requests that brown bears be allowed to be hunted over bait in Unit 25D.

DISCUSSION

The proponent states that hunters should be allowed to harvest brown bears that show up at black bear bait stations and that brown bears are at high densities in the unit. Furthermore, the proponent states that hunting of brown bears over bait has been done in the area for generations in both the spring and fall seasons. The proponent has submitted a similar proposal to the Alaska Board of Game for Unit 25D with the intention of aligning Federal and State regulations currently in place in Units 12, 20C, 20E, and 21D.

Existing Federal Regulation

Unit 25D – Brown Bear

Unit 25D – 2 bears every regulatory year *Aug. 10 – June 30*

(iii) Unit-specific regulations

(A) You may use bait to hunt black bear between April 15 and June 30 and between August 1 and September 25; you may use bait to hunt wolves on FWS and BLM managed lands.

Currently harvesting a brown bear over bait is not allowed under Federal regulations in any unit.

Proposed Federal Regulation

Unit 25D – Brown Bear *Aug. 10 – June 30*

(iii)(A) You may use bait to hunt black bear ***and brown bear*** *between April 15 and June 30 and between August 1 and September 25; you may use bait to hunt wolves on FWS and BLM lands.*[*]

[*]Note: The intent of the proposal is to allow baiting of brown bears during the existing season of Aug. 10 – June 30, not the dates listed in the above language.

Existing State Regulation

Unit 25D – Brown Bear

Units 12, 13D, 15*, 16*, 20C, 20E, and 21D allow brown bears to be taken at bait stations during open black bear baiting seasons with a bear bait station permit. The same restrictions that apply to black baiting apply to brown bear baiting. The edible meat of brown bears taken in these units over bait must be salvaged.*

Residents – two bears every regulatory year	*July 1 – Nov. 30*
	Mar. 1 – June 30
Nonresidents – one bear every regulatory year	*Sept. 1 – Nov. 30*
	Mar. 1 – June 15

**New units added to regulations at Alaska Board of Game meeting, February 2013.*

Extent of Federal Public Lands

Federal public lands comprise approximately 63% of Unit 25D and consist of 62% US Fish and Wildlife Service managed lands and 1% Bureau of Land Management managed lands (**Unit 25 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 25D have a customary and traditional use determination for brown bear in Unit 25D.

Cultural Knowledge

Members of these Athabascan communities recognized and continue to recognize brown bear as an important subsistence resource. Bears were harvested using spears, bow and arrows, and snares. Snares were sometimes baited (Nelson et al. 1982, Van Lanen et al. 2012). Rifles have replaced traditional methods of killing bears (Nelson 1973, Van Lanen et al. 2012). At the Council meeting on February 21, 2013, in Fairbanks, a Council member from a Qwich'in village said:

> In the springtime you'll find the bears just coming out of their dens and the trappers . . . would use [carcasses] as bait . . . whatever didn't get eaten by the dogs, they would use that for bait in the springtime to get the spring bears. And you'd use whatever was left from your moose kill in the fall for bait to get a fall bear (EIRAC 2013: 255-256).

> Those were the two times of year that [bear were] normally taken, which the State season reflects. But I'd just like to see it in the Federal reg book as well so I don't have to play that lawyer GPS "where am I" game to go from State and Federal land . . . and I could leave my

> bait stations where they are and not have to move camp miles to get back onto Federal land or back onto State land. We have a checkerboard of land ownership in the Yukon Flats (EIRAC 2013: 255-256).

According to Van Lanen et al. (2012), use of brown bears has been historically low and harvest of the species was often incidental to other activities. No mention was made of brown bear baiting being used as a traditional method of harvest.

Regulatory History

Currently, harvesting a brown bear over bait is not allowed under Federal subsistence regulations.

At its March 2012 meeting, the Alaska Board of Game addressed several proposals looking to allow harvesting of brown bears at bait sites: Proposal 168 to allow baiting of brown bears in Unit 21D was adopted. Proposal 196 to allow brown bear baiting in Units 12 and 20E with the same season and restrictions as black bear baiting was adopted. Proposal 232 to allow the harvest of grizzly bears over a black bear bait site with the requirement to salvage the meat and hide in Unit 20C was also adopted.

Current Events Involving the Species

The Eastern Interior Federal Subsistence Regional Advisory Council submitted a proposal to the Alaska Board of Game, which will be addressed by the Board in early 2014, to allow baiting of brown bears in Unit 25D with the intent to align State and Federal regulations if WP14-50 is approved by the Federal Subsistence Board.

Biological Background

Brown bears are widely distributed in northeastern Alaska. The brown bear population in 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 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 based on an increase in sightings of brown bears by local residents on the Yukon River compared to years prior to 2000 (Lenart 2011).

The current population estimates of brown bears in Units 25A, 25B, and 25D are based on extrapolations from studies done in the 1980s and 1990s, with an estimated 1,200 brown bears (2.4 bears/100 mi^2) (Lenart 2011). Estimated densities and population size varies slightly between the units. 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) based on extrapolations from studies done in Unit 20A in the 1980s and 1990s.

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, long intervals between successful reproductive events and short potential reproductive periods lead to the low rates of successful production in brown bears in northern Alaska (USFWS 1982). In addition, female brown bears exhibit high fidelity to

home ranges and little emigration or immigration (Reynolds 1993). Therefore, brown bears are often managed conservatively.

Brown bears in Unit 25D have been identified as a significant predator on moose calves contributing to maintaining a low density of moose. In their moose mortality study, Bertram and Vivion (2002) found 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.

The *Yukon Flats Cooperative Moose Management Plan* notes the following about the brown bear population in Unit 25D:

> There are an estimated 380 grizzly bears in Unit 25D, or about 1 bear per 46 mi². Based on a 5% sustainable harvest rate, the estimated sustainable harvest is about 19 bears, assuming some harvest of female bears. The reported harvest of grizzly bears averages 3-4 each year and some additional bears are taken but not sealed. Increased awareness and concern about the effects of bear predation on moose has resulted in greater local interest in harvesting bears (*Yukon Flats Cooperative Moose Management Plan*, 2002: 25).

The State management objectives for Unit 25D are to manage for a temporary reduction in grizzly bear numbers and predation on moose. After this reduction is achieved, bear harvest will be reduced to allow the bear population to recover (Lenart 2011).

Harvest History

Brown bear mortality in Units 25B and 25D has been low in most years. Between 2000 and 2012 an average of 4 brown bears were killed annually in these units (**Table 1**). There was a spike of 11 bears killed in regulatory year 2002/03, most likely in response to increased effort to harvest bears as prescribed in the Yukon Flats Cooperative Moose Management Plan (Lenart 2011). Underreporting of harvest is suspected due to the difficulty in getting a bear sealed in this remote area and there is a discrepancy between reported harvest and harvest recorded during household surveys (Van Lanen et al. 2012, Stevens and Maracle 2012). For example, annual harvest of brown bears between 2006 and 2010 averaged 23 animals according to household survey data (**Table 2**), while the annual reported harvest during this same period averaged just 6 animals. The average annual harvest as reported by household surveys exceeds the sustainable harvest for Unit 25D. There are two registered guides on Yukon Flats National Wildlife Refuge that harvest bears in Unit 25D. Currently guided harvest of brown bears is just a few animals per year but refuge staff have been told that brown bear harvest would increase if baiting were allowed (Bertram 2013, pers. comm.).

Table 1. Units 25B and 25D brown bear reported mortality, RY 2000-2010 (Lenart 2011, Crawford 2013, pers. comm.).

Regulatory Year	Total Reported Mortality
2000-2001	1
2001-2002	1
2002-2003	11
2003-2004	2
2004-2005	3
2005-2006	1
2006-2007	4
2007-2008	6
2008-2009	6
2009-2010	6
2010-2011	2
2011-2012	3

Table 2. Unit 25B and 25D brown bear mortality (Lenart 2007, Young 2007, Van Lanen et al. 2012) from household survey data.

Regulatory Year	Household Survey Data Mortality[a]
1995-1996	1
1996-1997	0
1997-1998	1
1998-1999	0
1999-2000	-
2000-2001	-
2001-2002	-
2002-2003	5
2003-2004	-
2004-2005	22
2005-2006	-
2006-2007	37
2007-2008	17
2008-2009	22
2009-2010	16

[a]Household survey data does not include nonlocal harvest of brown bears.

Effects of the Proposal

If this proposal is adopted, brown bears will be allowed to be harvested using bait on Federal lands by Federally qualified users. This would be the first regulation of its kind for brown bears on Federal lands in Alaska. If adopted, it would provide increased opportunities for Federally qualified users to harvest brown bears in the unit. The effect of the proposal on brown bear populations is difficult to predict given that the latest population estimates for the species in Unit 25D are now 20 years old and based on extrapolations from studies done in the 1980s and 1990s . Indeed, without recent population estimates, managers have

been relying on detecting trends in brown bear populations based on sex and age composition of bears harvests, which can be problematic due to vulnerability to harvest of different cohorts, patchy distribution of harvest as a result of differences in hunter accessibility, and detected trends being affected by changes in bag limits, seasons and other hunt parameters rather than any actual trends in population size (Miller et al. 2011).

Hunting brown bears over bait would most likely lead to an increase in hunter success versus a "spot and stalk" hunt because it is an efficient method of hunting (Dunkley and Cattet 2003, Gore 2003). Additionally, the harvest limit for brown bears in Unit 25D was changed from one to two bears every regulatory year in 2012. There is a proposal before the State Board of Game that would allow for baiting of brown bears in Unit 25D starting in 2014. There is potential for a further increase in brown bear harvest by non-local hunters if both the State and Federal proposals are approved. Opening up brown bears to baiting, combined with a doubling of the brown bear harvest limit in such a short period of time could have an adverse impact on the species, especially in northern portions of the state where brown bears are known to have low reproductive rates.

OSM CONCLUSION

Oppose Proposal WP14-50.

Justification

Brown bear population estimates for Unit 25D are now 20 years old and based on extrapolations from studies done in the 1980s and 1990s. It is difficult to predict what the effect of allowing baiting for the species on Federal land would be. Population trends are being estimated based on harvest, which is problematic for a variety of reasons. Bear baiting is an efficient method of hunting and would likely lead to an increase in hunting success versus the "spot and stalk" hunting method now used. This, coupled with the recent doubling of the harvest limit in Unit 25D under Federal regulations, the preponderance of underreporting of harvest in Unit 25, the potential for increased harvest by non-local hunters should the State and Federal proposals allowing brown bear baiting in Unit 25D be approved, and the already low reproductive rates of the species in northern Alaska would indicate caution in opening up the species to the method of hunting requested by the proponent. A conservative approach to an increase in harvest for this species is warranted prior to the initiation of more efficient methods of harvest such as baiting.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support WP14-50. The Council discussed interest in additional harvest opportunity for bear. Council member Andrew Firmin noted that CATG collects harvest information and there does not appear to be a conservation concern with current harvest levels. Council feels it would be helpful to align the federal regs. with the state for bear harvest. Council discussed eating brown bear meat and noted many consider it good food and are very intelligent and difficult to hunt. Council would opportunity to harvest a brown bear over black bear bait if it does come to it.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-50: The taking of black and brown bears over bait has been a traditional practice in the area. This area has a exceptionally low moose population and the locals are trying to get meat from bears that is not available from moose. As one Eastern RAC member said, we could legalize a practice that has been a traditional practice.

Donald Woodruff, Eagle

WP14-53 Executive Summary	
General Description	Proposal WP14-53 requests that the boundary for Unit 26A – that portion west of 156°00'W longitude and excluding the Colville River drainage, be changed. The proponent requested changing the longitude from 156°00'W to 155°00'W longitude to allow for moose hunting in the Alaktak and Chipp river drainages. *Submitted by North Slope Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 26A—Moose** *Unit 26A—that portion west of ~~156°00'W Long.~~* ***155°00'W Long.*** *and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.* — *July 1–Sept. 14* *Unit 26A, remainder—1 bull* — *Aug. 1–Sept. 14*
OSM Conclusion	**Oppose**
North Slope Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-53

ISSUES

Proposal WP14-53, submitted by North Slope Subsistence Regional Advisory Council (Council), requests that the boundary for Unit 26A – that portion west of 156°00'W longitude and excluding the Colville River drainage, be changed. The proponent requested changing the longitude from 156°00'W to 155°00'W longitude to allow for moose hunting in the Alaktak and Chipp river drainages (**Map 1**).

DISCUSSION

The proponent would like to move the boundary east from to 156°00'W longitude to 155°00' W longitude allow for a moose hunt in the Alaktak and Chipp river drainages, which are outside of the current regulatory boundaries. The proponent states that approximately 40 people from Barrow are familiar with and have camps along the Chipp River area that can be accessed by boat. Opening a moose hunt along the Alaktak and Chipp rivers would reduce the expense, time, and distance that hunters currently have to travel to harvest moose.

Existing Federal Regulation

Unit 26A—Moose

Unit 26A—that portion west of 156°00'W Long. and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.	*July 1–Sept. 14*
Unit 26A, remainder—1 bull	*Aug. 1–Sept 14*

Proposed Federal Regulation

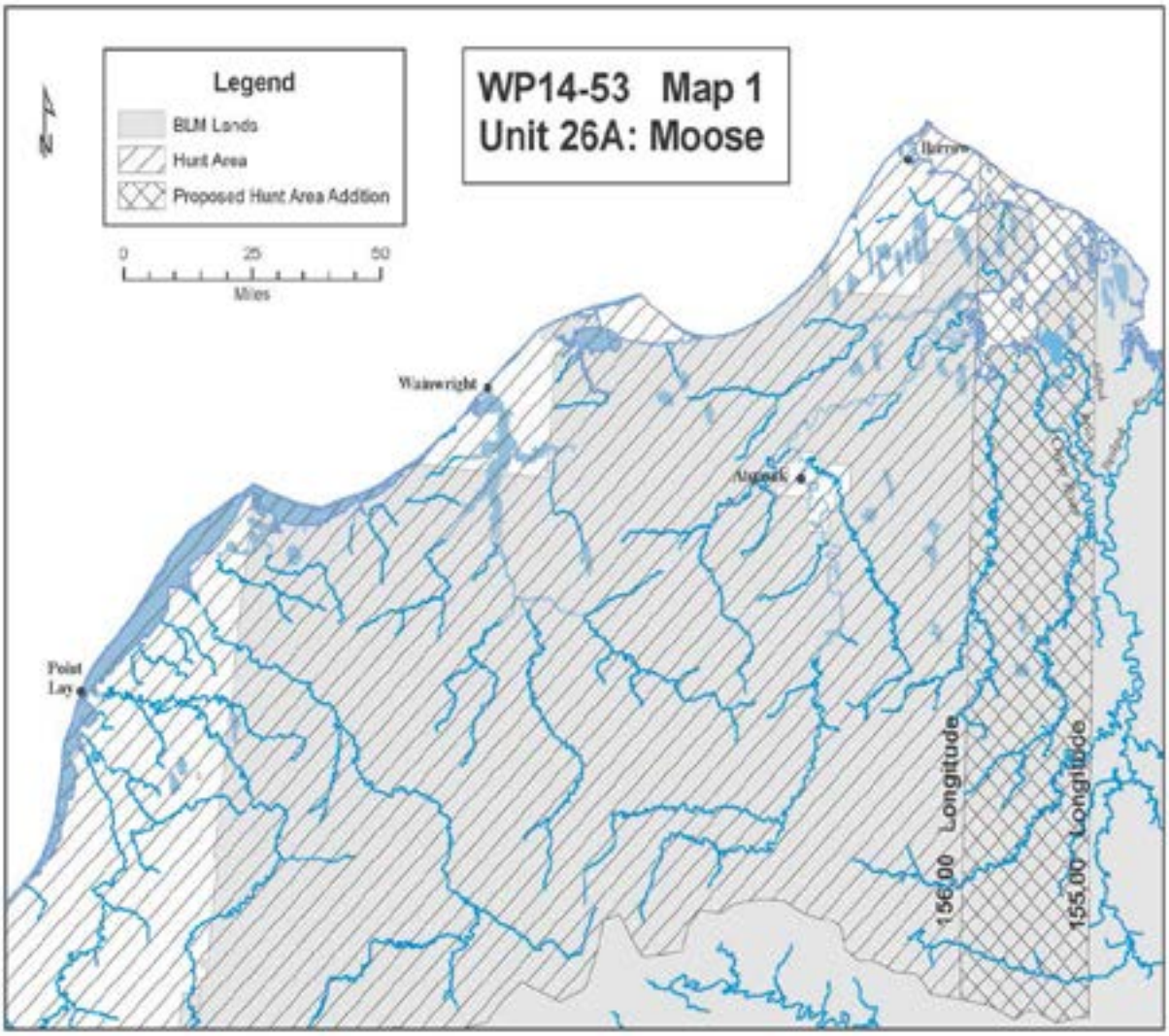
Unit 26A—Moose

*Unit 26A—that portion west of ~~156°00'W Long.~~ **155°00'W Long.** and excluding the Colville River Drainage—1 moose, however, you may not take a calf or a cow accompanied by a calf.*	*July 1–Sept. 14*
Unit 26A, remainder—1 bull	*Aug. 1–Sept. 14*

Existing State Regulation

Unit 26A—Moose

26A west of 156°00'W. longitude excluding the Colville River drainage	***Resident Hunters:*** *One Moose however, a person may not take a calf or a cow accompanied by a calf*	*HT*	*July 1–Sept. 14*
	Nonresident Hunters		*No open season*
26A remainder	***Resident Hunters:*** *One bull*	*HT*	*Aug. 1–Sept. 14*



Extent of Federal Public Lands

Approximately 73% of the lands in Unit 26A are comprised of Federal public lands consisting of 66% Bureau of Land Management (BLM) managed lands, 6.6% National Park Service (NPS) managed lands, and 0.1% U.S. Fish and Wildlife Service (USFWS) managed lands (See Unit 26 **Map**). All of the lands that the proponent proposes to open to moose hunting are managed by the BLM.

Customary and Traditional Use Determinations

Residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for moose in Unit 26.

Regulatory History

In 1996, the Federal Subsistence Board (Board) adopted regulatory proposal P96-66 that closed moose hunting on all Federal public lands in Unit 26A except in that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River due to population declines (FWS 1996). At that time, the only segment of the population that was considered stable was the small population of moose downstream from the mouth of Anaktuvuk River. That area remained open only to Federally-qualified subsistence users from Aug. 1–Aug. 31, and the harvest was limited to 1 moose per hunter, as long as it was not a cow accompanied by a calf. The Board's justification for adopting the closure to non-Federally qualified users to harvest moose was to address conservation concerns.

In 2002, the Board adopted Proposal WP02-45 that expanded the Federal subsistence moose harvest area in Unit 26A from that portion of the Colville River drainage downstream from the mouth of the Anaktuvuk River to that portion of the Colville River drainage downstream from and including the Chandler River and also extended the season by two weeks, from Aug. 1–Aug. 31 to Aug. 1–Sept. 14. The Board's decision in 2002 was based on: population increases since 1998, especially in the core areas of the Colville River drainage; to spread out the harvest pressure to other areas with higher moose density; align State and Federal regulations; and to provide additional subsistence hunting opportunity later in the fall when the temperatures are colder, which could reduce the chance of meat spoilage.

In 2004, the Board adopted Proposal WP04-85 which established the eastern boundary of the proposed harvest area in Unit 26A to 156°00'W longitude to match the new State regulation and also aligned the season and harvest limits with those made by the State Board of Game. In 2005, the Office of Subsistence Management conducted closure review WCR05-23 and recommended that the closure of that portion of the Colville River drainage downstream from and including the Chandler River to non-Federally qualified moose hunters should continue to remain in effect. However, when WCR05-23 was discussed during the North Slope Regional Advisory Council's (Council) fall 2005 meeting (NSSRAC 2005), new winter moose census information provided by the ADF&G suggested the closure was no longer necessary since the moose population had reached at least 1,000 animals. Although the Council recommended maintaining the closure for non-subsistence uses, the new information indicated such a closure may no longer be needed to conserve a healthy moose population.

In May 2006, the Board adopted Proposal WP06-66 (FWS 2006), which resulted in reopening remaining Federal public lands on that portion of the Colville River drainage downstream from and including the Chandler River to hunting by all Alaska residents.

Biological Background

Prior to the 1950s, moose were scarce along the North Slope. Subsequently, populations expanded along the limited riparian habitat of the major drainages (LeResche et al. 1974) and have become well established in Unit 26A. The northern extent of the moose populations on the North Slope is thought to be limited by habitat availability. The moose in these areas tend to concentrate along riparian corridors where browse is most abundant. Nearly all the moose are confined to the riparian habitat along the large river corridors during the winter but during summer many of the moose disperse north across the coastal plain and south into the foothills of the Brooks Range.

State management goals for moose in Units 26A are to maintain viable populations throughout their historic range in the region, provide sustained moose harvest opportunity, and to provide opportunity for moose photography and viewing (Carroll 2010). Specific State management objectives for Unit 26A are as follows (Carroll 2010).

- Allow for the recovery of the Unit 26A moose population and maintain a population of over 1,000, with a bull:cow ratio greater than 30:100.

- Maintain a moose population at a level that can sustain subsistence and general hunt needs.

Since the late 1970s, ADF&G has conducted late-winter aerial surveys (1977, 1984, 1991, 1995, 1999, 2002, 2005, 2008, 2011) in all the major drainages of Unit 26A to assess population status and recruitment of short yearlings (10 to 11 months old) (Carroll 2000, Carroll 2010). The moose population reached a high of 1,535 in 1991 and then declined to a low of 326 in 1999, increased again to 1,180 in 2008 (Carroll 2010) and declined to 609 in 2011 (**Table 1**). It should be noted that all the population counts included the Itkillik River, which is part of the Colville River drainage, but is in Unit 26B (Carroll 2010). For example, in 2008, 64 moose, including 4 calves were counted in the Itkillik River (Carroll 2010).

The declines in the population counts from 2008 – 2011 were a result of high adult mortality and poor calf survival which appeared to be the result of a combination of factors such as malnourishment, bacterial diseases, mineral deficiencies, predation by brown bears and wolves, severe winter weather, and competition with snowshoe hares (snowshoe hares eating willow bark) (Carroll 1998). Density dependent factors such as over-browsing when populations were high, likely contributed to the following declines (Carroll 2008).

In addition to population counts in Unit 26A (Table 1), trend area counts have been conducted yearly (except for 1982) along the Anaktuvuk River from the mouth to Sivugak Bluff, the Chandlar River from the mouth to Table Top Mountain, and the Colville River between the mouths of Anaktuvuk and Killik Rivers from 1974 – 2007. The trend area counts indicated that moose population reached a low in 1996 of 152 and slowly began to recover due to increased adult and calf survival rates to 610 in 2007.

Table 1. Moose observed during aerial censuses conducted in the Unit 26A (Carroll 2010, OSM 2013).

	Moose observed			
Year	Adults	Calves	Total[a]	% Calves
1970	911	308	1219	25
1977	991	267	1258	21
1984	1145	302	1447	21
1991	1231	304	1535	20
1995	746	11	757	1
1999	274	52	326	16
2002	502	74	576	13
2005	863	185	1048	18
2008	1023	157	1180	13
2011[b]	545	64	609	10

[a] Includes moose counted on the Ikkillik River which is part of the Colville River drainage, but is in Unit 26B. In 2008, there were 64 moose, including 4 calves on the Itkillik River. (Carroll 2010).

[b] Information provided by Geoff Carroll (Carroll 2013, pers. comm. 2013)

The trend area count declined from 559 in 2008 and to 293 in 2012. Based on information from radio telemetry studies the population began to recover in 1996 due to decline in the adult mortality rates to about 7% and an increase in calf survival. Estimates of recruitment of short yearlings into the population ranged from 17% to 26% between 1997 and 2007. Even though the population counts increased slightly from 2005 to 2008, data from the trend counts from 2008 to 2009 indicate that the population declined substantially in 2009. In 2008, the biologists counted 559 moose within the trend count area, including 475 adults and 84 short yearlings (15% recruitment rate) and in 2009 the total dropped to 356 adults, including only 8 calves (2% recruitment rate) (Carroll 2010). In 2010, the population declined to 265 and is currently stable at low numbers (2011 – 282, 2012 – 293, Carroll 2013, pers. com.). Based on trend counts, the decline that started in 1991 lasted five years and the decline that started in 2007 lasted 3 years.

At the winter 2013 North Slope Council meeting (NSSRAC 2013) Geoff Carroll, biologist with Alaska Department of Fish and Game (ADF&G), stated that the moose population was low and that this proposal would probably not get a lot of support from the State biologist. Mr. Carroll also mentioned that the Chipp River has a small struggling moose population and is one of the reasons why the moose harvest is restricted to one bull east of the boundary line at 156°00'W longitude in Unit 26A (NSSRAC 2013).

Habitat

Moose in Unit 26, which are on the extreme edge of their distribution, are limited by marginal habitat and thus are more vulnerable to environmental variations than populations in more optimal locations and habitat. During the winter the moose in this area are confined to the riparian areas on the coastal plain. During the summer a majority of them will disperse from the river bottoms but usually remain near riparian habitat and during the fall, when the snow begins to accumulate, they move back to the riparian corridors of the large river systems (Carroll 2010).

A habitat study was initiated in April 2008 on the Colville river in areas where moose browsed between the mouth of the Killik River and Umiat to determine the quantity of browse available to moose in the riparian area in the winter. Results indicated a 12% browse removal rate, which was similar to other areas in the State which have moderate browsing and twinning rates. Thus it appears that the poor survival rate of collared animals, low weights of the short-yearlings, and apparent starvation of several moose during the 2008 capture season was not related to the quantity of browse in Unit 26A (Carroll 2010). Quantity and availability (willows covered up by snow drifts), accessibility (effects of deep snow on access), and increased tannins in the willows (in response to snowshoe hares eating the bark) are factors which could contribute to malnourishment seen in some of the moose. In 2009, samples were taken to assess the quality of the browse but the results are not currently available (Carroll 2010).

Harvest History

Moose harvest in all of Unit 26A averaged 57 per year until 1995, which was several years after the peak estimated abundance of the moose population in 1991 (**Table 1, Table 2**). Although the trend area counts began to decline in 1992, the harvest remained at the higher levels for several years (Carroll 2010). In 1995, when more restrictive regulations were implemented, the harvest dropped to 14 and then remained low between 1996 and 2004 at an average of 4 per year. One of the most important changes affecting harvest levels in this area was the ban on the use of aircraft from 1996 to 2005. In the fall of 2005, in response to an increasing moose population, the Alaska Board of Game liberalized some of the regulations in Unit 26A including the limited use of aircraft during moose hunts. Between 2005 and 2010 the average harvest was 10 moose per year.

Geoff Carroll expressed concern, at the winter 2013 North Slope Advisory Council meeting, about the current decline in the moose population and small population in the Chipp River drainage but also mentioned that the additional harvest of one or two moose would probably not have a population-level effect (NSSRAC 2013). However, the basis for the original decision to limit the hunt to one bull west of 156°00'W longitude was to protect the very small population of moose that occur in the Chipp River drainage (NSSRAC 2013).

Table 2. Moose harvest in Unit 26A from 1985-2011 (Carroll 2010, OSM 2013).

Year	Male	Female	Total
1985/1986	50	15	65
1986/1987	46	6	52
1987/1988	49	13	62
1988/1989	51	6	57
1989/1990	41	3	44
1990/1991	60	4	64
1991/1992[a]	59	8	67
1992/1993	52	8	60
1993/1994	53	8	61
1994/1995	36	4	40
1995/1996[b]	14	0	14
1996/1997	0	0	0
1997/1998	2	0	2
1998/1999	5	0	5
1999/2000[c]	2	0	2
2000/2001	0	0	0
2001/2002	4	0	4
2002/2003	11	0	11
2003/2004	5	0	5
2004/2005	4	1	5
2005/2006	9	2	11
2006/2007	8	3	11
2007/2008	11	1	12
2008/2009	12	0	12
2009/2010	10	9	19
2010/2011	12	0	12

[a]Moose population at a high of 1,535

[b]Restrictive regulations implemented

[c]Moose population at a low of 326

Effects of the Proposal

Under the Federal Subsistence Regulations for 26A remainder one bull moose may be taken in 26A remainder which would include the area between 156°00'W longitude to 155°00' W longitude from Aug. 1 – Sept. 14. If this proposal is adopted, it is expected that up to 40 people from Barrow, which use the Chipp River area, could potentially benefit from the change in the eastern boundary. Having the Chipp River included in the hunt area would allow hunters to take any moose except a calf or a cow accompanied by a calf from July 1 – Sept 14, when they are at traditional hunting and fishing areas on the Chipp and Alaaktak river drainages. Changing the boundary from 156°00'W to 155°00'W would add approximately 3065 mi^2 to Unit 26A and decrease the area available to Federally qualified subsistence users in Unit 26A remainder by the same amount.

Increasing the harvest season by a month and allowing the take of any moose versus just a bull moose is likely to increase the moose harvest in Alaktak and Chipp river drainages. An increase of the harvest could slow the recovery of the moose population that inhabits the Chipp River drainage. Due to the small population in the Chipp and Alaktak River drainage and the current decline in the population, the harvest of even a few moose from the Alaktak and Chipp River drainage could have a significant impact on the moose population in these two drainages. Allowing the take of cows, the most important age class in the population, is likely to cause the population to continue to decline or slow the recovery of moose that occur in the Chipp and Alaktak drainages. If this proposal is adopted, Federal and State regulations will be out of alignment, adding to the regulatory complexity for Federally qualified subsistence users.

OSM CONCLUSION

Oppose Proposal WP14-53.

Justification

Expanding the hunt area from 156°00'W to 155°00'W, increasing the harvest season, and allowing the harvest of cows without a calf is likely to have a significant adverse impact on the relatively small number of moose that occur in the Chipp and Alaktak drainage of Unit 26A, excluding the Colville River drainage and also contribute to the continued decline of the moose population in Unit 26A. The current moose population in Unit 26A is low and thus expansion of the hunt area in Unit 26A is not recommended due to conservation concerns which is consistent with sound management principles for conservation of a healthy moose population.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

North Slope Subsistence Regional Advisory Council

Support WP14-53. The Council discussed that hunting moose is opportunistic when they happen to wander in the area and reaching these areas on the Chipp River are limited to times when the water conditions are just right to be accessible by boat. The Council thus felt the actual harvest impact to the moose population would be minimal in that area.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-54 Executive Summary	
General Description	Proposal WP14-54 requests that the moose season in Unit 26B remainder and Unit 26C be extended from July 1 to March 31 to July 1 to June 30, the harvest restrictions for Unit 26C (number, sex) be removed, and the harvest limit be increased from 3 moose to 5 moose. *Submitted by North Slope Regional Advisory Council.*
Proposed Regulation	**Unit 26B remainder and 26C—Moose** *Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is* ***~~3~~5*** *moose ~~(2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C.~~ You may not take a cow accompanied by a calf in Unit 26B. Only* ***~~3~~5*** *Federal registration permits will be issued.* *Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.*
OSM Conclusion	**Support** Proposal WP14-54 **with modification** to only allow for the extension of the harvest season from July 1 to March 31 to July 1 to June 30.
North Slope Regional Advisory Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee provided a number of options for the Federal Subsistence Board to consider.
ADF&G Comments	**Support** Proposal WP14-54 **with modification** to allow for only one extension of the harvest season from July 1 - March 31 to July 1 - April 30. Opposed to increased harvest quota for northern (central) Unit 26C and Unit 26B remainder.
Written Public Comments	**None**

ISSUES

Proposal WP14-54, submitted by North Slope Regional Advisory Council (Council), requests that the moose season in Unit 26B remainder and Unit 26C be extended from July 1 to March 31 to July 1 to June 30, the harvest restrictions for Unit 26C (number, sex) be removed, and the harvest limit be increased from 3 moose to 5 moose.

DISCUSSION

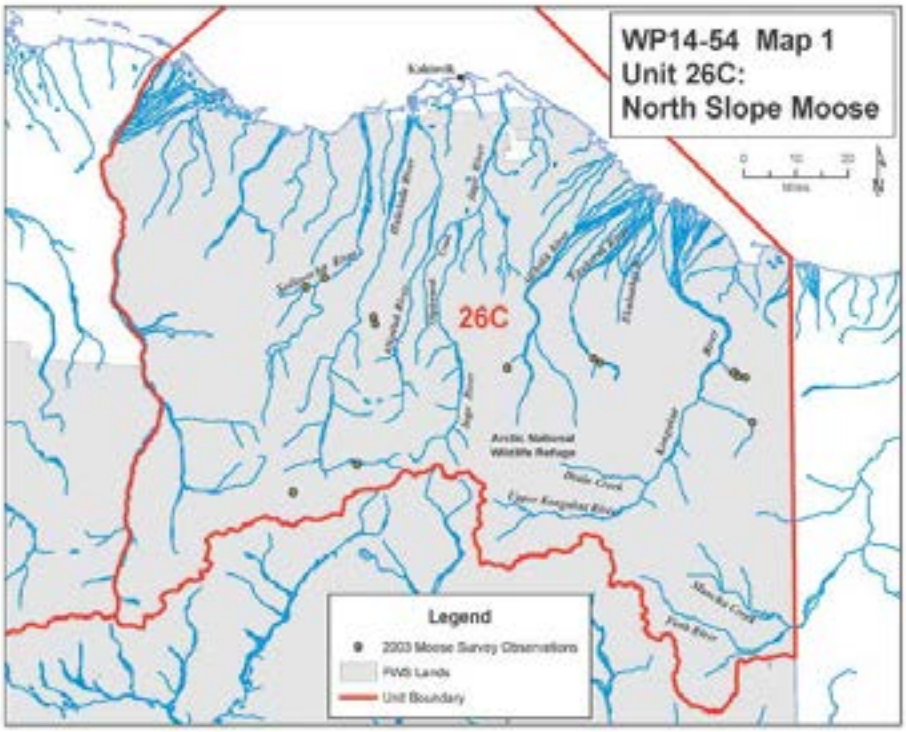
The proponent would like to increase the harvest limit from 3 to 5 moose in Unit 26 C (**Map 1**) and Unit 26B remainder (**Map 2**) to allow subsistence hunters opportunity to harvest more moose. Given the expense and long distances required to find and harvest a moose, the current moose season and harvest limit of 3 moose is considered very restrictive and provides little meat for the community of Kaktovik. The proponent states that increasing the harvest from 3-5 moose should not impact the moose population, would help feed more families and would provide diversity from marine mammals in their annual diet. The proponent requests full consideration of the subsistence needs of the community and an investigation into historic harvest levels prior to the implementation of any subsistence restrictions.

In addition, the proponent requests that the moose season be extended to year-round hunt to allow the hunters the flexibility to hunt when the weather and travel conditions are suitable and safe. In recent years Kaktovik residents have encountered severe winter weather and storms which have prevented hunters from being able to hunt safely in March.

Existing Federal Regulation

Unit 26B remainder and 26C—Moose

Units 26B, remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 3 moose (2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf in Unit 26B. Only 3 Federal registration permits will be issued.	*July 1–Mar. 31*
Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations	

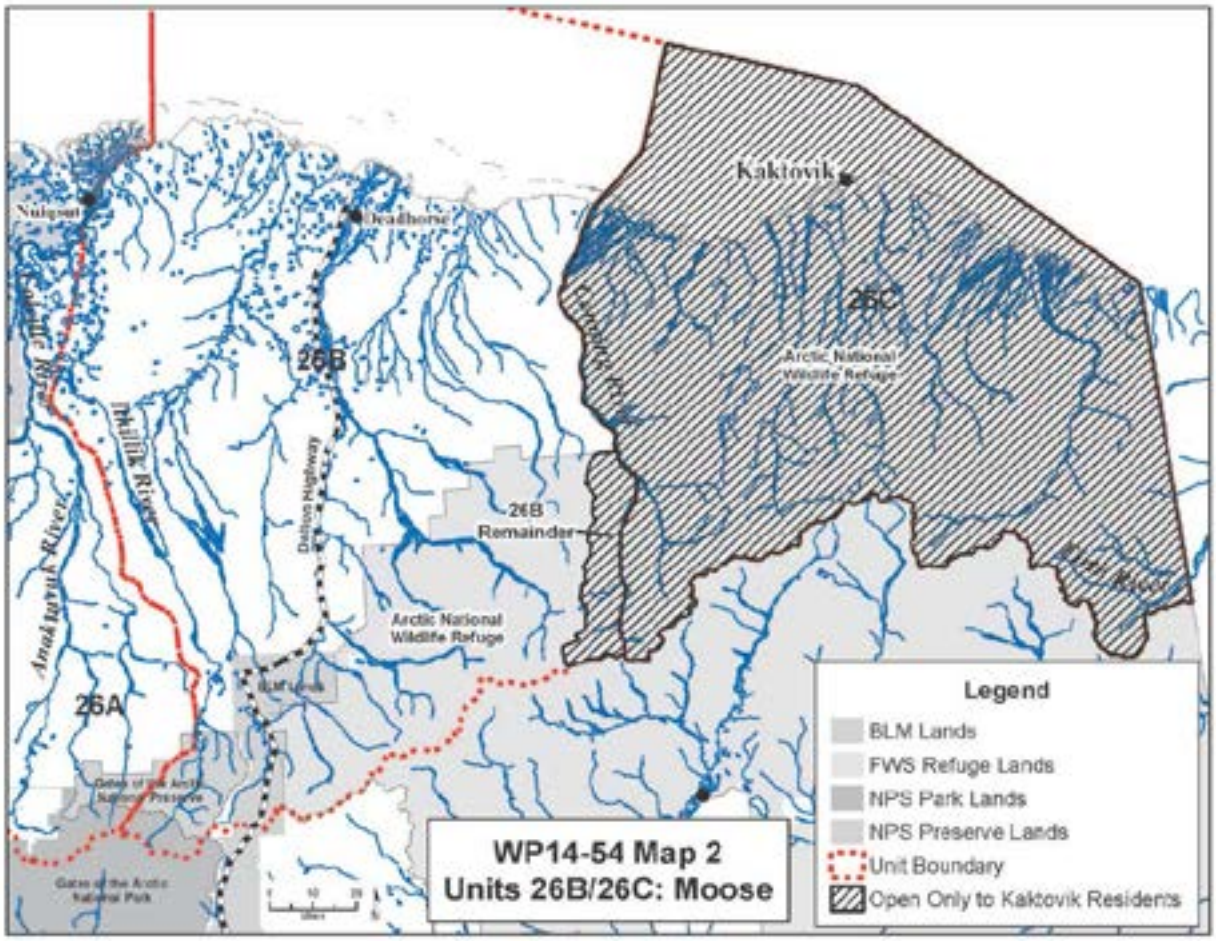


Proposed Federal Regulation

Unit 26B remainder and 26C—Moose

Units 26B, remainder and 26C—1 moose by Federal registration permi by residents of Kaktovik only. The harvest quota is ***~~3~~5*** *moose ~~(2 antlere bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C.~~ You may not take a cow accompanied by a calf in Unit 26B. Only* ***~~3~~5*** *Federal registration permits will be issued.*

Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.



Existing State Regulation

Unit 26B—Moose

Unit 26B remainder		*No open season*

Unit 26C—Moose

*Unit 26C that portion in the drainages of Firth River and Mancha Creek and the Upper Kongakut River, upstream from and including Drain Creek**	***Resident Hunters**: 1 bull by drawing permit only; up to 30 permits may be issued;*	*Sept. 1–Sept. 25*
	***Nonresident hunters**: 1 bull with*	*Sept. 1 – Sept. 25*

	50-inch antlers or antlers with 4 or more brow tines on at least one side; by drawing permit only; up to 30 permits may be issued;
Unit 26C-remainder	*No open season*

***Note**: Although a moose season in this portion of Unit 26C was established in State regulations by action of the Alaska Board of Game at their March 2–11, 2012 meeting: the hunt area is entirely on Federal public land and Federal lands are currently closed to the harvest of moose, except by Federally qualified subsistence users.*

Extent of Federal Public Lands

Approximately 98% of the lands in Unit 26C are comprised of Federal public lands managed by the U.S. Fish and Wildlife Service (USFWS). Approximately 29% of the lands in Unit 26B are comprised of Federal public lands consisting of approximately 23% USFWS managed lands, 4% Bureau of Land Management managed lands, and 3% National Park Service managed lands.

Customary and Traditional Use Determinations

Residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for moose in Unit 26. Federal public lands in Unit 26B remainder and Unit 26C were closed to non-Federally qualified users and those with recognized customary and traditional uses except the residents of Kaktovik. The prioritization of Kaktovik residents over other users was established through an ANILCA Section 804 analysis in Proposal WP04-86.

Regulatory History

Federal and State moose seasons in Units 26B and 26C were closed in 1996 due to low population of moose following declines in the early 1990s (Mauer 1997, Lenart 2010). These declines were probably due to a combination of factors including weather, predation by wolves and grizzly bears, disease, and possibly insect harassment (Lenart 2008).

The Federal closure was temporarily lifted in 2003, when the Federal Subsistence Board (Board) approved a modification of Special Action WSA03-04 to allow residents of Kaktovik to harvest one moose in Units 26B and 26C for their Thanksgiving Feast and one moose for their Christmas Feast; however, only one moose could be harvested in Unit 26C (OSM 2003).

In 2004, the Board adopted Proposal WP04-86b with modification to allow of a harvest quota of 3 moose (2 bulls and 1 of either sex) with the following restrictions that no more than 2 bulls may be harvested and a cows may not be harvested in Unit 26C. The analysis for Proposal WP04-86 included an ANILCA Section 804 analysis (WP04-86a) which the Board used to give priority to the residents of Kaktovik for harvesting moose in Unit 26C.

Proposals WP06-67a and WP06-67b requested that residents of Unit 25A be added to the customary and traditional use determination for the Firth and Kongakut river drainages of Unit 26C (WP06-67a) and set a harvest limit of two moose per drainage (WP06-67b). Proposal WP06-67a was rejected by the Board because the residents of Arctic Village and the surrounding area did not have a demonstrated pattern of use of moose in Unit 26C. Proposal WP06-67b was rejected by the Board (FSB 2006) based on conservation concerns.

In 2007, the Board adopted Proposal WP07-63 with modification, to lift the closure of Federal public lands to non-Federally qualified subsistence users in the portion of Unit 26B outside of the Canning River drainage based on increasing moose populations in that portion of the unit (FSB 2007). The Board retained the closure of Federal public lands in Unit 26C and areas within the Canning River drainage in Unit 26B, except for residents of Kaktovik.

Proposal WP08-54 requested a modification of the moose harvest quota in Unit 26C to 5 bulls (4 bulls and 1 of either sex) with shorter harvest season from July 1 to December 31 vs. July 1 to March 31 for Kaktovik residents in Unit 26C and the proposal requested lifting the closure in the Canning River drainage of Unit 26B (Unit 26B remainder). The Board adopted the proposal with modification to keep the closure in place, except for residents of Kaktovik, but changed the harvest quota from 3 moose (2 bulls and 1 of either sex) to 3 moose (2 antlered bulls and 1 of either sex) (FSB 2008). Changing the harvest limit to antlered bulls was done to protect cows from being harvested later in the season when bulls have shed their antlers. The restriction of harvesting a cow accompanied by a calf was retained.

In March 2012, the Alaska Board of Game adopted Proposal 174A to establish a State moose season in a portion of Unit 26C which includes the Firth River, Mancha Creek and the Upper Kongakut River drainages; however, there has been no State season because the area consists of Federal public lands that are currently closed to the harvest of moose, except by Federally qualified subsistence users. A State season is contingent on the Board lifting the closure in the portion of Unit 26C in the Firth River, Mancha Creek and the Upper Kongakut River drainages. In March 2013, the Alaska Department of Fish and Game (ADF&G), requested the closure to non-Federally qualified subsistence users be lifted in the Firth, Mancha, and upper Kongakut river drainages (upstream from and including Drain Creek) for the harvest of moose in Unit 26C. The remaining Federal public lands in Unit 26C and Unit 26B remainder would remain closed to the harvest of moose, except by residents of Kaktovik.

In March 2013, the Alaska Board of Game, by Emergency Order 03-03-13, authorized a general moose season in Unit 26B, excluding the Canning River drainage, when hunting conditions are favorable for up to 14 days during the period February 15–April 15. The population of approximately 500 moose in Unit 26B can sustain the 2012-2013 harvest quota of 15 bull moose, including the 4 that may be harvested by this hunt. State lands in Unit 26B are closer to the village of Kaktovik than the Federal public lands in Unit 26B remainder, thus making it easier for Kaktovik residents to harvest additional moose.

On April 3, 2013, the Board adopted Emergency Special Action (WSA12-12) with modification to allow Kaktovik residents to harvest one additional moose in Unit 26B remainder and to extend the season through April 14, 2013.

Current Events Involving the Species

Federal Wildlife Closure Review WCR12-31, which assessed the closure of Federal public lands in Units 26B remainder and 26C for moose harvest, was presented at both the Eastern Interior and the North Slope Subsistence Regional Advisory Council (Council) meetings held in February 2013. Both Councils deferred action on this closure review until their fall 2013 meetings.

Biological Background

Unit 26C contains at least two distinct moose populations: the first occurring on the coastal plain and foothills in the North Slope portion of Unit 26C (North Slope population), and the other in the Firth, Mancha, and Upper Kongakut river drainages (Old Crow Flats population) (Mauer 1998). A majority of the moose population in the eastern portion of Unit 26C in the Brooks Range, calve and spend the summer in Old Crow Flats in the Yukon and migrate to the Firth, Mancha, and Upper Kongakut river drainages in Unit 26C, and the Sheenjek, and Coleen river drainages in Unit 25A during the fall and winter. Some moose in the Old Crow Flats population move between drainages during the fall or spring migration (Mauer 1998, Cooley 2013, pers. comm.).

Moose in Unit 26B remainder and Unit 26C are at the northern limits of their range in Alaska. The lack of quality habitat severely limits the potential size of moose populations. Moose are generally associated with the narrow strips of shrub communities along drainages, except during calving and summer when some seasonal movement occurs away from the riparian habitat (Lenart 2010). In winter moose are limited almost entirely to the riparian shrub habitat, which is the only area where they have access to willows. During surveys in the 1970s and 1980s, small numbers of moose were observed in the Sadlerochit, Hulahula, Okpilak, Okerokovik, Jago Aichilik and Egaksrak drainages and larger concentrations of moose were found on the Canning River and between the Sagavanirktok and Kavik rivers, west of the Canning River. The moose population in Units 26B and 26C peaked during the late 1980s at approximately 1,400 moose (Mauer and Akaran 1991; Lenart 2004, 2008), then declined in the early 1990s, and remained at approximately 700 animals throughout the remainder of the 1990s (Mauer 1998, Lenart 2008).

State management goals for moose in Units 26B and 26C are to maintain viable populations throughout their historic range in the region, to provide sustained moose harvest opportunity, and provide an opportunity for moose photography and viewing (Lenart 2010). Specific State management objectives for Unit 26B and Unit 26C are as follows (Lenart 2010):

- Unit 26B, maintain a population of at least 300 moose with short yearlings (10 to 11 month old calves) comprising at least 15% (3-year average) of the population.

- Unit 26C, maintain a population of at least 150 moose with short yearlings comprising at least 15% (3-year average) of the population.

- Maintain bull:cow ratios of at least 35 bulls:100 cows when hunting seasons are open for Unit 26B and Unit 26.

surveys account for a large percentage of the moose in the units as habitat is limited in the region (Lenart 2010).

The moose population in the eastern portion of Unit 26B, including the Canning River, rebounded from low levels of around 150 in 1998–2000 to 335 observed individuals in 2005 (**Figure 1**). Due to conservation concerns**,** harvest was very limited in Unit 26B due to State and Federal harvest closures enacted in 1996. A limited season for Kaktovik residents was opened under Federal regulations in 2004. The moose harvest closure on Federal public lands in Unit 26B was lifted in 2007, except for the Canning River drainage which remained open only to Kaktovik residents. The moose population in eastern Unit 26B appears to have declined following peak counts in 2005–2008 (**Figure 1**). The composition of short yearlings in the population averaged 16% from 2005–2008, but declined to 11% short yearlings in 2009. The Emergency Special opening by the Alaska Board of Game in Unit 26B during March 2013 was based on a population estimate of approximately 500 moose.

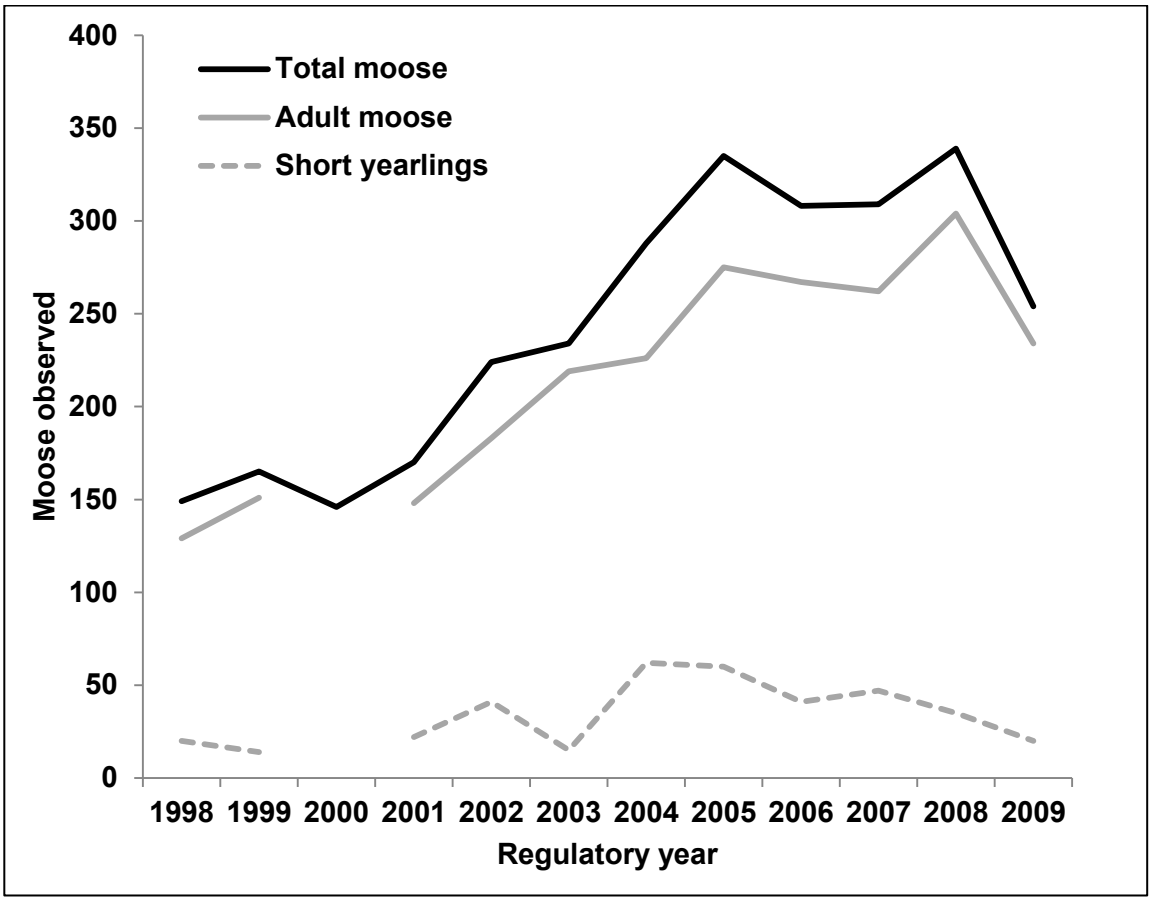


Figure 1. Aerial composition survey counts of moose in Unit 26B, east of the Sagavanirktok River and including the Canning River. Surveys were conducted in regulatory years 1998/1999 to 2009/2010 and moose presented as adults or short yearlings (11 months old) (Lenart 2010).

The North Slope population was surveyed every two years between 2003 and 2011 by Arctic National Wildlife Refuge staff (Wald 2011). The North Slope population in Unit 26C occurs in the Coastal Plain from the Canadian border to the Canning River and from the Beaufort Sea coast to the foothills of the Brooks Range. The moose are usually concentrated in the drainages of the Sadlerochit, Hulahula, Okpilak, Okpirourak, Jago, Aichilik, Egaksrak, Ekaluakat, and the lower part of the Kongakut rivers (Wald 2011) (**Map 1**). Forty adults and 8 short-yearlings, were counted during the surveys conducted in April, 2011. Short-yearling composition was 17% of all moose observed in the 2011 survey. The trend counts suggest the North Slope population was relatively stable but at low numbers between 2003 and 2011 (**Figure 2**).

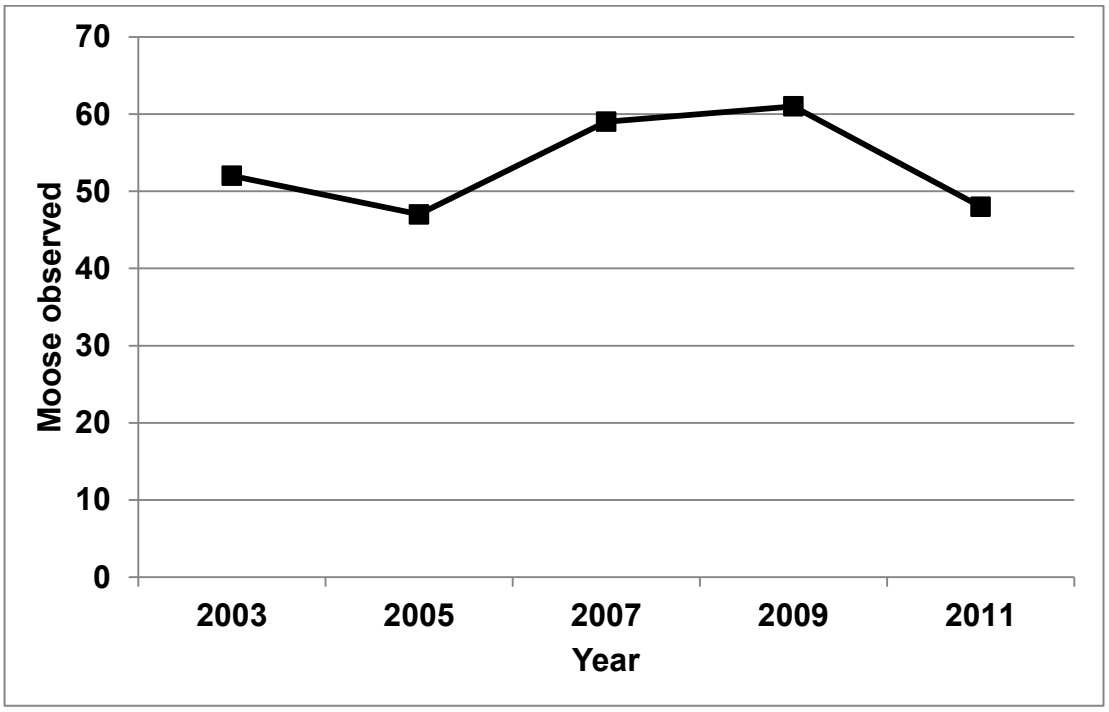


Figure 2. Moose observed during aerial surveys of trend count areas, conducted bi-yearly, for the North Slope Population of Unit 26C, 2003–2011 (Wald 2011).

The Old Crow Flats population that includes the Firth River, Mancha Creek, and Upper Kongakut River drainages in the Brooks Range was sporadically surveyed between 1991 and 2011 (**Table 1**). Based on limited survey data, the moose population in this portion of Unit 26C has fluctuated. The 2011 survey indicates the population has grown since 2000 and 2002. However, differences in the survey aircraft and flight time limit the ability to make direct comparisons between surveys conducted in 2002 and 2011 (Caikoski 2011, unpublished data). All surveys in the area have indicated a high bull to cow ratio (70–118 bulls:100 cows) (**Table 1**).

Table 1. Moose observed during aerial population composition surveys conducted in the Firth River, Mancha Creek, and upper Kongakut River drainages of Unit 26C (Caikoski 2011, un-published data).

	Moose observed				Ratio (per 100 cows)	
Year	Cows	Calves	Bulls	Total	Calves	Bulls
1991[a]	167	63	176	406	38	105
2000[a]	62	22	73	157	35	118
2002[a]	96	23	108	227	24	113
2011[b]	169	52	118	339	31	70

[a] Survey conducted by the USFWS (Buchholt 2002).

[b] Survey conducted by the Alaska Department of Fish and Game, and differed from previous surveys in regard to search time, search area, and moose classification protocol.

The Old Crow Flats population which occur in the Firth, Coleen, Sheenjek, and upper Kongakut river drainages of the eastern Brooks Range (Units 25A and 26C) are known to be migratory (Mauer 1998; Cooley 2013, pers. comm.). These migratory moose calve and/or summer in the Old Crow Flats of the Yukon Territory in Canada and then move into the Brooks Range drainages to rut and winter. The Old Crow Flats population also includes some moose which winter in the Sheenjek and Coleen river drainages in Unit 25A. Since 2000, moose abundance declined and has remained at fairly low levels in both the Coleen and Sheenjek river area of the Old Crow Flats population (Bucholtz 2002, Mauer 2013). Mauer (1998) conducted a collared moose study (14 bulls, 43 cows) to examine migration patterns. The study determined that moose migrated from their respective winter ranges in the Firth (96%), Kongakut (86%), and Coleen (75%) river drainages, but fewer (43%) moose migrated from the Sheenjek River drainage. Most moose began moving from Old Crow Flats to wintering areas during August and early September, and moved out of winter range in late March and April (Mauer 1998). During migration, some moose moved between the Sheenjek and Coleen river drainages in Unit 25A and the Firth, Mancha, and Kongakut river drainages in Unit 26C (Mauer 1998).

An additional study was conducted in the area in 2007–2009 using satellite collars to track individual moose movements (10 bulls, 9 cows) at finer temporal and spatial scales than Mauer's (1998) study (Cooley 2013, pers. comm.). Data analysis is not complete, but preliminary results corroborate the seasonal movements identified by Mauer (1998). The more detailed movement data provide insight into the amount of time moose spent in each drainage during winter. After the moose arrived in a drainage and the bulls went through rut, they generally the remained in the same area (Cooley 2013, pers. comm.).

Habitat

The Coastal Plain in Unit 26C is characterized by tundra intersected by rivers that flow into the Arctic Ocean. The moose population is limited by extreme weather, restricted riparian habitat along the rivers,

and predation. During the winter moose are limited almost exclusively to exposed willow patches along river drainages because this is the only area where food is available (Lenart 2010).

The valleys in the Kongakut and Sheenjek drainages were carved by glaciers and are bordered by steep mountains. They differ from the Firth and Coleen valleys, which show little evidence of glaciation and are bordered by moderate slopes. The Sheenjek, Coleen, and Firth valleys are characterized by open white spruce forests (*Picea glauca*) along the sides of the valleys at the lower elevations and alpine tundra at the higher elevations. The Upper Kongakut River, which flows into the Arctic Ocean, occurs beyond the northern limits of white spruce forests. Feltleaf willow (*Salix alaxensis*) is the dominant shrub on the gravel bars and low terraces along the floodplains of the Sheenjek, Coleen, Firth, and Kongakut . In addition to feltleaf willow, there are isolated stands of balsalm popular (*Populus balsamifera*) on the floodplains of the Kongakut. Small lakes and ponds, which are common in the lower part of the Sheejek River valley, are rare in in the Kongakut, Coleen, and Firth river valleys (Kessel and Schaller 1960, Drew and Shanks 1965, Mauer 1998).

Harvest History

Harvest quotas for North Slope moose populations which occur at low densities at the northern extent of their range, are currently determined using a 3% harvest rate (preferably bulls only) (Lenart 2013, pers com., Wald 2013, pers. com.). Moose harvest on the affected Federal public lands in Units 26B and 26C has been limited to residents of Kaktovik since 2004, with up to three permits issued annually and a harvest quota of 3 moose (2 bulls in Unit 26C and 1 moose in Unit 26B). Since 2004, 9 bull moose have been reported harvested, with an average of 1 moose harvested per year (**Table 2**). No additional moose were taken by Kaktovik hunters in Unit 26B remainder during two week extension under Emergency Special Action WSA12-12.

Table 2. Federal registration permits issued and used by residents of Kaktovik to harvest moose in Units 26B and 26C (OSM 2013, Twitchell 2013, pers. comm.). Federal public lands in Unit 26B remainder and 26C are currently closed to the harvest of moose, except by residents of Kaktovik. Up to three permits are issued annually.

Year	Permits issued	Permits used	Harvest
2004/2005	3	1	1
2005/2006	3	2	2
2006/2007	3	2	2
2007/2008	3	- [a]	- [a]
2008/2009	3	2	1
2009/2010	3	2	- [a]
2010/2011	2	1	1
2011/2012	3	2	0
2012/2013	3	2	2

[a] Data not available for the report.

opportunistically by Kaktovik residents but not specifically targeted (Jacobson and Wentworth 1982:43). Moose were harvested in the 1970s primarily from January until May (Jacobson and Wentworth 1982:29). In a study conducted in 2005 and 2006 in Kaktovik by Braund (2010:150), it was noted that moose hunting was restricted by regulation and occurred from October to April, with the most hunting occurring in April. Household surveys conducted by the ADF&G Division of Subsistence estimated that Kaktovik residents harvested 4 moose in 1985, 1 in 1986, and 4 in 1992 (ADF&G 2013). Pedersen et al. (1985:57) report that Kaktovik's annual subsistence harvest averaged five moose from 1962 to 1982. Pedersen et al. (1985:69) also estimated that 16 households (76% of households) in Kaktovik harvested moose from 1923 to 1983.

The movement of moose into the North Slope is relatively recent event and thus historically the Inupiaq in this region focused more on other large mammals in the region such as caribou, sheep, and marine mammals. (Pederson et al. 1985). Pedersen et al. (1985:70) noted that subsistence harvests in Kaktovik are not static and thus harvest levels,use areas, and temporal cycles vary from year to year and decade to decade (Pedersen et al. 1985:72). The primary moose harvest area for Kaktovik residents during the 1970s was in the Sadlerochit Valley and in the foothills along Old Man Creek, Okpilak River, and Okpirourak River. Moose, at that time, were more commonly seen along the Sadlerochit River, even at its mouth, than along the Hulahula River. Occasionally moose were seen along the Kekiktuk River and on the Sadlerochit side of Kikiktat Mountain. Moose tended to congregate in the Ignek, Ikiakpaurak and Ikiakpuk valleys, and along the Canning River between these valleys. People would make hunting trips to this area in the spring and occasionally would travel to the other side of the Canning River along the Kavik River and in the foothills near its headwaters (Jacobson and Wentworth 1982:43). Jacobson and Wentworth (1982:43) interviewed three Kaktovik hunters who had traveled far up into the Firth River and shot two or three moose near the U.S. – Canada border.

Another subsistence use study was conducted in Kaktovik in 2005 and 2006 by Stephen R. Braund & Associates (Braund 2010). At that time, the moose hunting season had only recently been reopened the previous spring and residents needed to apply for moose permits. The use area map in Braund's report (Braund 2010:151) depicted moose harvest areas occurring around the Sadlerochit, Hulahula, and Okpilak rivers, with the highest concentration of harvests occurring along the Salerochit and Kekiktuk rivers and around Lake Schrader (Braund 2010:150).

Other Alternative(s) Considered

One alternative were considered during analysis of this proposal.

Alternative 1: The moose season for Federally qualified subsistence users would be extended from July 1 to March 31 to July 1 to June 30. The harvest quota Unit 26B remainder and Unit 26C would be 5 moose (4 antlered bulls and 1 of either sex.) provided that no more than 2 antlered bulls may be harvested from the North Slope population in Unit 26C or from Unit 26B remainder. Cows may not be harvested from Unit 26C and a cow accompanied by a calf may not be taken in unit 26B. Two to four antlered bulls may be taken from the Old Crow Flats population in the Firth, Mancha, and upper Kongakut river drainages (upstream

from and including Drain Creek) for the harvest of moose in Unit 26C. The hunt will be closed in Unit 26B remainder and 26C when 5 moose have been harvested.

This alternative was not chosen because the primary hunting area for moose by Kaktovik residents is from the North Slope moose population in Unit 26C and because subsequent surveys are needed to determine the population trend for the Old Crow Flats population. Continued cooperation between wildlife managers and biologists in Alaska and Yukon Territory should continue to occur to ensure that overharvest does not occur on this small and potentially vulnerable migratory Old Crow Flats moose population (Suitor 2013, pers. comm.)

Effects of the Proposal

If this proposal is adopted, the moose season for Federally qualified subsistence users would be extended from July 1 to March 31 to July 1 to June 30.

Typically, Kaktovik hunters harvest moose from the North Slope population in Unit 26C (Jacobson and Wentworth 1982, OSM 2013), which is closer to the village of Kaktovik than the Canning River drainage in Unit 26B or the Old Crow Flats population in eastern portion of Unit 26C. Due to the small number of moose that inhabit the Canning River drainage (Unit 26B remainder), increasing the harvest is not recommended due to conservation concerns.

The impacts of increasing the allowable harvest and extending the season in Unit 26C are difficult to determine because of the lack of current information on population size, herd composition, trend information, habitat use, and migration patterns. The North Slope moose population in Unit 26C is relatively small recovering moose population at the northern limits of their range. Additional harvest from this population could cause a conservation concern, because of the length of time required for recovery.

OSM CONCLUSION

Support Proposal WP14-54 **with modification** to only allow for the extension of the harvest season from July 1 to March 31 to July 1 to June 30.

The modified regulation should read:

Unit 26B remainder and 26C—Moose

Units 26B, remainder and 26C— 1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 3 moose (2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf in Unit 26B. Only 3 Federal registration permits will be issued.	*July 1–**June 30**~~Mar. 31~~*

under these regulations.

Justification

Extending the moose season to a year-round hunt will allow subsistence users to take advantage of favorable weather and provide more opportunity to harvest moose. In addition, retaining the current quota of 3 moose (2 antlered bulls and 1 of either sex) would limit the number of moose harvested, and maintain ongoing conservation efforts for the North Slope moose population in Unit 26C.

Moose on the North Slope are at the northern limits of their range. Extreme weather conditions, restricted habitat, and predation limit the population size and increase the length of time for populations that have declined to recover. The North Slope moose population in Unit 26C which occurs on the coastal plain is a good example. Despite relatively low hunting pressure of 1 moose per year the population has remained relatively stable at approximately 50 animals for the past 12 years. The current quota of 2 antlered bulls for the North Slope portion in Unit 26C is currently slightly above the harvest recommendation of 3% for moose populations which occur in low densities at the northern extent of their range. Except for the updated population information for the Old Crow Flats population, the population dynamics of the North Slope population have not changed since the Board adopted the current regulations in 2008 (OSM 2008). The restriction for the take of adult bulls in Unit 26C and no additional harvest in Unit 26B remainder is consistent with sound management principles to conserve healthy moose populations.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

North Slope Subsistence Regional Advisory Council

Support WP14-54. The Council stressed that it was very important for the community to harvest a couple more moose for food when available. Kaktovik Council member and others stressed that year round hunt season allows safer travel and extended opportunity when weather and conditions are good and opportunity to hunt moose when they are in the area. They noted that encountering a moose is opportunistic and flexibility to take an extra one or two if the opportunity arose would be very helpful to the community, especially in times when the caribou numbers are low or caribou pass through too quickly to be hunted. The Council noted that the location of the alternative hunt area suggested by OSM was likely "mission impossible" due to the distance and mountainous terrain.

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 recommendation and Federal Subsistence Board action on the proposal.

Proposal WP14-54, submitted by the North Slope Regional Advisory Council (Council), requests that:

- the moose season in Unit 26B remainder and Unit 26C be extended from July 1 to March 31 to a year-round harvest opportunity,
- the harvest restrictions for Unit 26C (number, sex) be removed, and
- the harvest limit be increased from 3 moose to 5 moose.

The OSM conclusion is to support only that portion of the proposal which extends the season to a year-round harvest, while the Council's recommendation at their Regional Advisory Council meeting is to support the entire proposal. In their justification, the Council stressed that it was very important for the community of Kaktovik to harvest a couple more moose for food and to extend the opportunity to harvest when the weather and conditions are good. In the its evaluation of the effects of the proposal, as proposed, OSM determined that additional harvest could cause a conservation concern.

There are a number of actions that the Board could take, including accepting the Council's recommendation to adopt the proposal or accepting the OSM recommendation which is to reject any increase in harvest, while extending the harvest season. Other options that the Board could consider, which would allow for increased harvest, but likely not cause a conservation concern include:

- Increase the harvest quota for one additional antlered moose, while retaining the sex-of-moose harvest restriction. The additional antlered moose would be harvested from Unit 26B remainder. (*Regulatory language:* The harvest quota is 4 moose (3 antlered bulls and 1 of either sex)

provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf. Only 4 Federal registration permits will be issued). This option would continue a small harvest limit on the area most critical to moose conservation (the western portion of Unit 26C), while allowing for some additional harvest opportunity in Unit 26B. Unfortunately, the additional harvest opportunity would be from an area relatively far (west) from Kaktovik.

- Increase the harvest quota as requested by the Council, but only allow additional harvest to come from only a portion of the eastern part of Unit 26C. (*Regulatory language:* The harvest quota is 5 moose (4 antlered bulls and 1 of either sex) provided that up to 4 antlered bulls may be taken in that area of Unit 26C in the drainages of Firth River and Mancha Creek and the upper Kongakut River, upstream from and including Drain Creek, and only 2 antlered bulls may be harvested in the remainder of Unit 26C and provided that cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf. Only 5 Federal registration permits will be issued.) This option would continue a small harvest limit on the area most critical to moose conservation (the western portion of Unit 26C), while allowing for some additional harvest opportunity in a portion of the eastern area of Unit 26C, an area that may have more moose than elsewhere in the unit and available for harvest as suggested by the Alaska Department of Fish and Game (proposal WP14-55). Unfortunately, the additional harvest opportunity would be from an area relatively far (east) from Kaktovik.

WP14-55 Executive Summary	
General Description	Proposal WP14-55 requests the closure be lifted for non-Federally qualified subsistence users in the Firth, Mancha, and Upper Kongakut river drainages (upstream and including Drain Creek) for the harvest of moose in Unit 26C. The remaining Federal public lands in Unit 26C and Unit 26B remainder would remain closed to the harvest of moose, except by residents of Kaktovik. *Submitted by Alaska Department of Fish and Game.*
Proposed Regulation	**Unit 26B remainder and 26C—Moose** *Units 26B-remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 3 moose (2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf in Unit 26B. Only 3 Federal registration permits will be issued. Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations* ***except as permitted under State of Alaska Regulations 5AAC 92.010 and 5AAC 92.012****.* *July 1–Mar. 31*
OSM Conclusion	**Oppose**
North Slope Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Oppose**

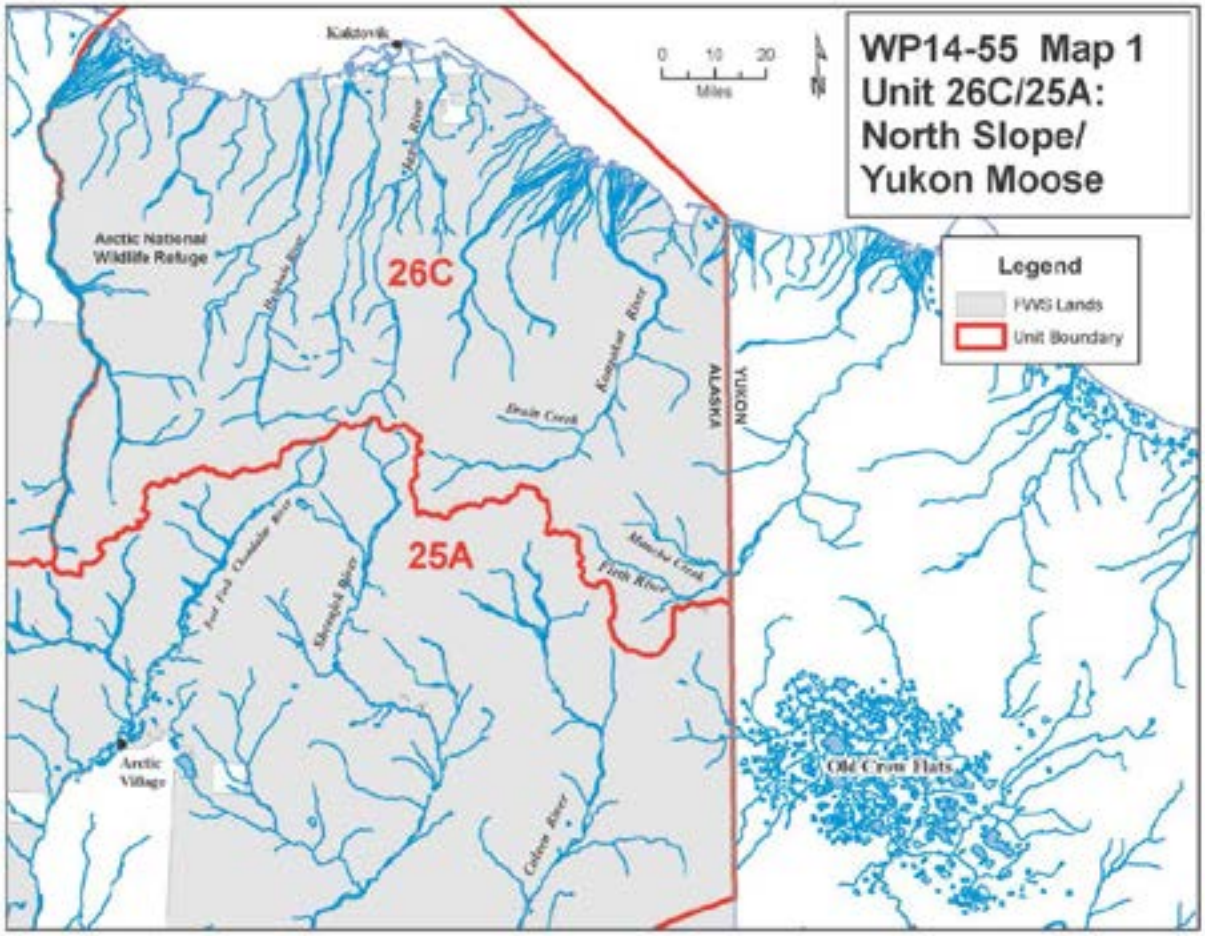
STAFF ANALYSIS
WP14-55

ISSUES

Proposal WP14-55, submitted by the Alaska Department of Fish and Game (ADF&G), requests the closure be lifted for non-Federally qualified subsistence users in the Firth, Mancha, and Upper Kongakut river drainages (upstream and including Drain Creek) for the harvest of moose in Unit 26C (**Map 1**). The remaining Federal public lands in Unit 26C and Unit 26B remainder would remain closed to the harvest of moose, except by residents of Kaktovik.

DISCUSSION

A moose season in a portion of Unit 26C was established under State regulations by action of the Alaska Board of Game at their March 2–11, 2012 meeting; however, the hunt area is entirely on Federal public lands which are closed to the harvest of moose, except by Federally qualified subsistence users.



The proponent states that there is a harvestable surplus of moose in the Firth, Mancha, and Upper Kongakut river drainages in Unit 26C based on a fall 2011 survey conducted by the ADF&G, which indicated the moose population in this area increased from 227 in 2002 to 339 in 2011 (Caikoski 2011). The proponent states, that based on a 3% harvest rate and a population of 339, the harvestable surplus of moose in the Firth, Mancha, and Upper Kongakut river drainages is estimated to be 10 bull moose. If the Federal closure is lifted in the area requested, hunting under State regulations could occur in the area.

Existing Federal Regulation

Unit 26B-remainder and 26C—Moose

Units 26B-remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 3 moose (2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf in Unit 26B. Only 3 Federal registration permits will be issued. Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations.	*July 1–Mar. 31*

Proposed Federal Regulation

Unit 26B remainder and 26C—Moose

Units 26B-remainder and 26C—1 moose by Federal registration permit by residents of Kaktovik only. The harvest quota is 3 moose (2 antlered bulls and 1 of either sex,) provided that no more than 2 antlered bulls may be harvested from Unit 26C and cows may not be harvested from Unit 26C. You may not take a cow accompanied by a calf in Unit 26B. Only 3 Federal registration permits will be issued. Federal public lands are closed to the taking of moose except by a Kaktovik resident holding a Federal registration permit and hunting under these regulations ***except as permitted under State of Alaska Regulations 5AAC 92.010 and 5AAC 92.012****.*	*July 1–Mar. 31*

Existing State Regulation

Unit 26B—Moose

Unit 26B-remainder	*No open season*

Unit 26C—Moose

*Unit 26C, that portion in the drainages of Firth River and Mancha Creek and the Upper Kongakut River, upstream from and including Drain Creek**	***Resident Hunters**: 1 bull by drawing permit only; up to 30 permits may be issued;*	*Sept. 1–Sept. 25*
	***Nonresident hunters**: 1 bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side; by drawing permit only; up to 30 permits may be issued;*	*Sept. 1 – Sept. 25*
Unit 26C-remainder		*No open season*

***Note**: Although a moose season in this portion of Unit 26C was established in State regulations by action of the Alaska Board of Game at their March 2–11, 2012 meeting, the hunt area is entirely on Federal public land and currently Federal lands are closed to the harvest of moose, except by Federally qualified subsistence users.*

Extent of Federal Public Lands

Approximately 98% of the lands in Unit 26C are comprised of Federal public lands managed by the U.S. Fish and Wildlife Service (USFWS). Approximately 29% of the lands in Unit 26B are comprised of Federal public lands consisting of approximately 23% USFWS managed lands, 4% Bureau of Land Management managed lands, and 3% of National Park Service managed lands.

Customary and Traditional Use Determinations

Residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for moose in Unit 26. An ANILCA Section 804 analysis further prioritized these users and Federal public lands in Unit 26B-remainder and the Federal Subsistence Board (Board) closed Unit 26C to non-Federally qualified subsistence users and those with recognized customary and traditional uses, except the residents of Kaktovik.

Regulatory History

Federal and State moose seasons in Units 26B and 26C were closed in 1996 due to low population of moose following declines in the early 1990s (Mauer 1997, Lenart 2010). These declines were probably due to a combination of factors including weather, predation by wolves and grizzly bears, disease, and possibly insect harassment (Lenart 2008).

The Federal closure was temporarily lifted in 2003, when Board approved Special Action WSA03-04 with modification to allow residents of Kaktovik to harvest one moose in Units 26B and 26C for their Thanksgiving Feast and one moose for their Christmas Feast; however, only one moose could be harvested in Unit 26C.

In 2004, the Board adopted Proposal WP04-86b with modification to allow a harvest quota of 3 moose (2 bulls and 1 of either sex), provided that no more than 2 bulls may be harvested in Unit 26C and a prohibition on taking cows in Unit 26C. The analysis for Proposal WP04-86 included an ANILCA Section 804 analysis (WP04-86a) and the Board took action to give priority to the residents of Kaktovik for harvesting moose in Unit 26C.

Proposals WP06-67a and WP06-67b requested that residents of Unit 25A be added to the customary and traditional use determination for the Firth and Kongakut river drainages of Unit 26C (WP06-67a) and set a harvest limit of two moose per drainage (WP06-67b). Proposal WP06-67a was rejected by the Board because the residents of Arctic Village and the surrounding area did not have a demonstrated pattern of use of moose in Unit 26C. Proposal WP06-67b was rejected by the Board (FSB 2006) based on conservation concerns.

In 2007, the Board adopted Proposal WP07-63 with modification, to lift the closure of Federal public lands to non-Federally qualified subsistence users in the portion of Unit 26B outside of the Canning River drainage based on increasing moose populations in that portion of the unit (FSB 2007). Except for residents of Kaktovik, the Board retained the closure of Federal public lands in Unit 26C and areas within the Canning River drainage in Unit 26B.

Proposal WP08-54 requested a modification of the moose harvest quota in Unit 26C to 5 bulls (4 bulls and 1 of either sex) and the season be shortened from July 1 to March 31 to July 1 to December 31 for Kaktovik residents in Unit 26C and the proposal also requested lifting the closure in the Canning River drainage of Unit 26B (Unit 26B remainder). The Board adopted the proposal with modification to keep the closure in place, except for residents of Kaktovik, but changed the harvest quota from 3 moose (2 bulls and 1 of either sex) to 3 moose (2 antlered bulls and 1 of either sex) for conservation concerns (FSB 2008). Changing the harvest limit to antlered bulls was done to protect cows from being harvested later in the season when bulls have shed their antlers. The restriction on harvesting a cow accompanied by a calf was retained.

In March 2012, the Alaska Board of Game adopted Proposal 174A to establish a State moose season in a portion of Unit 26C which includes the Firth River, Mancha Creek and the Upper Kongakut River drainages; however, there has been no State season because the area consists of Federal public lands that are currently closed to the harvest of moose, except by Federally qualified subsistence users. A State season is contingent on the Federal Subsistence Board lifting the closure in the portion of Unit 26C in the Firth River, Mancha Creek, and the Upper Kongakut River drainages. In March 2013, the ADF&G, requested the closure be lifted to non-Federally qualified subsistence users in the Firth, Mancha, and Upper Kongakut river drainages (upstream from and including Drain Creek) for the harvest of moose in Unit 26C be lifted. Based on this proposal the remaining Federal public lands in Unit 26C and Unit 26B remainder would remain closed to the harvest of moose, except by residents of Kaktovik.

On April 3, 2013, the Board adopted Emergency Special Action (WSA12-12) with modification to allow Kaktovik residents to harvest one additional moose in Unit 26B-remainder and to extend the season for two weeks through April 14, 2013.

Current Events Involving the Species

Federal Wildlife Closure Review WCR12-31, which assessed the closure of Federal public lands in Units 26B-remainder and 26C for moose harvest, was presented at both the Eastern Interior and the North Slope Subsistence Regional Advisory Council (Council) meetings held in February 2013. Both Councils deferred action on this closure review until their fall 2013 meetings.

Biological Background

Unit 26C contains at least two distinct moose populations: the first occurring on the coastal plain and foothills in the central portion of Unit 26C (North Slope Population), and the other in the Firth, Mancha, and Upper Kongakut river drainages (Old Crow Flats population) (Mauer 1998). A majority of the moose population in the eastern portion of Unit 26C in the Brooks Range, calve and spend the summer in Old Crow Flats in the Yukon Territory and migrate to the Firth, Mancha, and Upper Kongakut river drainages in Unit 26C, and the Sheenjek, and Coleen river drainages in Unit 25A during the fall and winter. Some moose in the Old Crow Flats population move between drainages during the fall or spring migration (Mauer 1998, Cooley 2013, pers. comm.).

Moose in Unit 26C are at the northern limits of their range in Alaska. The lack of quality habitat severely limits the potential size of moose populations. Moose are generally associated with the narrow strips of shrub communities along drainages, except during calving and summer when some seasonal movement occurs away from the riparian habitat (Lenart 2010). In winter moose are limited almost entirely to the riparian shrub habitat, which is the only area where they have access to willows. Moose populations on the North Slope may also experience significant natural declines due to a combination of factors such as weather, predation by wolves and grizzly bears, disease, and insect harassment. During surveys in the 1970s and 1980s, small numbers of moose were observed in the Sadlerochit, Hulahula, Okpilak, Okerokovik, Jago, Aichilik and Egaksrak drainages and larger concentrations of moose were found on the Canning River and between the Sagavanirktok and Kavik rivers, west of the Canning River. The moose population in Units 26B and 26C peaked during the late 1980s at approximately 1,400 moose (Mauer and Akaran 1991; Lenart 2004, 2008), then declined in the early 1990s, and remained at approximately 700 animals throughout the remainder of the 1990s (Mauer 1998, Lenart 2008).

State management goals for moose in Units 26 are to maintain viable populations throughout their historic range in the region, provide sustained moose harvest opportunity, and provide opportunity for moose photography and viewing (Lenart 2010). Specific State management objectives for Unit 26C are as follows (Lenart 2010):

- Unit 26C, maintain a population of at least 150 moose with short -yearlings comprising at least 15% (3-year average) of the population.

- Maintain bull:cow ratios of at least 35 bulls:100 cows when hunting seasons are open.

A comprehensive moose survey has not been conducted for Units 26B and 26C, however smaller scale surveys have been conducted in areas where moose concentrate to assess population trends. These trend surveys account for a large percentage of the moose in the units as habitat is limited in the region (Lenart 2010). Although minimum counts have the potential to capture a large percentage of the moose due to limited habitat distribution and aggregations as suggested by Lenart (2010) moose may occasionally use marginal habitat (Suitor 2013, pers. comm.). For example, during the 2013 survey of North Slope moose populations in the Richardson Mountains in Yukon Territory, significant numbers of moose were relocated in high alpine basins and tundra valleys with scrub willow (*Salix sp*) that was often almost completely covered with snow and had not traditionally contained moose on previous surveys (Suitor 2013, pers. comm.).

The North Slope moose population was surveyed every two years between 2003 and 2011 by Arctic National Wildlife Refuge staff (Wald 2011). The North Slope moose population occurs in the Coastal Plain from the Canadian border to the Canning River and from the Beaufort Sea coast to the foothills of the Brooks Range. The moose are usually concentrated in the drainages of the Sadlerochit, Hulahula, Okpilak, Okpirourak, Jago, Aichilik, Egaksrak, Ekaluakat, and the lower part of the Kongakut rivers (Wald 2011). Forty adults and 8 short-yearlings (10-11 month old calves), were counted during the surveys conducted in April, 2011. Short-yearling composition was 17% of all moose observed in the 2011 survey. The trend counts suggest the North Slope population was relatively stable but at low numbers between 2003 and 2011 (**Figure 1**).

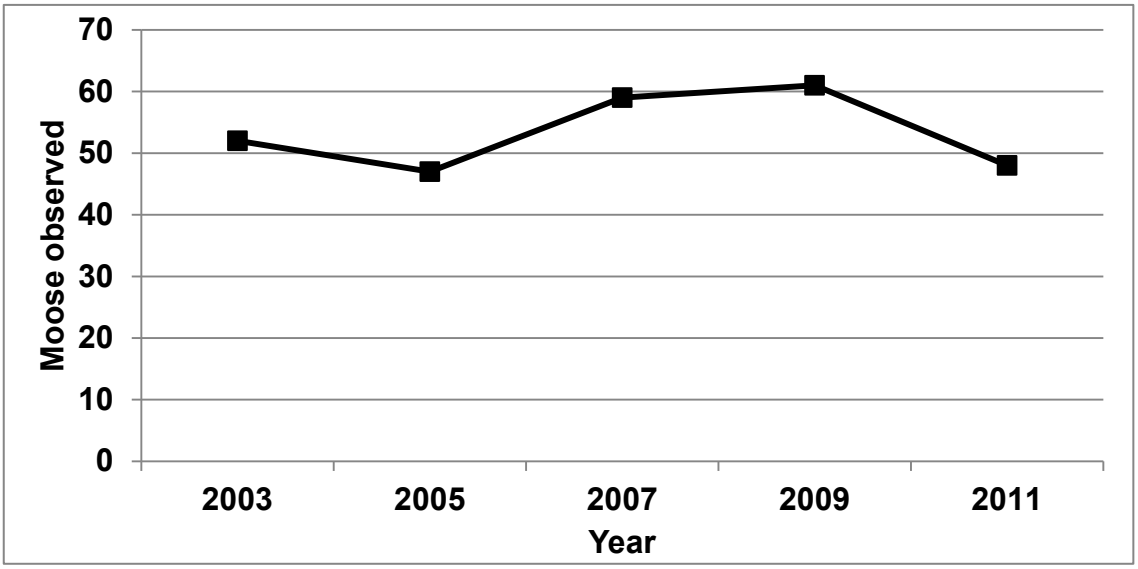


Figure 1. Moose observed during aerial surveys of trend count areas, conducted every other year, for the North Slope population of Unit 26C, 2003–2011 (Wald 2011).

The Old Crow Flats population that includes the Firth River, Mancha Creek, and Upper Kongakut River drainages in the Brooks Range was sporadically surveyed between 1991 and 2011 (**Table 1**). The data

from the composition surveys in **Table 1** are minimum counts. Based on limited survey data, the moose population in this portion of Unit 26C has fluctuated. Although the data from the 2011 is suggestive that an increase may have occurred since 2000 and 2002, subsequent surveys using similar methods are required to determine if this is the case. Although the bull:cow ratio was substantially lower in 2011than previous surveys, all surveys in the area have indicated a high bull to cow ratio (70–118 bulls:100 cows) (**Table 1**). However, differences in the survey aircraft and flight time limit the ability to make direct comparisons between surveys conducted in 2002 and 2011 (Caikoski 2011, unpublished data).

The Old Crow Flats population which occurs in the Firth, Coleen, Sheenjek, and Upper Kongakut River drainages of the eastern Brooks Range (Units 25A and 26C) are known to be migratory (**Map 1**) (Mauer 1998; Cooley 2013, pers. comm.). These migratory moose calve and/or summer in the Old Crow Flats of the Yukon Territory in Canada and then move into the Brooks Range drainages to rut and winter. The Old Crow Flats population also includes some moose which winter in the Sheenjek and Coleen river drainages in Unit 25A. Since 2000, moose abundance declined and has remained at fairly low levels in both the Coleen and Sheenjek river area of the Old Crow Flats population (Bucholtz 2002, Mauer 2013). Mauer (1998) conducted a collared moose study to examine migration patterns. The study determined that moose migrated from their respective winter ranges in the Firth (96%), Kongakut (86%), and Coleen (75%) river drainages, but fewer (43%) moose migrated from the Sheenjek River drainage. Most moose began moving from Old Crow Flats to wintering areas during August and early September, and moved out of winter range in late March and April (Mauer 1998). During migration, some moose moved between the Sheenjek and Coleen river drainages in Unit 25A and the Firth, Mancha, and Kongakut river drainages in Unit 26C (Mauer 1998).

Table 1. Moose observed during aerial population composition surveys conducted in the Firth River, Mancha Creek, and upper Kongakut River drainages of Unit 26C (Caikoski 2011, unpublished data).

	Moose observed				Ratio (per 100 cows)	
Year	Cows	Calves	Bulls	Total	Calves	Bulls
1991[a]	167	63	176	406	38	105
2000[a]	62	22	73	157	35	118
2002[a]	96	23	108	227	24	113
2011[b]	169	52	118	339	31	70

[a] Survey conducted by the USFWS (Buchholtz 2002).
[b] Survey conducted by the Alaska Department of Fish and Game, and differed from previous surveys in regard to search time, search area, and moose classification protocol.

An additional study was conducted in the area in 2007–2009 using satellite collars to track individual moose movements (10 bulls 9 cows) at finer temporal and spatial scales than Mauer's (1998) study (Cooley 2013, pers. comm.). Data analysis is not complete, but preliminary results corroborate the seasonal

amount of time moose spent in each drainage during winter. After the moose arrived in a drainage and the bulls went through rut, they generally remained in the same area (Cooley 2013, pers. comm.).

The distances between the seasonal ranges of the Old Crow Flats moose population are at the upper extreme for Alaska moose populations (Mauer 1998). Deep snow in the prime feeding areas of Old Crow Flats during the winter probably make it difficult for moose to find exposed willow patches and move between prime feeding areas, and it may also make them more vulnerable to wolf predation. The effects of predation on the Old Crow Flats moose population are unknown as no estimates of the effects of predation have been conducted to date. Population sizes of migratory populations often are greater than sedentary populations due to ability to maximize the use of food resources (moving to areas where food is seasonally abundant and/or available) and reduced vulnerability to predators (Tambling and Du Toit 2005). Knowledge about seasonal residency in and movement among, drainages will be important for interpretation of past surveys, future survey design, and development of a comprehensive management strategy for the Old Crow Flats population.

Habitat

The Coastal Plain in Unit 26C is characterized by tundra intersected by rivers that flow into the Arctic Ocean. The moose population is limited by extreme weather, restricted riparian habitat along the rivers, and predation. During the winter, moose are limited almost exclusively to exposed willow patches along river drainages because this is the only area where food is available (Lenart 2010). Although minimum moose counts in this region have the potential to capture a large percentage of moose due to limited habitat distribution and aggregations that occur (Lenart 2010), moose may utilize what would be considered marginal habitats and thus not detected on surveys. For example, during the 2013 moose survey in the Richardson Mountains in Yukon Territory, Canada, significant numbers of moose were found in high tundra valleys and alpine basins that had not contained moose on previous surveys (Suitor 2013, pers. comm.). The willow, which is the primary food source in these high mountain areas, was almost completely covered by snow (Suitor 2013, pers. comm.).

The valleys in the Kongakut and Sheenjek drainages were carved by glaciers and are bordered by steep mountains. They differ from the Firth and Coleen valleys, which show little evidence of glaciation and are bordered by moderate slopes. The Sheenjek, Coleen, and Firth valleys are characterized by open white spruce forests (*Picea glauca*) along the sides of the valleys at the lower elevations and alpine tundra at the higher elevations. The Upper Kongakut River, which flows into the Arctic Ocean, occurs beyond the northern limits of white spruce forests. Feltleaf willow (*Salix alaxensis*) is the dominant shrub on the gravel bars and low terraces along the floodplains of the Sheenjek, Coleen, Firth, and Kongakut. In addition to feltleaf willow, there are isolated stands of balsam popular (*Populus balsamifera*) on the floodplains of the Kongakut. Small lakes and ponds, which are common in the lower part of the Sheenjek River valley, are rare in the Kongakut, Coleen, and Firth river valleys (Kessel and Schaller 1960, Drew and Shanks 1965, Mauer 1998).

Harvest History

Harvest quotas for North Slope moose populations which occur at low densities at the northern extent of their range, are currently determined using a 3% harvest rate (preferably bulls only) (Lenart 2013, pers comm,Wald 2013, pers. com.). Moose harvest on the affected Federal public lands in Units 26B and 26C has been limited to residents of Kaktovik since 2004, with up to three permits issued annually and a harvest quota of 3 moose (2 bulls in Unit 26C and 1 moose in Unit 26B). Since 2004, 9 bull moose have been reported harvested by Federal permit, with an average of 1 moose harvested per year (**Table 2**).

Jacobsen and Wentworth (1982:43) conducted research on subsistence land use values in the Arctic National Wildlife Refuge in Kaktovik during the late 1970s. At that time moose were harvested opportunistically by Kaktovik residents but not specifically targeted (Jacobson and Wentworth 1982:43). The movement of moose into the North Slope is relatively recent and the Inupiaq focused more on other large mammals such as caribou, sheep, and whale, than they do on moose. The primary moose harvest area for Kaktovik residents was in the Sadlerochit Valley and in the foothills along Old Man Creek, Okpilak River, and Okpirourak River. Moose, at that time, were more commonly seen along the Sadlerocit River, even at its mouth, than along the Hulahula River. Occasionally moose were seen along the Kekiktuk River and on the Sadlerochit side of Kikiktat Mountain. Moose tended to congregate in the Ignek, Ikiakpaurak and Ikiakpuk valleys, and along the Canning River between these valleys. People would make hunting trips to this area in the spring and occasionally people would travel to the other side of the Canning River along the Kavik River and in the foothills near its headwaters (Jacobson and Wentworth 1982:43). Jacobson and Wentworth (1982:43) talked with three Kaktovik hunters who had traveled far up into the Firth River and shot two or three moose near the U.S. – Canada border.

The migratory moose population which calve and summer in Old Crow Flats in Yukon Territory, Canada have a very limited harvest from Yukon residents due to challenges accessing the area and thus the cumulative harvest is not a significant concern presently. However, members of the Vuntut Gwich'in have the right to harvest moose in this population without limit at this time. The Regional Biologist for the North Yukon Region recommended that communication between wildlife managers on both sides of the border continue to ensure that overharvest does not occur on this small and potentially vulnerable migratory population (Suitor 2013, pers. comm.).

Table 2. Federal registration permits issued and used by residents of Kaktovik to harvest moose in Units 26B and 26C (OSM 2013, Twitchell 2013, pers. comm.). Federal public lands in Unit 26B remainder and 26C are currently closed to the harvest of moose, except by residents of Kaktovik. Up to three permits are issued annually.

Year	Permits issued	Permits used	Harvest
2004/2005	3	1	1
2005/2006	3	2	2
2006/2007	3	2	2
2007/2008	3	- [a]	- [a]
2008/2009	3	2	1
2009/2010	3	2	- [a]
2010/2011	2	1	1
2011/2012	3	2	0
2012/2013	3	2	2

[a] Data not available for the report.

Effects of the Proposal

If this proposal is adopted, Federally qualified subsistence users from Kaktovik would still have the ability to harvest from the Old Crow Flats moose population in the eastern portion of Unit 26C. Federally qualified subsistence hunters would still be able to harvest up to a total of two bull moose in Unit 26C from the North Slope population or the Old Crow Flats population. However, Kaktovik hunters typically harvest moose from the North Slope population in Unit 26C (Jacobson and Wentworth 1982, OSM 2013) which is closer to the village of Kaktovik than the Canning River drainage in Unit 26B or the Old Crow Flats population in southeastern portion of Unit 26C. The proponent anticipates a highly regulated hunt through the use of drawing permits which would allow managers to monitor and control the number of bull moose harvested (NSSRAC 2013).

The impacts of partially lifting the closure on the Old Crow Flats moose population are difficult to predict because of the lack of information on the population size, herd composition, habitat use, and current migration patterns. The proponent recommends allowing a harvest of 3% of the population, which is common for moose populations that occur in low densities at the northern extent of their range. The limited availability of habitat confines moose to riparian habitat, which makes them very susceptible to harvest pressure. In addition, the migratory behavior of the population complicates management because the population may be exposed to harvest pressure in multiple areas, including portions of the Old Crow Flats, Yukon Territory and Unit 26C and Unit 25A in Alaska.

OSM CONCLUSION

Oppose Proposal WP14-55.

Justification

Survey results in the Firth River, Mancha Creek, and Upper Kongakut River drainages indicate the Old Crow Flats population may be growing. However, interpreting the status of the Old Crow Flats population and developing sustainable harvest limits with, essentially, a single recent data point is questionable. Although the data suggests that an increase may have occurred, subsequent surveys using similar robust methods are needed to determine if this is a trend. The closure should be maintained to give biologists and managers from the Arctic National Wildlife Refuge and the Alaska Department of Fish and Game more time to obtain additional information on the population. Understanding the overall population dynamics, migratory patterns, climate, predation, and harvest is important to maintaining a healthy population.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

North Slope Subsistence Regional Advisory Council

Oppose WP14-55. The Council noted the migratory nature of the moose population that is important to the community of Kaktovik and that subsistence users in the Firth Mancha region should have continued priority. The Council discussed the concern for the recovery of this migratory moose population and stressed caution to allow the population to better recover before opening it to harvest by non-federally qualified users. The Council discussed that current quota for Kaktovik is currently only 3 moose – hardly

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Fran Mauer, Fairbanks Alaska

Oppose Proposal WP14-55

I am writing in support of WP14-48 because it would limit the harvest of moose in the upper Sheenjek, Coleen and Old Crow river drainages where populations have significantly declined. I am opposed to WP14-55 because it would increase hunting pressure on the same population. This is a critical conservation concern that warrants appropriate actions by the Federal Subsistence Board in order to restore a unique migratory moose population that is especially vulnerable to harvest pressure.

During the period of 1981to 2002, I worked as a wildlife biologist with the Arctic National Wildlife Refuge where I was responsible for studies and monitoring of caribou, Dall sheep, and moose populations. From 1995 to 1999 I led a study of moose movements within the area addressed by WP14-48 and WP14-55. Results of the study revealed that most moose inhabiting this area migrate to Old Crow Flats in Canada where they give birth, remain through the summer season, and return to the upper drainages of the Coleen, Sheenjek rivers in Game Management Unit (GMU) 25A, and the Firth and Kongakut rivers in GMU 26C where they rut and spend the winter (Mauer 1998). These migrations are the longest that have been reported for moose in North America.

Moose numbers in the upper Sheenjek, Coleen, Kongakut and Firth drainages have been monitored by consistent aerial survey methods since 1977. From 1977 to 1991,moose numbers were relatively stable, however, a significant decline was detected in 2000 when overall numbers for these areas were down by 57%. This decline coincided with a widespread decline in moose throughout northern Alaska. The Alaska Board of Game closed all of GMU 26 (including the Kongakut and Firth areas) to moose harvest in 1996. Moose hunting in the upper Sheenjek and Coieen river drainages, however, has remained open. Results of surveys conducted since 2000 show that moose numbers in the upper Sheenjek have remained very low during the past 13 years (21to 26 moose counted). This represents an 84% decline from previous levels. For the Coleen area, the number of moose counted has dropped from a previous average of 229 during 1977 to 1991, to 79 in 2012, representing a decline of 65%. During this same period, moose counts in the Kongakut and Firth areas, where hunting has remained closed, show increases of 53% and 92% respectively.

There has been a steady increase in hunting pressure in the Sheenjek and Coleen areas that is having a significant negative influence on recovery of the moose population. A long-time local resident to the Coleen area reported increasing numbers of hunters and decreasing numbers of moose. Since 2000 i have had the opportunity to visit the Sheenjek, Coleen and Firth areas on several occasions during the summer season and have observed evidence of moose abundance such as intensity of browsing, shed antlers, and pellet groups that are consistent with the low moose counts for the Sheenjek and Coleen areas, and the higher counts of moose in the Firth and Kongakut areas.

I am concerned that some may claim that action on WP14-48 should be postponed due to uncertainties and variability of the survey data. I would like to point out that the aerial survey methodology that has been applied in this region was developed during the 1970's by biologists of both the Alaska Department of Fish and Game (ADF&G) and the Arctic Refuge working under the guidance of Dr. William Gasaway, a renowned moose research scientist at ADF&G. Further refinements were provided by Dr. Roy Nowlin (ADF&G) and Dr. Gerald Garner (Arctic Refuge) in the 1980's, which resulted in the survey trend areas that are currently used. Because of the sparse forest and open tundra environments found here, moose are highly visible under favorable snow conditions. I have reviewed all moose survey reports for the period of 1977 to 2012 and find a high degree of consistency and therefore conclude that the data is sufficiently reliable to base management decisions. Confidence in the reliability of this multi-year data set has been significantly enhanced by moose movement studies completed during 1995- 1998 and more recently with studies conducted by the Yukon Renewable Resources Department using GPS technology (2007- 2009). Both studies verified that most moose of this region are migratory, and that individuals demonstrate a very high degree of fidelity to seasonal ranges and migratory routes. Therefore, changes in moose count data in the trend areas are not likely due to shifts in moose from one area to another in different years, but are indicative changes in moose numbers.

Within the area addressed by WP14-48 we have a unique situation where moose are predominately migratory, a strategy that enables moose to optimize the use of seasonal habits and achieve significantly higher population density that would be afforded by a non-migratory strategy. Prior to the decline of moose during the 1990's,a minimum number of moose that wintered in the upper Sheenjek, Coleen, Kongakut and Firth river areas was over 800 animals. Aerial surveys of neighboring areas to the south, where no migratory strategy has been detected, found much lower densities of moose.

It is imperative to consider that while the moose migration that has been documented is capable of attaining relatively high densities, they are extremely vulnerable to hunting pressure due to the open nature of the landscape, and the highly predictable movement of moose during the hunting season. Studies have shown that moose consistently move along the same trails and migration routes every fall when hunters are present. Thus, it is possible for hunting to continue to show relatively high success rates even when the number of moose are declining, as is the case for moose destined for the Sheenjek and Coleen areas. As these moose populations dwindle, the possibility of extermination of moose having the migratory tradition becomes greater.

It is also important to consider that the State of Alaska is recommending that the current wildlife closure of moose hunting in the upper Kongakut and Firth areas be lifted by the Federal Board (WP14-55). Moose movement studies have documented that many of the migratory moose that are destined for the Sheenjek and Coleen areas, where moose numbers are very low,pass through the Firth and Kongakut areas during the fall hunting season. WP14-55 would expose these moose to additional hunting pressure at a time when the Sheenjek and Coleen population is already susceptible to further decline. Therefore, I am opposed to WP14-55. Instead,I support development of a conservation plan that addresses the unique nature of moose migrations in northeast Alaska and northwest Canada and integrates regulatory actions focused to sustain populations at a healthy level rather than the current piecemeal approach that threatens this important resource.

In 1995 I had the opportunity to discuss the moose migrations of northeast Alaska with the late Dr Gasaway. He concurred with the concern for migratory moose of this region being especially vulnerable to hunting pressure. Dr Gasaway also indicated that excessive hunting in the Yukon Flats during the 1950's and 1960's by hunters accessing the area with floatplanes in August, extirpated or severely depleted formerly robust moose migrations in the Flats. Today, we find very low densities of mostly non-migratory moose in the Yukon Flats.

There is still time to prevent such a loss for the Sheenjek and Coleen areas. By enacting the provisions of WP14-48 and maintaining the wildlife closure in the Kongakut and Firth areas, the Federal Subsistence Board would be taking significant conservation actions that would help to restore the moose population and enable a sustainable harvest in the future.

Reference: Mauer, F.J. 1998. Moose migration: northeastern Alaska to northwestern Yukon Territory, Canada. Alces Vol. 34(1): 75-81.

WP14-23 Executive Summary	
General Description	Proposal WP14-23 requests an extension of the moose season in Unit 18, 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 to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, from Aug. 1 to the last day of February, to Aug. 1 to Mar. 31. It also requests removal of the bull-only restriction from Aug. 1-Sept. 30. *Submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 18 — Moose** *Unit 18 – 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—2 moose~~, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.~~* — *Aug. 1~~ the last day of February.~~**Mar. 31***
OSM Conclusion	**Support** Proposal WP14-23.
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Support with modification** to combine the Unit 18 Remainder with the lower Yukon hunt area and make the season Aug. 1 – Mar. 31 with a harvest limit of 2 moose and retain the language that antlered bulls may only be harvested from Aug. 1 – Sept. 30th. The modified regulation should read: **Unit 18 — Moose** *Unit 18 – 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* — *Aug. 1~~ the last day of February.~~* ***Mar. 31***

WP14-23 Executive Summary	
	Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village—2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30. *Unit 18, remainder – ~~1 moose~~* ***2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.*** *Aug. ~~10~~* ***1 – Mar. 31***
Western Interior Regional Advisory Council Recommendation	**Support with modification** made by the YKDRAC.
Seward Peninsula Regional Advisory Council Recommendation	**Support**
Interagency Staff Committee Comments	If the Board chooses to accept the modification proposed by the Yukon Kuskokwim Delta and Western Interior Regional Advisory Councils, the result would be the creation of a much larger hunt area and extension of the hunting season by one month in the Lower Yukon area and by up to 4 months in the Unit 18 Remainder area. This would allow additional harvest opportunity in a larger area for a longer period. There is no biological concern anticipated resulting from this modification. Unless the antlered bull restriction is removed, as recommended in the original proposal, the Board should fix possible misinterpretation of that language. That language could be read to only allow the harvest of antlered bulls August 1 to September 30, and no other moose. To clarify the intent of the regulatory language, the Board could use this changed phraseology: *2 moose, only one of which may be antlered. ~~Antlered bulls may only be harvested from August 1 to September 30.~~* ***Antlered bulls may not be taken after September 30.***
ADF&G Comments	**Support with modification** to align bag limits and seasons with those recently added by the Board of Game at their January 10-13, 2014 in Kotzebue.

WP14-23 Executive Summary	
Written Public Comments	1 **Support**

STAFF ANALYSIS
WP14-23

ISSUES

Proposal WP14-23, submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council, requests an extension of the moose season in Unit 18, 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 to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village, from Aug. 1 to the last day of February, to Aug. 1 to Mar. 31. It also requests removal of the bull-only restriction from Aug. 1-Sept. 30.

DISCUSSION

The proponent states that the moose population in Unit 18 is growing quickly and that people are concerned about the population becoming too abundant and crashing. The proponent feels that an extension of the hunting season will allow for more opportunity to harvest moose in the Lower Yukon portion of Unit 18 while allowing for higher cow harvest will help to keep the moose population from exceeding the carrying capacity of the area.

Existing Federal Regulation

Unit 18 — Moose

Unit 18 – 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—2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.	*Aug. 1–the last day of February.*

Proposed Federal Regulation

Unit 18 — Moose

Unit 18 – 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—2 moose~~, only one of which may be antlered.~~	*Aug. 1~~–the last day of February.~~**Mar. 31***

~~*Antlered bulls may only be harvested from Aug. 1 through Sept. 30.*~~

Existing State Regulation

Unit 18 - Moose

Residents, two moose only one of which may be an antlered bull, taking of cows accompanied by calves or calves is prohibited.	*Aug.1 – Sept. 30*
Or	
Two antlerless moose	*Oct. 1 – Feb. 28*
Nonresidents, one antlered bull	*Sept. 1 – Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 66% of Unit 18 and consist of 63% US Fish and Wildlife Service managed lands and 3% Bureau of Land Management managed lands (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Unit 18, Upper Kalskag, Aniak and Chuathbaluk have a positive customary and traditional 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 (but excluding) the Tuluksak drainage.

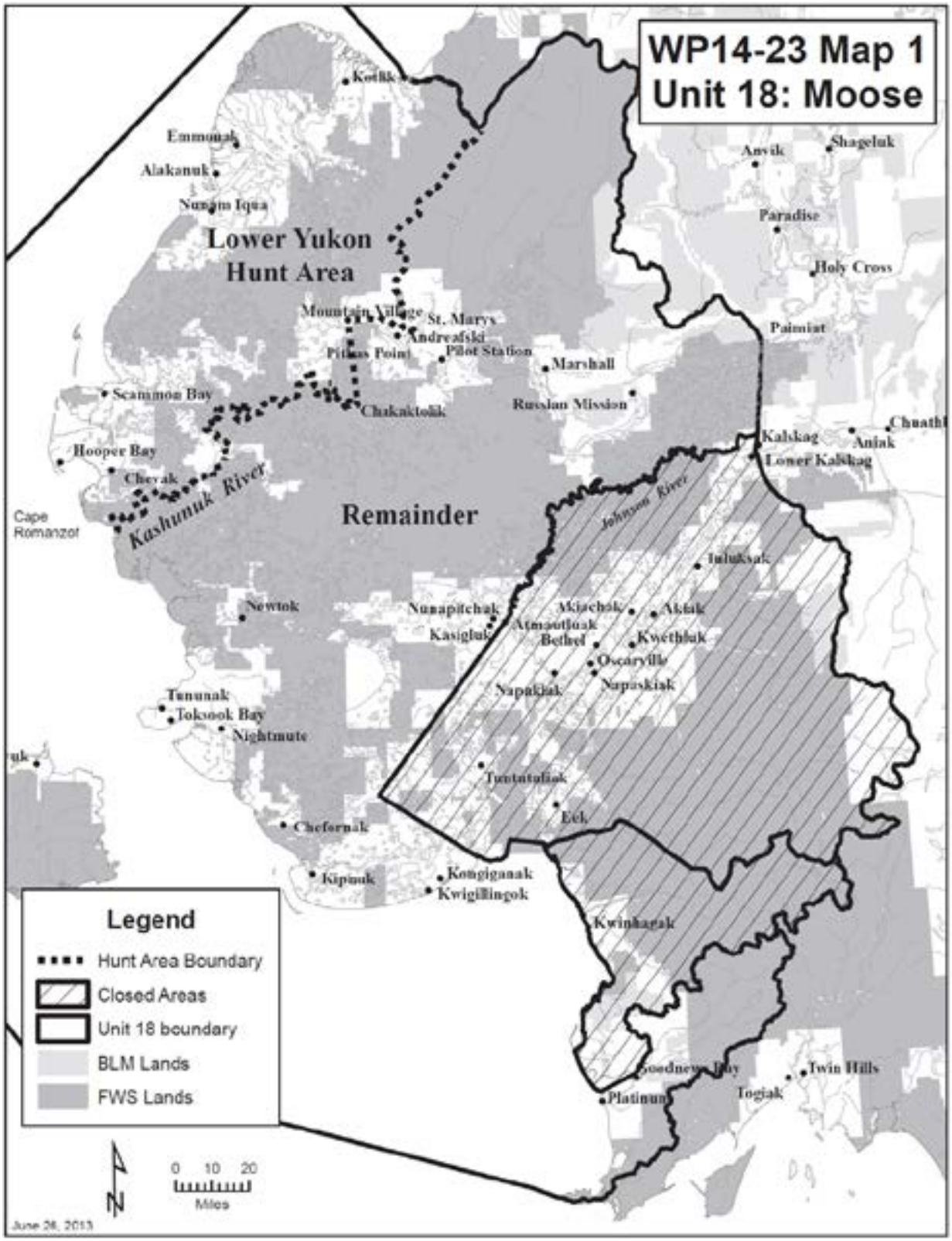
Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional determination for moose in Unit 18, that portion north of a line from Cape Romanzof to Kuzilvak Mountain to Mountain Village, and all drainages north of the Yukon River downstream from Marshall.

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional determination for moose in Unit 18 remainder.

Regulatory History

In November 2005, the Alaska Board of Game adopted Proposal 4 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 adopted Proposal 6, which lengthened the fall moose season for the lower Yukon and remainder areas of Unit 18 by 21 days and lengthened the winter season in the lower Yukon by 10 days.

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


WP14-23 Map 1
Unit 18: Moose
Lower Yukon
Hunt Area
Remainder
Kashunuk River
Johnson River
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Anvik
Shageluk
Paradise
Holy Cross
Mountain Village
St. Marys
Andreafski
Pilot Station
Marshall
Scammon Bay
Chakaktolik
Russian Mission
Paimiut
Kalskag
Lower Kalskag
Aniak
Hooper Bay
Chevak
Cape Romanzof
Iulukvak
Newtok
Nunapitchak
Kasigluk
Atmautluak
Bethel
Mekoryuk
Aktak
Kwethluk
Oscarville
Napakiak
Napaskiak
Tununak
Tokoosk Bay
Nightmute
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Platinum
Togiak
Twin Hills
Legend
Hunt Area Boundary
Closed Areas
Unit 18 boundary
BLM Lands
FWS Lands
0 10 20
Miles
June 26, 2013

Unit 18. The Board stated that the affected moose population increased to a size that it could 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 Jan. 20 to Feb. 28 and move the boundary between the lower Yukon and the remainder areas, south to a more discernible geographic land mark.

WP10-56, submitted by the Yukon Delta National Wildlife Refuge, requested 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 did not harvest a moose in the fall would be allowed to harvest two moose during the winter season. The proposal also delegated 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. The proposal was supported by the Federal Subsistence Board with modification to extend the winter season to February 28.

WP10-57, submitted by the Yukon Delta National Wildlife Refuge, requested 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. The proposal was supported by the Federal Subsistence Board with modification to remove the Cape Romanzof to Kusilvak Mountain section and replace with a descriptor for the Kashunuk River drainage.

WP12-49, submitted by the Yukon Delta National Wildlife Refuge, requested the moose hunting season in Unit 18, that portion north and west of the Kashunak 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 be revised from fall and winter dates (Aug. 10 - Sept.30 and Dec. 20 - Feb. 28) to Aug. 1 through the last day of February. The harvest limit would be two moose, only one of which may be antlered. The harvest of an antlered bull would be limited to the dates of Aug. 1 – Sept. 30. The proposal was adopted with modification by the Federal Subsistence Board at its January 2012 meeting to allow for the harvest of an antlered bull starting on Aug. 1 instead of Sept. 1.

Current Events Involving Species

In January of 2014, the Alaska Board of Game acted o n a suite of proposals dealing with moose hunting in Unit 18. The Board voted to approve and amended proposal (Proposal 3A), which created a continuous season for moose in Unit 18 Remainder and the Lower Yukon Area for residents from Aug. 1 – Mar. 15th and a bag limit of 2 moose, of which only 1 may be an antlered bull. This action closely mirrors

modifications made on Proposal WP14-23 by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council at its meeting in November 2013, except that the RAC's modifications created a continuous season from Aug. 1st – Mar. 31st with antlered bulls only being allowed to be harvested from Aug. 1 – Sept. 30th. These modifications will be taken up by the Federal Subsistence Board at its April 2014 meeting.

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 (USFWS 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. Population composition data for lower Yukon moose collected in 2011 showed 30 bulls per 100 cows and 69 calves per 100 cows, with 55% of cows having calves (Rearden 2013, pers

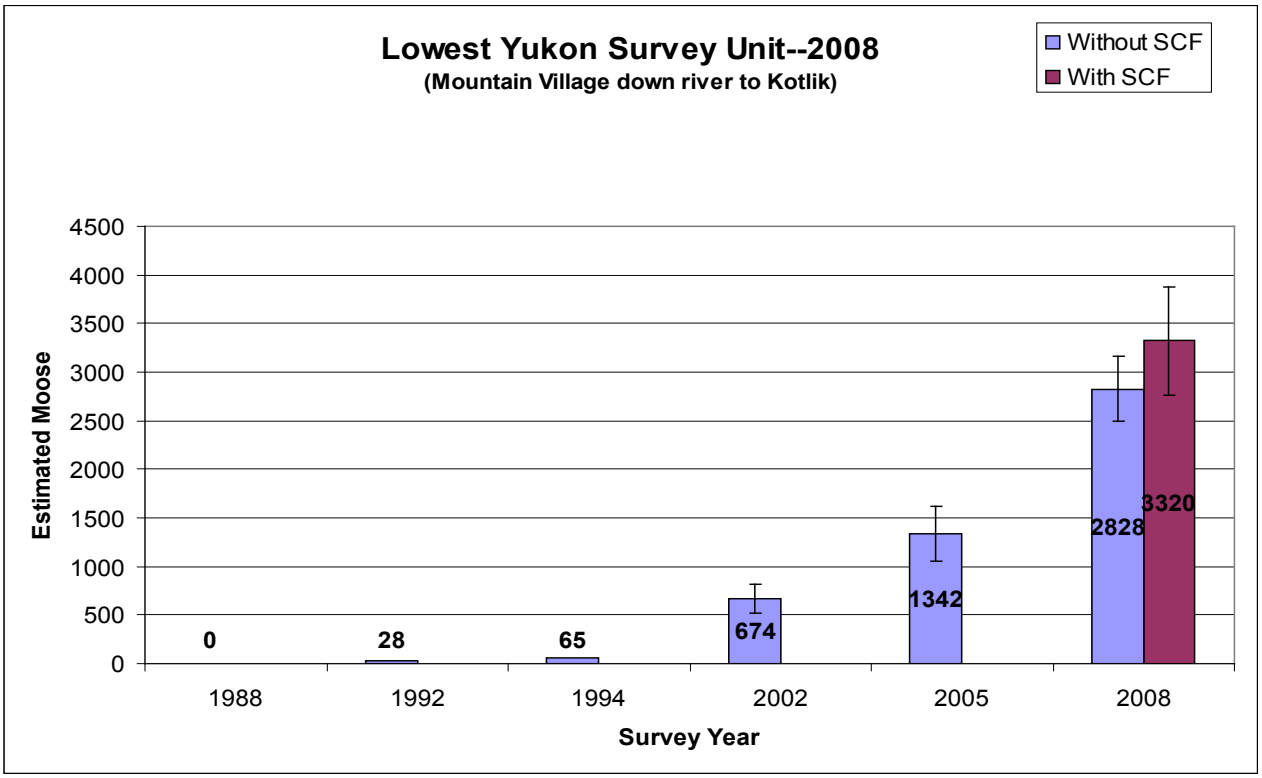


Figure 1. Moose populations survey results from the lowest survey unit along the main stem of the Yukon River, 1998-2008 (USFWS 2008).

comm.). This data most likely reflects a growing population since the 2008 surveys.

Habitat

The Alaska Department of Fish and Game estimates a minimum of 8000 mi^2 of moose habitat within Unit 18. Approximately 4500 mi^2 of this habitat occurs along riparian zones of the Yukon River. Islands and adjacent sloughs along the Yukon River from Paimiut to Mountain Village represent the most productive habitat for moose in the unit (Perry 2010).

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 (FSB 2009).

Harvest History

Hunter success has increased since 2005 in the lower Yukon area of Unit 18 during the fall and winter seasons (**Table 1**). From 2005 to 2010, the average annual reported fall and winter moose harvest was 152 and 34 moose respectively. Even with the "any moose" harvest limit provided during the 2009 season, the total reported winter harvest remains lower than anticipated. Harvest information is typically collected through harvest ticket or registration permit reports submitted by users, which may undercount harvest (Anderson and Alexander 1992). Overall, the reported moose harvest for the area shows an increasing trend.

Table 1. Fall and winter moose harvest in Unit 18, 2000-2009 (Perry 2010).

Regulatory Year	Fall Harvest	Winter Harvest	Unknown Harvest	Total Harvest
2000-2001	166	5	4	175
2001-2002	140	9	13	162
2002-2003	202	10	11	223
2003-2004	220	13	0	233
2004-2005	189	36	1	226
2005-2006	253	64	0	317
2006-2007	256	70	4	330
2007-2008	370	86	2	458
2008-2009	350	81	11	442

Effects of the Proposal

If this proposal is adopted it would provide additional harvest opportunities for Federally qualified subsistence users by lengthening the season by one month and eliminating the bull only restriction between

Aug.1 and Sept. 30. Given the rapidly increasing moose population in the lower Yukon River portion of Unit 18, this proposal would help limit the growth of the population by reducing recruitment rates via a targeted harvest of cows. Such a reduction may also help prevent habitat degradation along the lower Yukon that could lead to a population crash if left unchecked.

OSM CONCLUSION

Support Proposal WP14-23.

Justification

The Federal Subsistence Board has adopted increasingly more liberal hunting regulations in Unit 18 in response to the growing moose population in the area. This proposal would lengthen the season by one month and allow the harvest of any moose for the whole season providing increased harvest opportunities for Federally qualified users. Moose densities along the lower Yukon River are high and additional harvest should not have a negative impact on the population. This proposal could help to reduce moose densities in the area, which should help to prevent habitat degradation that could lead to a population crash.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-23 **with modification** to incorporate WP14-28 into the proposal, to include Unit 18 remainder with the Lower Yukon hunt area with a season of Aug. 1- Mar. 31 and retain language that antlered bulls may only be harvested from Aug. 1 - Sept. 30th.

The modified regulation should read:

Unit 18 — Moose

Unit 18 – 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—2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.	*Aug. 1~~ the last day of February.~~**Mar. 31* *~~Dec. 20 – last day of February~~*
Unit 18, remainder – ~~1 moose~~ ***2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.***	*Aug.~~ 10~~ **1** – ~~Sept. 30~~**Mar. 31***

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-23 **with modification** made by the YKDRAC. Due to time limitations and scheduling conflicts resulting from the government shutdown in October 2013, the WIRAC is deferring action on this proposal to the YKDRAC.

Seward Peninsula Subsistence Regional Advisory Council

Support Proposal WP14-23. The Council generally supported the proposal, but noted there needs to be a good management plan in place when allowing the harvest of the breeding stock [allowing the harvest of

cows during Aug. 1-Sept. 30]. The Council had some concern about impacts to the moose population by overharvest/habitat degradation, similar to the moose populations in Unit 22.

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 recommendation and Federal Subsistence Board action on the proposal.

Proposal WP14-23 requests an extension of the moose season in Unit 18 in that portion north and west of the Kashunuk River including the north bank from the mouth of 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 (Lower Yukon Area), from August 1 to March 31. It also requests removal of the bull-only restriction from Aug. 1-Sept. 30.

The Yukon Kuskokwim Delta Alaska Regional Advisory Council (YK RAC) recommends combining the unit 18 Remainder with the Lower Yukon hunt area with a harvest limit of 2 moose, a season of August 1 through March 31 and retain the existing language that only one of the 2 moose may be antlered, and antlered bulls may only be harvested from August 1 through September 30th. The YK RAC tied proposal WP14-28, which addresses Unit 18 Remainder, to this proposal.

The Western Interior Regional Advisory Council supports the modifications made by the YK RAC.

The Seward Peninsula Regional Advisory Council supports the proposal as written.

The preliminary OSM recommendation was to support the proposal.

The State of Alaska supports the proposal as written.

If the Board chooses to accept the modification proposed by the Yukon Kuskokwim Delta and Western Interior Regional Advisory Councils, the result would be the creation of a much larger hunt area and extension of the hunting season by one month in the Lower Yukon area and by up to 4 months in the Unit 18 Remainder area. This would allow additional harvest opportunity in a larger area for a longer period. There is no biological concern anticipated resulting from this modification.

Unless the antlered bull restriction is removed, as recommended in the original proposal, the Board should fix possible misinterpretation of that language. That language could be read to only allow the harvest of antlered bulls August 1 to September 30, and no other moose. To clarify the intent of the regulatory language, the Board could use this changed phraseology:

2 moose, only one of which may be antlered. ~~*Antlered bulls may only be harvested from August 1 to September 30.*~~ ***Antlered bulls may not be taken after September 30.***

WRITTEN PUBLIC COMMENTS

Support Proposal 14-23: The people using the resource know Best the conditions of the herd and possible over-grazing of an area, a possible crash of the moose population is a very real and serious issue

Donald Woodruff, Eagle

WP14-21 Executive Summary	
General Description	Proposal WP14-21 requests an extension of the to-be-announced winter season and an increase in the harvest limit for moose under Federal hunting regulations in Unit 17A. *Submitted by the Bristol Bay Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 17A—Moose** *Unit 17A—1 bull by State registration permit* — *Aug. 25–Sept. 20.* *Unit 17A—~~1 antlered bull~~* ***up to 2 moose*** *by State registration permit. Up to a ~~14~~* ***31****-day season during the period Dec. 1–Jan. 31 may be opened or closed by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Bristol Bay Regional Advisory Council.* — *Winter season ~~to~~* ***may*** *be announced*
OSM Conclusion	**Support with modification** to delete regulatory language found in the Unit 17A may-be-announced season, and delegate authority to the Togiak National Wildlife Refuge Manager to open and close the season and set the harvest limit, including any sex restrictions (e.g., bulls only), for moose via a delegation of authority letter only. The modified language should read: **Unit 17A—Moose** *Unit 17A—1 bull by State registration permit* — *Aug. 25–Sept. 20* *Unit 17A—~~1 antlered bull~~* ***up to 2 moose*** *by State registration permit. ~~Up to a 14 day season during the period Dec. 1–Jan. 31 may be opened or closed by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Bristol Bay Regional Advisory Council.~~* — *~~Winter~~* ***Up to a 31-day*** *season ~~to~~* ***may*** *be announced* ***between Dec. 1–Jan. 31.***
Bristol Bay Regional Advisory Council Recommendation	**Support** Proposal WP14-21 **with modification** as described in the OSM Conclusion.
Yukon-Kuskokwim Delta Regional Advisory Council	**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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP14-21 **with modification** as described in the OMS Conclusion.
Written Public Comments	**None**

STAFF ANALYSIS
WP14-21

ISSUES

Proposal WP14-21, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests an extension of the to-be-announced winter season and an increase in the harvest limit for moose under Federal hunting regulations in Unit 17A.

DISCUSSION

The proponent states that the Federal moose regulations should be changed to align with State seasons and harvest limits in Unit 17A. The changes are intended to slightly reduce the Unit 17A moose population to keep it in a healthy and productive state, and to prevent over-browsing of the habitat. The regulatory change will provide Federally qualified subsistence users up to 17 additional days of opportunity to harvest moose (up to 31 days total) in Unit 17A during December/January. The proposal also provides additional harvest opportunity for Federally qualified subsistence users with more liberal harvest regulations that include an increased harvest limit and allowing users to harvest cow moose during the winter.

Existing Federal Regulation

Unit 17A—Moose

Unit 17A—1 bull by State registration permit	*Aug. 25–Sept. 20.*
Unit 17A—1 antlered bull by State registration permit. Up to a 14-day season during the period Dec. 1–Jan. 31 may be opened or closed by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Bristol Bay Regional Advisory Council.	*Winter season to be announced*

Proposed Federal Regulation

Unit 17A—Moose

Unit 17A—1 bull by State registration permit	*Aug. 25–Sept. 20.*
Unit 17A—~~1 antlered bull~~ ***up to 2 moose*** *by State registration permit. Up to a ~~14~~* ***31****-day season during the period Dec. 1–Jan. 31 may be opened or closed by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Bristol Bay Regional*	*Winter season ~~to~~* ***may*** *be announced*

Advisory Council.

Existing State Regulation

Unit 17A—Moose

Residents: One bull by permit available in person in Dillingham and Togiak beginning Aug 15	*RM573*	*Aug. 25–Sept. 20*
OR		
Two moose by permit available in person in Dillingham and Togiak (up to a 31-day season may be announced Dec 1 – Jan 31)	*RM575*	*May be announced*

Extent of Federal Public Lands

Federal public lands comprise approximately 87% of Unit 17A, and consist of 87% FWS managed lands and less than 1% of BLM managed lands (see **Unit 17 Map**).

Customary and Traditional Use Determinations

Residents of Kwethluk have a positive customary and traditional use determination to harvest moose in 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.

Residents of Akiak and Akiachak have a positive customary and traditional use determination to harvest moose in Unit 17A, that portion north of Togiak Lake that includes the Izavieknik River drainages.

Residents of Unit 17, Goodnews Bay and Platinum (excluding residents of Akiachak, Akiak, and Quinhagak) have a positive customary and traditional use determination to harvest moose in Unit 17A remainder.

Regulatory History

Under State and Federal regulations there were no open seasons for moose in Unit 17A from January 1, 1981 to August 20, 1997. Prior to 1981, the State moose season was Sept. 10–Sept. 20 and Dec. 10–Dec. 31, with a harvest limit of one bull moose.

Several proposals were submitted to the Federal Subsistence Board (Board) to establish a moose season in Unit 17A. Proposal P95-31 requested the establishment of an Aug. 20–Sept. 15 moose season. The Bristol Bay Subsistence Regional Advisory Council (Council) tabled the proposal due to concerns about the moose population, and the Board subsequently deferred action on P95-31. Special Action S95-03 requested the establishment of a temporary Aug. 20–Sept. 20 moose season, but the Board rejected the

request because the Council had not had an opportunity to review moose survey data and make a recommendation. Proposals P96-37 and P96-38 requested the establishment of moose seasons from Aug. 15–Sept. 20 and Aug. 20–Sept. 15, respectively. The Board supported the Council's recommendation to reject the proposals and recommend the Togiak National Wildlife Refuge develop a management strategy that allowed for subsistence harvest while promoting growth of the moose population.

In 1997, the Alaska Board of Game adopted Proposal 134, which established a moose hunting season in Unit 17A with a harvest limit of one bull moose during Aug. 20–Sept. 15. The Council submitted Special Actions SA97-03 and SA97-03a to establish a moose season under Federal regulations. Special action SA97-03a was a modification of SA97-03, which requested the Federal season align with the State season and close when 10 bull moose were harvested. The Board approved SA97-03a.

Proposal P98-59 was submitted to take the temporary season established by approval of SA97-03a and put it into permanent regulation and align with State regulations. The Board deferred action on P98-59, pending the development of a moose management plan in Unit 17A. The proposal was resubmitted as P99-40, but was rejected by the Board because P98-59 was still pending. Another temporary season was established with the Board's approval of Special Action WSA00-05. Proposal P01-20 was submitted to make the temporary season from WSA00-05 a permanent regulation, which the Board adopted.

Special Action WSA02-11 was submitted by the Togiak Traditional Council to establish a limited winter moose hunt in a portion of Unit 17A. WSA02-11 was subsequently modified by the Togiak Traditional Council, and recommended that a Federal registration permit be required instead of a State registration permit. The special action was approved with modification by the Board on November 12, 2002. The modification stipulated that the Federal subsistence hunt require the use of a State registration permit rather than a Federal registration permit. Prior to approval of WSA02-11, proposed winter moose seasons had been previously rejected by the Board, including Special Action SA97-12, Proposal P00-61, a subsequent Request for Reconsideration RFR00-03, and Proposal P01-21. Proposal WP03-34 requested that the season temporarily established by WSA02-11 be placed in permanent regulation, but the Board deferred action due to a pending review by the Unit 17A Moose Planning Working Group.

Proposal WP04-46 requested that a limited moose hunt be held in Unit 17A during Dec. 1–Jan. 31. The Board adopted the proposal with modifications consistent with the Council's recommendation. The first modification implemented a winter hunt using the State registration permit instead of a Federal permit. The second modification included language stating "up to a 14-day season" during the period of Dec. 1–Jan. 31. Also in 2004, Proposal WP04-47 requested a winter moose hunt be held in Unit 17A from Jan. 1–Jan. 31, with a harvest limit of one moose and a closure of the season once 20 cows had been harvested. The Board rejected the proposal as a consent agenda item, as the action on WP04-46 was preferred by the Regional Advisory Councils.

In 2012, Proposal WP12-40 requested a modification of the Unit 17A winter season hunt area by expanding the season to all of Unit 17A. The Board adopted the proposal as a consent agenda item to provide additional harvest opportunity and to align with State regulations.

The winter moose season was extended in 2013 to provide additional harvest opportunity under Federal and State regulations. The State extended the winter moose season in Unit 17A for an additional 14 days, from January 9–22, 2013, with Emergency Order No. 04-01-13. The justification for the season extension was that travel conditions and moose distribution were believed to have affected hunter success rates, resulting in approximately 6–8 moose being harvested. Aerial survey data and high rates of calf production and survival suggested the population could sustain additional harvest during the extended season. Special action WSA12-11 also requested an extension of the winter moose season in Unit 17A to January 9–22, 2013, as travel conditions had limited the opportunity for Federally qualified subsistence users to harvest moose during the 14-day winter season. It was determined the moose population could support the harvest of additional antlered bulls and WSA12-11 was approved by the Board to provide additional harvest opportunity, including utilization of the Federal designated hunter regulations.

Current Events Involving Species

At its February 8–15, 2013 meeting, the Alaska Board of Game adopted Proposal 48B, which increased the harvest limit from 1 bull to 2 moose, increased the season length for the may-be-announced winter season from up to 14 to up to 31 days, and opened a Sept. 5–15 nonresident season that allowed for the harvest of one bull with 50-inch antlers or antlers with 4 or more brow tines on one side by registration permit. The nonresident season will be by drawing permit only and will begin in 2014/2015. These actions were consistent with the updated Unit 17A Moose Management Plan.

In November 2013, the Federal Subsistence Board approved Special Action WSA13-01 to extend the length of the to-be-announced winter moose season in Unit 17A from up to a 14-day season to up to a 31-day season, and to increase the harvest limit from one antlered bull to up to two moose. The Bristol Bay Subsistence Regional Advisory Council submitted both WSA13-01 and this proposal.

Biological Background

Moose are relative newcomers to southwest Alaska and to Unit 17A, possibly migrating into the area from the middle Yukon River drainages during the last century. Aerial surveys conducted in the late 1980s and 1990s often resulted in less than 10 moose being observed in the unit (Woolington 2008). Local residents harvested moose opportunistically, but other species such as caribou, bear, and beaver were the main sources of wildlife meat. The last 20 years of minimum count surveys in Unit 17A show a steady increase from less than 10 moose in the early 1990s to 1,166 moose observed in 2011 (**Figure 1**). The 2004 version of the Unit 17A Moose Management Plan established a minimum population objective of 300 moose and a target population of 1,100–1,750 moose for Unit 17A. However, the population objective was recently revised to a target population of 800–1,200 moose in the January 8, 2013 version of the Moose Management Plan. The population's carrying capacity was recently estimated to be between 900 and 1,350 moose (Unit 17A Moose Management Group 2013).

The Togiak National Wildlife Refuge and ADF&G began a cooperative research study in 1998 to better understand the demographics of the Unit 17A moose population (Aderman et al. 2012). The objectives of the study are to monitor the population size, calf production and recruitment, and survival of females and their offspring. Since the project began in 1998, 50 short-yearling (between 10 and 12-months old)

females and 48 adult cows have been collared, and aerial radio tracking was conducted monthly for all moose, except during the calving period when cows were monitored weekly (Aderman et al. 2012). The minimum calf counts averaged 128 calves per 100 adult females (range 87–157 calves/100 females) between 1998 and 2011, and twinning rates averaged 64% (range 25%–94%) (Aderman et al. 2012). The twinning rates suggest that the population remains below carrying capacity (Gasaway et al. 1992, Aderman et al. 2012). Fall recruitment was estimated at 63 calves per 100 females (range 35–86 calves/100 females) between 1998 and 2011. Average calf survival from birth to November was 48% (range 28%–60%) and was 44% (range 28%–55%) through the following March/April survey period over the same time frame (Aderman et al. 2012). The average annual survival rate for female moose was 0.90 (range 0.76–0.97) from 1998 to 2011, with most mortalities occurring in late winter and spring (Aderman et al. 2012). Bull:cow ratios have typically been high throughout Unit 17 (Woolington 2010) and averaged 82 bulls:100 cows between 1998 and 2006 (Aderman 2008).

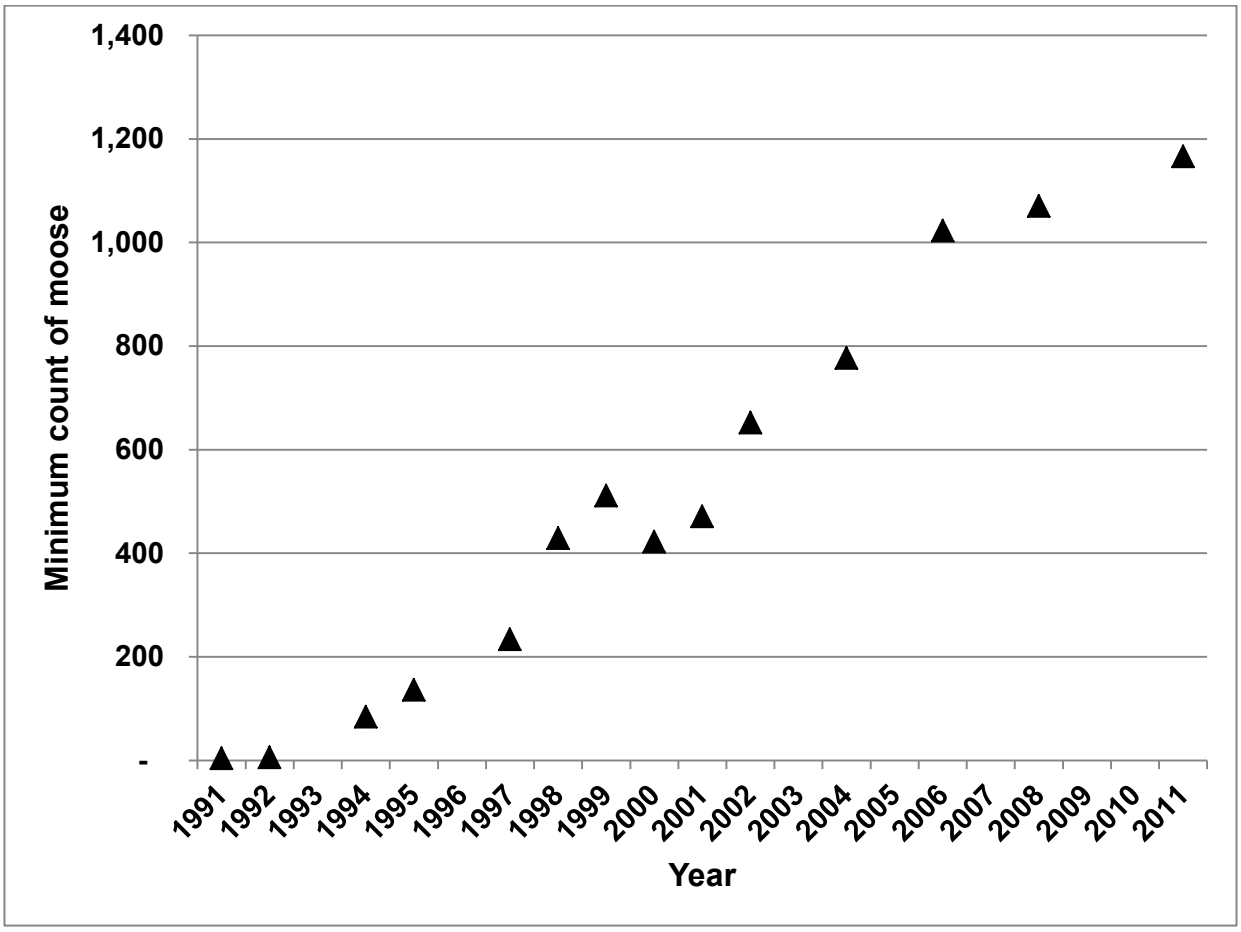

Figure 1. Minimum counts of moose observed during winter aerial surveys of Unit 17A between 1991 and 2011 (Aderman et al. 2012). Missing data indicates that no surveys were performed that year.

Between 2003 and 2011, an average of 33 moose were harvested annually in Unit 17A, of which an average of 31% (range 6%–50%) of the harvest occurred during the winter season (**Table 1**). Over the same period 65%–100% of moose harvested in Unit 17A were by local residents of Unit 17 (**Table 1**). However,

Table 1. Hunter participation and moose harvest among local and nonlocal Alaska residents using State registration permits RM573 (fall season) and RM575 (to-be-announced winter season) in Unit 17A (Aderman 2013, pers. comm.). Federally qualified subsistence users are required to possess a State registration permit to harvest moose in the unit.

		Residents of Unit 17			Nonlocal residents[a]			
Year	Season	Permits issued	Permits used	Harvest	Permits issued	Permits used	Harvest	Total harvest
2003	Fall	52	44	6	7	3	1	
	Winter	19	14	4	0	0	0	11
2004	Fall	52	48	10	1	0	0	
	Winter	44	29	10	0	0	0	20
2005	Fall	68	58	20	5	3	1	
	Winter	76	35	3	0	0	0	24
2006	Fall	62	56	21	5	5	3	
	Winter	48	26	11	6	5	1	36
2007	Fall	81	63	32	2	0	0	
	Winter	98	45	8	6	4	1	41
2008[b]	Fall	87	81	17	16	13	7	
	Winter	110	64	21	0	0	0	45
2009	Fall	98	82	18	21	17	11	
	Winter	35	29	2	1	0	0	31
2010[c]	Fall	96	88	21	17	12	6	
	Winter	30	25	10	1	0	0	37
2011[c]	Fall	114	103	22	25	20	6	
	Winter	42	36	22	0	0	0	50
2012[c]	Fall	114	93	21	21	21	8	
	Winter	58	36	16	0	0	0	45

[a] May include Federally qualified subsistence users from Akiachak, Akiak, Kwethluk, Goodnews Bay, and Platinum.
[b] Fall 2008 was the first year that aircraft could be used during the hunt.
[c] Preliminary harvest data.

nonlocal residents also may include Federally qualified subsistence users, as the communities of Akiachak, Akiak, Kwethluk, Goodnews Bay, and Platinum have positive customary and traditional use determinations and occur in Unit 18. Annual harvest has increased as the moose population has grown, with reported harvests of 11 moose in 2003 and 50 moose in 2011 (**Table 1**). As of April 27, 2013, 29 bull moose were reportedly harvested during the 2012 fall hunt while another 16 bulls were harvested during the winter hunt (Aderman 2013, pers. comm.).

Habitat

In 2011, the amount of moose habitat was estimated to comprise 13.4% of Unit 17A (449 mi^2 of 3,357 mi^2); however, the estimate did not include a mixed shrub category that contained an unknown percentage of willow and should be considered a minimum estimate (Aderman and Lowe 2011). A previous moose habitat mapping effort in 1999 estimated 560 mi^2 of optimal and 520 mi^2 of secondary moose winter habitats for Unit 17A, excluding the Nushagak Peninsula and areas west of the Matogak River (Aderman and Lowe 2011). Both estimates (1999 and 2011) were based on the same Landsat imagery from 1989.

Preliminary analyses of the nutritional quality suggest that forage species found in Unit 17A may provide more digestible protein than areas in Denali National Park and the Nelchina Basin (Aderman and Lowe 2011). The high amounts of digestible protein may help moose in Unit 17A achieve rapid body growth and lead to earlier sexual development.

Effects of the Proposal

If this proposal is adopted, it would align potential harvest limits and season dates under State and Federal regulations and provide additional opportunity for Federally qualified subsistence users to harvest moose in Unit 17A. Federally qualified subsistence users would have up to 17 additional days to harvest moose in the to-be-announced winter season, and the harvest limit would be increased from one antlered bull to up to 2 moose. Federally qualified subsistence users are required to have a State registration permit during the fall and winter moose seasons, and could harvest moose under State regulations regardless of the Board's decision. However, aligning the potential harvest limit and length of the to-be-announced season in State and Federal regulations would reduce regulatory complexity. In addition, adopting the proposal would allow Federally qualified subsistence users to harvest moose for other Federally qualified subsistence users on Federal public land via Federal designated hunter regulations.

Extending the winter season to up to a 31-day season and increasing the harvest limit is expected to impact the moose population in Unit 17A. The proposed regulations provide the Togiak National Wildlife Refuge manager the flexibility to manage the harvest in order to keep the moose population within the guidelines of the Unit 17A Moose Management Plan. When the moose population is increasing and approaching carrying capacity, as is the current case, more liberal harvest regulations that allow for a longer season, increased harvest limits, and potentially allowing for the harvest of cows should help to reduce the population to more sustainable levels.

OSM CONCLUSION

Support Proposal WP14-21 **with modification** to delete regulatory language found in the Unit 17A may-be-announced season, and delegate authority to the Togiak National Wildlife Refuge Manager to open and close the season and set the harvest limit, including any sex restrictions (e.g., bulls only), for moose via a delegation of authority letter only (**Appendix I**).

The modified regulation should read:

Unit 17A—Moose

Unit 17A—1 bull by State registration permit	*Aug. 25–Sept. 20.*
Unit 17A—~~1 antlered bull~~ ***up to 2 moose*** *by State registration permit.* *~~Up to a 14 day season during the period Dec. 1–Jan. 31 may be opened or closed by the Togiak National Wildlife Refuge Manager after consultation with ADF&G and the Chair of the Bristol Bay Regional Advisory Council.~~*	*~~Winter~~* ***Up to a 31-day*** *season ~~to~~* ***may*** *be announced* ***between Dec. 1–Jan. 31.***

Justification

The proposed regulatory changes are consistent with recommendations of the Unit 17A Moose Management Plan, which state that when the moose population is increasing and approaching carrying capacity, more liberal harvest regulations that allow for a longer season and increased harvest limits, including allowing for the harvest of cows, should help to reduce the population to more sustainable levels. The proposed regulatory changes would also align with recent changes to State regulations to increase the harvest limit and the may-be-announced season. Federally qualified subsistence users would be provided with additional opportunity to harvest moose under Federal regulations, including the use of Federal designated hunter regulations. The moose population continues to increase and is within the estimated carrying capacity for the area. The proposed changes, including creation of a delegation of authority letter, would provide the Togiak National Wildlife Refuge manager with flexibility to adjust the length of the winter season and harvest limit to more effectively manage the population.

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Refuge Manager
Togiak National Wildlife Refuge
P.O. Box 270 MS 569
Dillingham, Alaska 99576

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Togiak National Wildlife Refuge Manager, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within Unit 17A as it applies to moose on these lands.

It is the intent of the Board that actions related to management of moose by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G) and the Chair of the Bristol Bay Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State and Federal managers and the Chair and applicable members of the Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Togiak National Wildlife Refuge Manager is hereby delegated authority to issue emergency or temporary special actions affecting moose on Federal lands as outlined under the Scope of Delegation of this section. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To open a season of up to 31 days between December 1 and January 31, close a season, and set the harvest limit, including any antler or sex restrictions, for moose on Federal public lands in Unit 17A.

This delegation may be exercised only when it is necessary to conserve the moose population or to continue subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within Unit 17A.

3. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

4. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management and coordinate with local ADF&G managers and the Chair of the Bristol Bay Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

5. Support Services: Administrative support for regulatory actions will be provided by the Office of

DRAFT

Subsistence Management, U.S. Fish & Wildlife Service, Department of the Interior.

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
Chair, Bristol Bay Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Coordinator, Bristol Bay Subsistence Regional Advisory Council
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

DRAFT

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP14-21 **with modification** as described in the OSM Conclusion. The moose population is increasing and rural residents of the area using the resource are in support of maintaining a healthy moose population.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-21. This proposal, if enacted into regulation, would align the Federal caribou harvest regulations with the current State caribou harvest regulations. Council concurs with OSM's proposal analysis and supported this proposal unanimously.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-22 Executive Summary	
General Description	Proposal WP14-22 requests changes to the Federal subsistence caribou regulations in Units 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A, and 19B. The proposal requests the established of permit requirements for all of the units, and that the to-be-announced season in Units 17A remainder and 17C remainder be shortened from Aug. 1–Mar. 31 to Aug. 1–Mar. 15. *Submitted by the Bristol Bay Subsistence Regional Advisory Council.*
Proposed Regulation	**Units 9A, 9B, 9C—Caribou** *Unit 9A—2 caribou* ***by State registration permit****; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* *Unit 9B—2 caribou* ***by State registration permit****; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* *Unit 9C, that portion within the Alagnak River drainage—2 caribou* ***by State registration permit****; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* **Units 17A, 17B, 17C—Caribou** *Unit 17A—all drainages west of Right Hand Point—2 caribou* ***by State registration permit****; no more than1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 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 Manager.* — *Aug. 1–Mar. 15*

WP14-22 Executive Summary		
	Units 17A remainder and 17C remainder—selected drainages; a harvest limit of up to 2 caribou ***by State registration permit*** *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.*	*Season* ~~*to occur sometime within*~~ ***may be announced by the Togiak National Wildlife Refuge Manager between*** *Aug. 1–Mar.* ~~*31*~~***15****.*
	Units 17B and 17C—that portion of 17C east of the Wood River and Wood River Lakes—2 caribou ***by State registration permit****; no more than 1 caribou may be a bull, and no more than 1 caribou from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
	Unit 18—Caribou	
	Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou ***by State registration permit****; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*	*Aug. 1–Sept. 30 Dec. 20–the last day of Feb.*
	Unit 18 remainder—2 caribou ***by State registration permit****; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
	Units 19A, 19B—Caribou	
	Unit 19A—north of the Kuskokwim River—2 caribou ***by State registration permit****, no more than 1 caribou may be a bull; no more than 1 caribou may be taken from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
	Unit 19A—south of the Kuskokwim River and Unit 19B (excluding rural Alaska residents of Lime Village)—2 caribou ***by State registration***	*Aug. 1–Mar. 15*

WP14-22 Executive Summary	
	***permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*
OSM Conclusion	**Support with modification** to delete regulatory language found in portions of Units 17A and 17C, and issue a delegation of authority letter to the Togiak National Wildlife Refuge Manager for specific in-season management authorities. In Unit 17A within all drainages west of Right Hand Point, delegate the authority to open and close the season and set the harvest limit, including any sex restrictions (e.g., bulls only). In Unit 17A remainder and Unit 17C remainder, delegate the authority to open and close the season, set the harvest limit, and identify the hunt area for the may-be-announced season. The modified regulation should read: **Units 9A, 9B, 9C—Caribou** *Unit 9A—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* *Unit 9B—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* *Unit 9C, that portion within the Alagnak River drainage—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15* **Units 17A, 17B, 17C—Caribou** *Unit 17A—all drainages west of Right Hand Point—2 caribou **by State registration permit**; no more than1 caribou may be a bull, and no more than 1 caribou may be* — *Aug. 1–Mar. 15*

WP14-22 Executive Summary		
	taken Aug. 1–Jan. 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 Manager.~~	
	*Units 17A remainder and 17C remainder—selected drainages; a harvest limit of up to 2 caribou **by State registration permit** 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.~~*	*Season ~~to occur sometime~~ **may be announced** within Aug. 1–Mar. ~~31~~**15**.*
	*Units 17B and 17C—that portion of 17C east of the Wood River and Wood River Lakes—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
	Unit 18—Caribou	
	*Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*	*Aug. 1–Sept. 30* *Dec. 20–the last day of Feb.*
	*Unit 18 remainder—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
	Units 19A, 19B—Caribou	
	*Unit 19A—north of the Kuskokwim River—2 caribou **by State registration permit**, no*	*Aug. 1–Mar. 15*

WP14-22 Executive Summary	
	more than 1 caribou may be a bull; no more than 1 caribou may be taken from Aug. 1–Jan. 31. *Unit 19A—south of the Kuskokwim River and Unit 19B (excluding rural Alaska residents of Lime Village)—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.* — *Aug. 1–Mar. 15*
Bristol Bay Regional Advisory Council Recommendation	**Support** Proposal WP14-22 **with modification** as described in the OSM Conclusion.
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Support** Proposal WP14-22 **with modification** as described in the OSM Conclusion and for Unit 18 only, make the harvest limit 2 caribou and strike the bull restriction language as suggested for WP14-26. The modified regulation for Unit 18 should read: **Unit 18—Caribou** *Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou **by State registration permit**; ~~no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.~~* — *Aug. 1–Sept. 30* *Dec. 20–the last day of Feb.* *Unit 18 remainder—2 caribou **by State registration permit**; ~~no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.~~* — *Aug. 1–Mar. 15*
Western Interior Regional Advisory Council Recommendation	**Support** Proposal WP14-22 **with modification** as described in the OSM Conclusion.

WP14-22 Executive Summary	
Seward Peninsula Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP14-22 **with modification** as described in the OSM Conclusion.
Written Public Comments	**None**

STAFF ANALYSIS
WP14-22

ISSUES

Wildlife Proposal WP14-22, submitted by the Bristol Bay Subsistence Regional Advisory Council, requests changes to the Federal subsistence caribou hunting regulations in Units 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A, and 19B. The proposal requests the establishment of permit requirements for all of the units, and that the to-be-announced season in Units 17A remainder and 17C remainder be shortened from Aug. 1–Mar. 31 to Aug. 1–Mar. 15.

DISCUSSION

The proponent states the regulatory changes should be made to align with recent changes to State regulations, which would result in a consistent hunt structure. Requiring Federally qualified subsistence users to use a State registration permit to harvest caribou under Federal regulations would allow managers to better assess hunter harvest.

The proponent states the regulatory changes should reduce confusion about the correct harvest limit regulations on the Mulchatna Caribou Herd. Specifically, the statewide general caribou harvest card contains five harvest tickets, but the present harvest limit for Mulchatna caribou is two caribou. Also, the requirement for a State registration permit would require hunters to report the outcome of their hunting efforts. The proponent states that Federally qualified subsistence users would not be affected by the permit requirement, as most hunters in the range of the Mulchatna Caribou Herd are already familiar with other registration permits and the associated State reporting system.

Note: A similar proposal (WP14-26) requesting to extend the Federal subsistence caribou season in Unit 18, that portion to the east and south of the Kuskokwim River, from Aug. 1–Sept. 30 and Dec. 20–the last day of February to Aug. 1–Mar. 15 with a State and registration permit is being analyzed separately. However, this proposal (WP14-22) does request the use of a State registration permit in that portion of Unit 18.

Existing Federal Regulation

Note: The existing Federal regulations incorporate the recent Federal Subsistence Board approval of Temporary Special Action WSA13-02 (approved on July 26, 2013), as shown in bold.

Units 9A, 9B, 9C—Caribou

*Unit 9A—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

*Unit 9B—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 9C, that portion within the Alagnak River drainage—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Units 17A, 17B, 17C—Caribou

*Unit 17A—all drainages west of Right Hand Point—2 caribou **by State registration permit**; no more than1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 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 Manager.*	*Aug. 1–Mar. 15*
*Units 17A remainder and 17C remainder—selected drainages; a harvest limit of up to 2 caribou **by State registration permit** 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.*	*Season **may be announced by the Togiak National Wildlife Refuge Manager between** Aug. 1–Mar. **15***
*Units 17B and 17C—that portion of 17C east of the Wood River and Wood River Lakes—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Unit 18—Caribou

*Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*	*Aug. 1–Sept. 30* *Dec. 20–the last day of Feb.*
*Unit 18 remainder—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Units 19A—Caribou

*Unit 19A—north of the Kuskokwim River—2 caribou **by State registration permit**, no more than 1 caribou may be a bull; no more than 1 caribou may be taken from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 19A—south of the Kuskokwim River and Unit 19B (excluding rural Alaska residents of Lime Village)—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Proposed Federal Regulation

Units 9A, 9B, 9C—Caribou

*Unit 9A—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 9B—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 9C, that portion within the Alagnak River drainage—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Units 17A, 17B, 17C—Caribou

*Unit 17A—all drainages west of Right Hand Point—2 caribou **by State registration permit**; no more than1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 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 Manager.*	*Aug. 1–Mar. 15*
*Units 17A remainder and 17C remainder—selected drainages; a harvest limit of up to 2 caribou **by State registration permit** will be determined at the time the season is announced. Season, harvest limit,*	*Season ~~to occur sometime within~~ **may be announced by the Togiak National***

and hunt area to be announced by the Togiak National Wildlife Refuge Manager.	***Wildlife Refuge Manager between*** *Aug. 1–Mar. ~~31~~**15**.*
*Units 17B and 17C—that portion of 17C east of the Wood River and Wood River Lakes—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Unit 18—Caribou

*Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*	*Aug. 1–Sept. 30 Dec. 20–the last day of Feb.*
*Unit 18 remainder—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Units 19A, 19B—Caribou

*Unit 19A—north of the Kuskokwim River—2 caribou **by State registration permit**, no more than 1 caribou may be a bull; no more than 1 caribou may be taken from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 19A—south of the Kuskokwim River and Unit 19B (excluding rural Alaska residents of Lime Village)—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Existing State Regulation

Unit 9—Caribou

Unit 9A,Unit 9B, and that portion of Unit 9C within the Alagnak River drainage	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, McGrath, Palmer, Soldotna, and at*	*RC503*	*Aug. 1–Mar. 15*

	local license vendors beginning July 17. No more than one bull may be taken; no more than one caribou may be taken from Aug 1–Jan 31		
Unit 9C, that portion north of the north bank of the Naknek River and south of the Alagnak River drainage	*Residents only: One caribou by permit available online at http://hunt.alaska.gov and in person in King Salmon if a winter season is announced*	*RC504*	*may be announced*
Unit 17—Caribou			
Unit 17A, all drainages that terminate east of Right Hand Point	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, Palmer, Soldotna, and at local license vendors beginning July 17.*	*RC501*	*may be announced*
Unit 17A remainder, Unit 17B, and that portion of Unit 17C east of the east banks of the Wood River, Lake Aleknagik, Agulowak River, Lake Nerka and the Agulukpak River	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, McGrath, Palmer, Soldotna, and at local license vendors beginning July 17. No more than one bull may be taken; no more than one caribou may be taken from Aug 1–Jan 31.*	*RC503*	*Aug. 1–Mar. 15*
Unit 17C remainder	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, Palmer, Soldotna, and at local license vendors beginning July 17.*	*RC501*	*may be announced*

Unit 18—Caribou

Unit 18	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, McGrath, Palmer, Soldotna, and at local license vendors beginning July 17. No more than one bull may be taken; no more than one caribou may be taken from Aug 1–Jan 31.*	*RC503*	*Aug. 1–Mar. 15*

Unit 19—Caribou

Unit 19A and Unit 19B	*Residents only: Two caribou by permit available online at http://hunt.alaska.gov and in person in Anchorage, Bethel, Dillingham, Fairbanks, Homer, King Salmon, McGrath, Palmer, Soldotna, and at local license vendors beginning July 17. No more than one bull may be taken; no more than one caribou may be taken from Aug 1–Jan 31.*	*RC503*	*Aug. 1–Mar. 15*

Extent of Federal Public Lands

Unit 9

Federal public lands comprise approximately 40% of Unit 9A, and consist of 39% NPS and less than 1% of BLM and FWS managed lands. Federal public lands comprise approximately 44% of Unit 9B, and consist of 26% NPS and 18% BLM managed lands. Federal public lands comprise approximately 86% of Unit 9C, and consist of 78% NPS, 4% FWS, and 4% BLM managed lands (**Unit 9 Map**).

Unit 17

Federal public lands comprise approximately 87% of Unit 17A, and consist of 87% FWS and less than 1% of BLM managed lands. Federal public lands comprise approximately 8% of Unit 17B, and consist of 6% NPS, 1.5% BLM, and 1% FWS managed lands. Federal public lands comprise approximately 26% of Unit 17C, and consist of 11% BLM and 15% FWS managed lands (**Unit 17 Map**).

Unit 18

Federal public lands comprise approximately 66% of Unit 18, and consist of 63% FWS and 3% BLM managed lands (**Unit 18 Map**).

Unit 19

Federal public lands comprise approximately 22% of Unit 19A, and consist of 19.5% BLM and 2.5% FWS managed lands. Federal public lands comprise approximately 13% of Unit 19B, and consist of 11% NPS, 2.5% BLM, and less than 1% of FWS managed lands (**Unit 19 Map**).

Customary and Traditional Use Determinations

Unit 9

Residents of Units 9B, 9C, and 17 have a positive customary and traditional use determination to harvest caribou in Units 9A and 9B.

Residents of Units 9B, 9C, 17, and Egegik have a positive customary and traditional use determination to harvest caribou in Unit 9C.

Unit 17

Residents of Goodnews Bay, Platinum, Quinhagak, Eek, Tuntutuliak, and Napakiak have a positive customary and traditional use determination to harvest caribou in Unit 17A, that portion west of the Izavieknik River, Upper Togiak Lake, Togiak Lake, and the main course of the Togiak River.

Residents of Akiak, Akiachak, and Tuluksak have a positive customary and traditional use determination to harvest caribou in Unit 17A, that portion north of Togiak Lake that includes Izavieknik River drainages.

Residents of Kwethluk have a positive customary and traditional use determination to harvest caribou in 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 point where the Unit 17 boundary intersects the Shotgun Hills.

Residents of Bethel, Goodnews Bay, Platinum, Quinhagak, Eek, Akiak, Akiachak, Tuluksak, Tuntutuliak, and Napakiak have a positive customary and traditional use determination to harvest caribou in Unit 17B, that portion of Togiak National Wildlife Refuge within Unit 17B.

Residents of Units 9B, 17, Lime Village, and Stony River have a positive customary and traditional use determination to harvest caribou in Unit 17 remainder.

Unit 18

Residents of Unit 18, Manokotak, Stebbins, St. Michael, Togiak, Twin Hills, and Upper Kalskag have a positive customary and traditional use determination to harvest caribou in Unit 18.

Unit 19

Residents of Units 19A and19B; Unit 18 within the Kuskokwim River drainage upstream from, and including, the Johnson River; and residents of St. Marys, Marshall, Pilot Station, and Russian Mission have a positive customary and traditional use determination to harvest caribou in Units 19A and 19B.

Regulatory History

State and Federal regulations for the Mulchatna Caribou Herd (MCH) were liberalized during the dramatic population increase that occurred in the 1990s. These regulations provided hunters with the opportunity to harvest additional caribou from the large, increasing population. Numerous modifications were made to the Federal subsistence regulations for various management units as the MCH population increased and expanded into new range. Following the population decline, regulations became more restricted 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 the caribou harvest to allow no more than one bull to be taken, and no more than one caribou to be taken from Aug. 1–Jan. 31. In 2007, the Federal Subsistence Board (Board) took similar action and adopted Proposal WP07-23 with modification to reduce the harvest limits in Unit 9B, a portion of Unit 17A, Unit 17B, a portion of Unit 17C, Unit 18, a portion of Unit 19A, and Unit 19B; from five to three caribou due to the large population decline. In March 2009, the Alaska Board of Game eliminated the nonresident harvest on the MCH to ensure subsistence opportunity was being provided.

In 2010, the Bristol Bay Subsistence Regional Advisory Council submitted two proposals, WP10-51 and WP10-53. Proposal WP10-51 requested that the Federal caribou seasons be made consistent in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B with an Aug. 1–Mar. 31 season. Proposal WP10-53 requested a consistent harvest limit of two caribou, with no more than one bull to be taken and no more than one caribou to be taken Aug. 1–Jan. 31 in Units 9A, 9B, a portion of 9C, 17A, 17B, 17C, 18, 19A, and 19B (excluding Lime Village). The Board adopted proposal WP10-51 with modification to make the season ending date March 15 for all units, including the remainder of Units 17A and 17C, and also adopted WP10-53 as submitted. In addition, Proposal WP10-60, submitted by the Yukon Delta National Wildlife Refuge, requested the harvest limit for caribou in Unit 18 be reduced from three to two caribou. The Board adopted the proposal with modification to include a one-bull restriction and extend the one caribou restriction from Aug. 1–Nov. 30 to Aug. 1–Jan. 31, consistent with the actions taken on WP10-51 and WP10-53.

In 2011, Proposal WP12-42, submitted by the Yukon Delta National Wildlife Refuge, requested that the harvest limit be reduced from two to one caribou and that the harvest season be shortened from Aug. 1–Mar.

15 to a split season of Aug. 1–Sept. 30 and Dec. 20–last day of February in Unit 18. In January 2012, the Board adopted WP12-42 with modification to maintain the two caribou harvest limit, but changed the harvest season to Aug. 1–Sept. 30 and Dec. 20–the last day of February in the portion of Unit 18 south of the Kuskokwim River (FSB 2012). The remainder of Unit 18 retained the Aug. 1–Mar. 15 harvest season. However, Federally qualified subsistence users are still able to harvest caribou from Aug. 1–Mar. 15 throughout Unit 18, including Federal public land, under State regulations.

Wildlife Special Actions WSA11-10/11 were submitted by the Yukon Delta National Wildlife Refuge in February 2012. WSA11-10 requested a reduction in the season for caribou in Unit 18 of two weeks, and WSA11-11called for Federal public lands in Unit 18 south and east of the Kuskokwim River to be closed to the harvest of caribou to all users starting March 1, 2012. The Board rejected the special action requests because it felt current information suggested there was not an emergency situation with the MCH necessitating such an action.

In February 2013, the Alaska Board of Game adopted Proposal 45A which changed the caribou hunt in Units 9A, 9B, portions of 9C, 17, 18, 19A and 19B from a general hunt to a registration hunt, with seasons and harvest limits aligned within the entire range of the MCH. These changes were made to better assess harvest and to better respond to in-season requests to alter season dates and harvest limits, and to help evaluate the response of caribou harvest and population dynamics to ongoing intensive management programs.

In July 2013, Federal permit requirements and seasons dates were temporarily aligned with State regulations when the Board approved Temporary Special Action WSA13-02, which requested that a State registration permit be required for Federally qualified subsistence users to harvest caribou in Units 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A and 19B; and shortened the to-be-announced season in Units 17A remainder and 17C remainder from Aug. 1–Mar. 31 to Aug. 1–Mar. 15. Additionally, the newly established State registration permit would allow managers to better track harvest and improve in-season management. Also in 2013, the Association of Village Council Presidents submitted Temporary Special Action WSA13-03 to close Federal public lands to the harvest of caribou, except by Federally qualified subsistence users. The Board rejected the temporary special action because the MCH was at the lower end of the State management objective and population composition data was improving.

Current Events Involving the Species

Between March 5th and March 16th of 2013, 20 tickets were written by U.S. Fish and Wildlife Officers to hunters in the Bethel area for caribou hunting violations. The majority of tickets were written for having no hunting licenses and no harvest tickets. Additional tickets were written for harvesting over the limit of two caribou, and one ticket was written for a chasing violation. Similar numbers of tickets and violations were also given out by State wildlife troopers (Bedingfield 2013, pers. comm.).

Public hearings were held on June 13, 2013 in Dillingham and on June 26, 2013 in Bethel to provide opportunity for members of the public to comment on Temporary Special Action WSA13-02. Public hearings in the affected areas are required prior to taking action on temporary special actions that may be in place for more than 60 days. Most of the public testimony was in support of the special action request to

better align with State regulations. However, public comments also included concerns about availability of the new registration permits and requests to close the season to nonresident or non-Federally qualified users. Other comments were associated with effects of predation on the MCH, population objectives for the MCH, caribou migration routes, and a report of herding caribou with aircraft.

Public hearings were held on July 26, 2013 in Bethel and Dillingham to provide opportunity for members of the public to comment on WSA13-03. Public comments at the Bethel public hearing included five members of the public testifying in support of WSA13-03, and questions were raised regarding the status, management objectives, and data associated with the MCH. Those who supported the closure at the Bethel hearing stated that nonlocal hunters targeted trophy bulls and some wasted meat; local people do not know where the boundaries are between State, Federal, and Corporation lands; and that harvesting bulls is limiting reproduction. Public comments at the Dillingham public hearing included questioning whether the special action is necessary because the MCH may have reached its lowest population level and the herd's range is improving, more consistent use of terms by the Federal Subsistence Management Program, and that the current population level is probably closer to its historic size, while high numbers in the 1990s were not sustainable due to available habitat. In addition, one resident from Dillingham submitted a public comment to the Office of Subsistence Management on July 25, 2013 in opposition to WSA13-03. The individual stated several reasons for opposing the special action, including the high caribou numbers in the 1990s were not normal and the current population level is more similar to historic levels, managers have instituted a State registration permit to better track harvest, the bull:cow and calf:cow ratios are improving, the State has initiated predator control efforts on calving grounds, personal observations suggesting the range conditions are improving, and potential impacts to users due to the late submission of the special action request.

Biological Background

The MCH ranges across approximately 60,000 square miles, primarily within Units 9B, 9C, 17, 18, and 19. Wintering areas during the 1980s and early 1990s were along the north and west side of Iliamna Lake, north of the 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 in southwestern Unit 19B in increasing numbers. During the winter of 2004/2005, 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 River drainage. During 2005/2006, large numbers of caribou wintered near the lower Kvichak River (Woolington 2009).

The State's management objectives for the MCH have changed as the population's numbers have fluctuated. Prior to 2001, the management objective was to maintain a minimum population of 25,000 adults with a minimum ratio of 35 bulls:100 cows, manage the herd for maximum opportunity to hunt caribou, and manage the herd in a manner that encouraged range expansion west and north of the Nushagak River (Woolington 2001). In 2001, the Alaska Board of Game modified the population objective to maintain a population of 100,000–150,000 caribou (Woolington 2003). Most recently, at the Southcentral/Southeast Alaska Board of Game meeting in 2009, the population objective was reduced to 30,000–80,000 caribou, which was thought to be more realistic for the MCH (ADF&G 2009). The Alaska

Board of Game also reduced the harvest objectives from 6,000–15,000 caribou to 2,400–8,000 caribou (ADF&G 2009).

The MCH increased at an average annual rate of 17% between 1981 and 1996, and approximately 28% from 1992 to 1994. Overall heard size peaked in 1996, at approximately 200,000 animals and a peak of 42 bulls:100 cows (Woolington 2007). The dramatic population growth is attributed to mild winters, movements into 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 has declined. The latest photo census, conducted in 2008, provided a minimum count of 30,000 caribou, which is as the low end of the State's population objective (**Table 1**) (Woolington 2012). Preliminary results from a 2012 photo census suggest the population may still be around 30,000 caribou (Yuhas 2013, pers. comm.). Possible signs of stress in the MCH when the population level was high included an outbreak of hoof rot in 1998 and low calf:cow ratios in the fall 1999 (Woolington 2001).

The MCH declined from 1996 to 2008 and estimated bull:cow ratios have been below the management objective since 2001,but recent composition surveys have shown some improvement in the bull:cow ratio (**Table 1**). The proportion of bulls classified as large during recent composition surveys (24%–27% between 2010 and 2012) has increased from lows observed in 2004 (7%) and 2006 (9%) (**Table 1**). In addition, preliminary data shows the number of parturient 2- and 3-year old cows increased in 2013 and calf weights have been good, which suggests the caribou are not nutritionally stressed (Butler 2013, pers. comm.). While the MCH is managed as a single herd, some segments of the population appear to be faring better than others, as estimated bull:cow and calf:cow ratios have been consistently higher in the western portion of the MCH range (**Figures 1 and 2**). Preliminary data shows that calf survival is high in the Kemuk Mountain area (western portion), which has an active intensive management program for wolves, but is lower in the Tundra Lake area (eastern portion) (Butler 2013, pers. comm.). Individuals from eastern and western portions of the MCH range appear to have readily mixed prior to 2007 and 2008, but there has recently been more isolation between caribou in the two areas (Woolington 2011a, 2012).

Habitat

Taylor (1989) reported that the carrying capacity of traditional winter areas of the herd had been exceeded by the mid to late 1980s and that the herd had to utilize other areas to continue its growth. It appears that the MCH has been using these non-traditional winter ranges at an ever increasing rate over the last 25 years. Portions of the herd's range showed signs of heavy use during periods of high caribou abundance, with extensive trailing evident along major travel routes. Woolington (2011b) reported that some of the summer and fall range of the MCH in the Nushagak Hills and elsewhere was trampled and showed signs of heavy grazing, while traditional winter ranges on the north and west sides of Iliamna Lake also showed signs of heavy use despite the fact that few caribou appear to continue to utilize these areas.

Table 1. Mulchatna Caribou Herd composition counts and population estimates, 1974-2012 (Woolington 2012).

Regulatory Year	Total bulls: 100 cows	Calves: 100 cows	Calves (%)	Cows (%)	Small bulls (% of bulls)	Medium bulls (% of bulls)	Large Bulls (% of bulls)	Total bulls (%)	Composition sample size	Minimum estimate of herd size
1974/75	55.0	34.9	18.4	---	---	---	---	---	1,846	
1978/79	50.3	64.5	27.6	---	---	---	---	---	758	
1980/81	31.3	57.1	30.0	---	---	---	---	---	2,250	
1981/82	52.5	45.1	22.8	---	---	---	---	---	1,235	
1986/87	55.9	36.9	19.2	---	---	---	---	---	2,172	
1987/88	68.2	60.1	26.3	---	---	---	---	---	1,858	
1988/89	66.0	53.7	24.4	---	---	---	---	---	536	
1993/94	42.1	44.1	23.7	53.7	---	---	---	22.6	5,907	150,000[a]
1996/97	42.4	34.4	19.5	56.6	49.8	28.5	21.7	24.0	1,727	200,000[a]
1998/99	40.6	33.6	19.3	57.4	27.8	43.7	28.5	23.3	3,086	---[b]
1999/00	30.3	14.1	9.8	69.3	59.9	26.3	13.8	21.0	4,731	175,000[c]
2000/01[e]	37.6	24.3	15.0	61.8	46.6	32.9	20.4	23.2	3,894	---[b]
2001/02	25.2	19.9	13.7	68.9	31.7	50.1	18.3	17.7	5,728	---[b]
2002/03	25.7	28.1	18.3	65.0	57.8	29.7	12.5	16.7	5,734	147,000[d]
2003/04[f]	17.4	25.6	17.9	69.9	36.2	45.3	18.5	12.2	7,821	---[b]
2004/05[g]	21.0	20.0	14.2	71.0	64.2	28.9	6.9	14.9	4,608	85,000[h]
2005/06[i]	13.9	18.1	13.7	75.8	55.3	33.3	11.5	10.6	5,211	---[b]
2006/07[j]	14.9	25.5	18.1	71.3	57.5	33.7	8.9	10.6	2,971	45,000[k]
2007/08[l]	23.0	15.8	11.4	72.1	52.7	36.0	11.3	16.6	3,943	---[b]
2008/09[m]	19.3	23.4	16.4	70.1	46.8	36.1	17.1	13.5	3,728	30,000[n]
2009/10[o]	18.5	31.0	20.7	66.9	39.7	43.9	16.3	12.4	4,595	---[b]
2010/11[p]	16.8	19.5	14.3	73.3	30.0	43.7	26.3	12.4	4,592	---[b]
2011/12[q]	21.7	19.0	13.5	71.1	32.2	41.3	26.5	15.4	5,282	---[b]
2012/13[r]	23.2	29.8	19.5	65.3	38.3	38.1	23.6	15.2	4,853	---[b]

[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 7/8/1999.
[d] Estimate based on photocensus conducted 6/30/2002.
[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 7/7/2004.
Based on pooling data from surveys conducted 10/10/2005 and 10/14/2005.
Based on pooling data from surveys conducted 10/13-14/2006 and 10/22/2006.
[k] Based on photocensus conducted 7/11/2006.
Based on pooling data from surveys conducted 10/7-8/2007 and 10/11/2007.
[m] Based on pooling data from surveys conducted 10/7/2008 and 10/8/2008.
[n] Based on photocensus conducted 7/7/2008.
[o] Based on pooling dated from surveys conducted 10/12/2009 and 10/16/2009.
[p] Based on pooling data from surveys conducted 10/10-11/2010 and 10/13/2010.
[q] Based on pooling data 10/9/2011-10/11/2011.
[r] Based on pooling data from surveys conducted 10/5-10/6/2012.

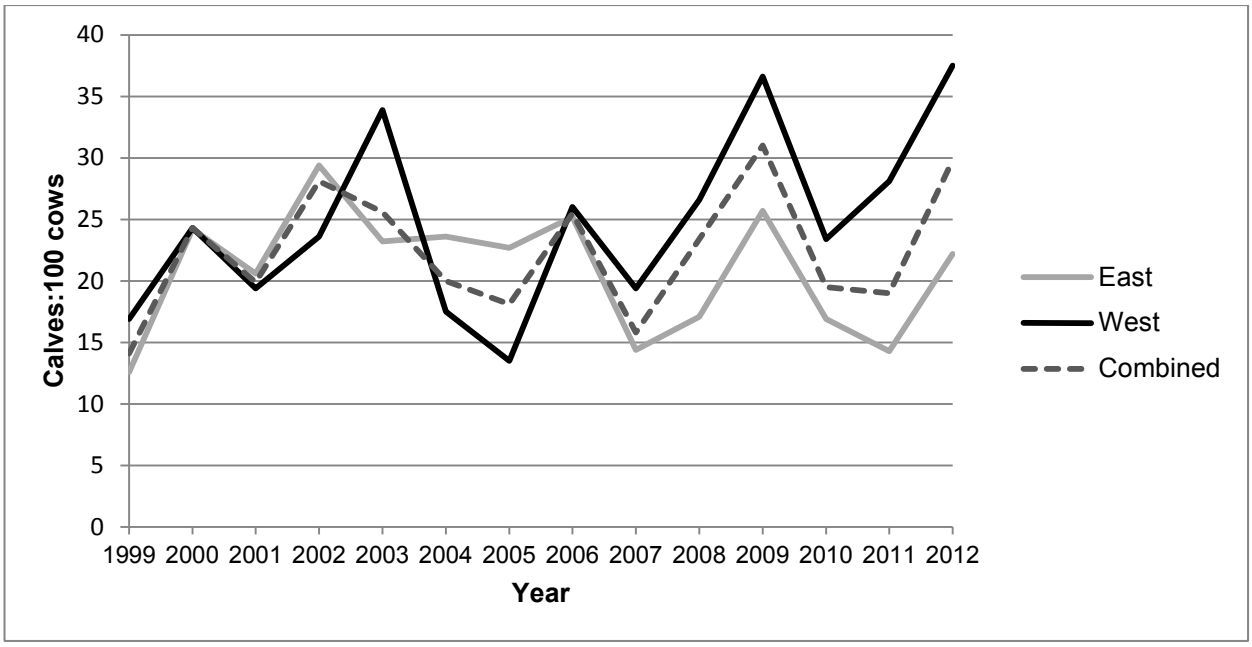

Figure 1. Calf:cow ratio estimates for the Mulchatna Caribou Herd during fall (October) population composition surveys (Woolington 2012). Surveys were conducted on the east (Unit 17B and the eastern portion of Unit 19B) and west (Unit 18 and the western portion of Unit 19B) sides of the herd's range. Combined composition data also includes survey data from Units 19A and 17C and a small group of caribou in the upper Tikchik River basin.

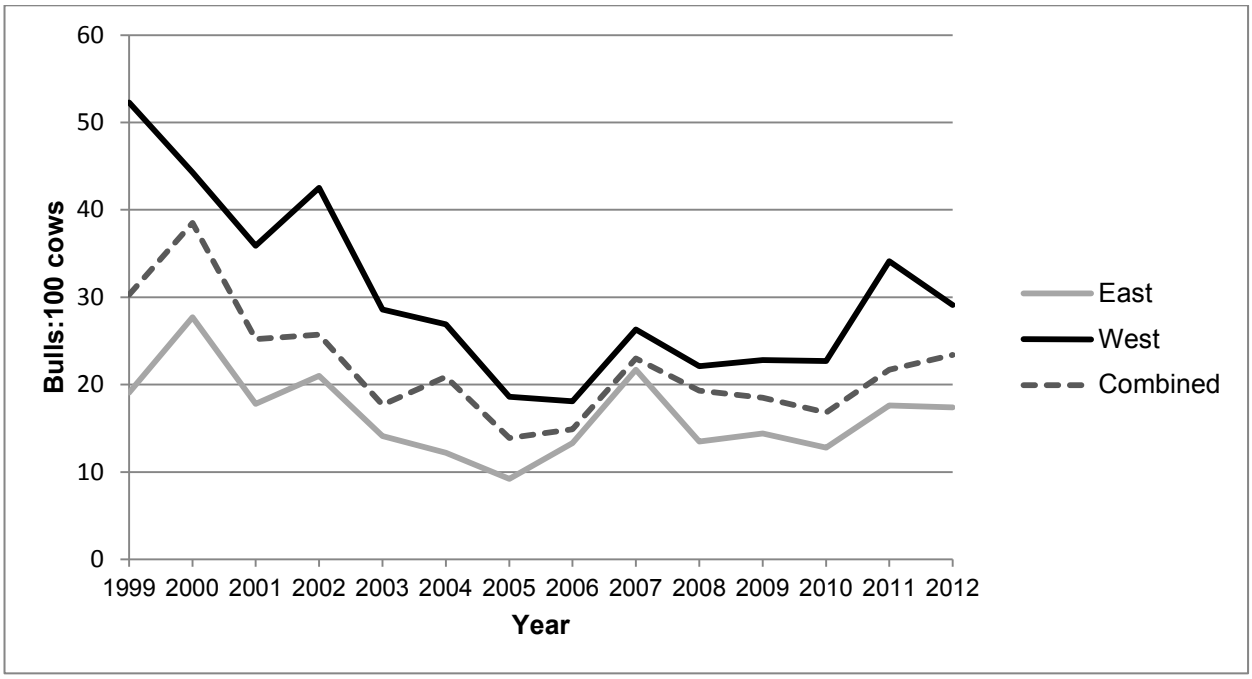

Figure 2. Bull:cow ratio estimates for the Mulchatna Caribou Herd during fall (October) population composition surveys (Woolington 2012). Surveys were conducted on the east (Unit 17B and the eastern portion of Unit 19B) and west (Unit 18 and the western portion of Unit 19B) sides of the herd's range. Combined composition data also includes survey data from Units 19A and 17C and a small group of caribou in the upper Tikchik River basin.

Harvest History

Reported caribou harvest by all users in Units 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A, and 19B has declined from 3,924 caribou in 2000/2001 to 450 caribou in 2010/2011 (**Table 2**). However, a significant amount of unreported harvest has likely occurred (Woolington 2011b). Annual reported harvest by Federally qualified subsistence users increased between 2000 and 2005, but has since declined (**Table 2**). Reported harvest by non-Federally qualified users (nonlocal Alaska residents and nonresidents) significantly declined between 2000 and 2010 (**Table 2**). Nonresident seasons were closed in State regulations in 2009 in the affected areas.

Until recently, most of the harvest has occurred in August and September (66% in 2004/2005 and 47% in 2005/2006) (Woolington 2011b). Since 2007/2008, an increasing percentage of the total annual harvest has occurred during February and March (54% in 2007/2008, 55% in 2008/2009, and 42% in 2009/2010) (Woolington 2011b).

Table 2. Reported harvest of caribou and sex composition of the harvest by Federally qualified subsistence users and non-Federally qualified users in Units 9A, 9B, 9C, 17A, 17B, 17C, 18, 19A, and 19B using State harvest tickets, 2000–2010 (OSM 2013). Federally qualified subsistence users are residents of communities with a positive customary and traditional use determination for the respective Federal hunt areas.

	Federally qualified subsistence users			Nonlocal residents			Nonresidents		
		Percent of harvest			Percent of harvest			Percent of harvest	
Year	Harvest	Bulls	Cows	Harvest	Bulls	Cows	Harvest	Bulls	Cows
2000	431	67%	31%	1,462	67%	32%	2,031	93%	6%
2001	645	60%	39%	1,512	56%	43%	1,659	91%	8%
2002	352	64%	34%	1,061	58%	42%	1,284	89%	10%
2003	795	54%	44%	1,227	48%	51%	1,076	91%	8%
2004	601	60%	39%	914	34%	66%	778	78%	21%
2005	835	52%	47%	713	30%	69%	488	67%	33%
2006	423	59%	41%	264	44%	56%	275	62%	36%
2007	403	58%	41%	104	48%	49%	128	63%	36%
2008	257	58%	41%	74	45%	55%	58	66%	34%
2009	247	69%	28%	63	62%	38%	0	0%	0%
2010	381	53%	46%	69	45%	55%	0	0%	0%

Effects of the Proposal

If this proposal is adopted, the permit requirements and season dates Federal subsistence caribou regulations in Units 9A, 9B, 9C, 17A, 17B, 17C, and 19A, and 19B would largely be aligned with the recently modified State regulations, which require a State registration permit to harvest caribou. Federal permit requirements would be aligned with State regulation in Unit 18, but seasons in the portion of Unit 18 east and south of the Kuskokwim River would remain misaligned due to the Federal split season (Aug. 1–Sept. 30 and Dec. 20–last day of Feb.); however, WP14-26 requests a continuous season that would align with other State seasons throughout the range of the MCH. The affected areas consist of Federal and non-Federal lands, and requiring a State registration permit under Federal and State regulations would

reduce regulatory complexity for all users and law enforcement officers. The State registration permit may also reduce confusion regarding harvest limits with the current general harvest tickets, as mentioned by the proponent. The requirement for a State registration permit would likely have a minimal impact on Federally qualified subsistence users, as the process for obtaining a registration permit is similar to obtaining a harvest ticket. State registration permits can be obtained at license vendors or online. Similar permits requirements already occur with Federal moose regulations in Units 9A, 9B, 9C, 17 and 18.

The use of a State registration permit would allow managers to better track harvest, be more responsive to in-season management needs, and allow harvest opportunity for Federally qualified subsistence users to be maximized. The State registration permit has a requirement to report harvest within 5 days taking a caribou, whereas the general harvest tickets have a requirement to report harvest within 15 of taking the bag limit or the close of the season. Harvest reporting is an important aspect of harvest management, especially with fluctuating populations like the Mulchatna Caribou Herd, and reporting would likely improve as reporting rates are higher with registration permits.

The Federal to-be-announced season in the Units 17A remainder and 17C remainder would be reduced by up to 16 days, from Aug. 1–Mar. 31 to Aug. 1–Mar. 15. The proposed change would align the potential Federal caribou season with other areas within the range of the Mulchatna Caribou Herd.

OSM CONCLUSION

Support Proposal WP14-22 **with modification** to delete regulatory language found in portions of Units 17A and 17C, and issue a delegation of authority letter (**Appendix I**) to the Togiak National Wildlife Refuge Manager for specific in-season management authorities. In Unit 17A within all drainages west of Right Hand Point, delegate the authority to open and close the season and set the harvest limit, including any sex restrictions (e.g., bulls only). In Unit 17A remainder and Unit 17C remainder, delegate the authority to open and close the season, set the harvest limit, and identify the hunt area for the may-be-announced season.

The modified regulation should read:

Units 9A, 9B, 9C—Caribou

*Unit 9A—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 9B—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*
*Unit 9C, that portion within the Alagnak River drainage—2 caribou **by***	*Aug. 1–Mar. 15*

***State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 31.*

Units 17A, 17B, 17C—Caribou

*Unit 17A—all drainages west of Right Hand Point—2 caribou **by State registration permit**; no more than1 caribou may be a bull, and no more than 1 caribou may be taken Aug. 1–Jan. 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 Manager.~~*	*Aug. 1–Mar. 15*
*Units 17A remainder and 17C remainder—selected drainages; a harvest limit of up to 2 caribou **by State registration permit** 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.~~*	*Season ~~to occur sometime~~ **may be announced** within Aug. 1–Mar. ~~31~~**15**.*
*Units 17B and 17C—that portion of 17C east of the Wood River and Wood River Lakes—2 caribou **by State registration permit**; no more than 1 caribou may be a bull, and no more than 1 caribou from Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Unit 18—Caribou

*Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*	*Aug. 1–Sept. 30* *Dec. 20–the last day of Feb.*
*Unit 18 remainder—2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Units 19A, 19B—Caribou

*Unit 19A—north of the Kuskokwim River—2 caribou **by State registration permit**, no more than 1 caribou may be a bull; no more than*	*Aug. 1–Mar. 15*

1 caribou may be taken from Aug. 1–Jan. 31.	
Unit 19A—south of the Kuskokwim River and Unit 19B (excluding rural Alaska residents of Lime Village)—2 caribou ***by State registration permit****; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*	*Aug. 1–Mar. 15*

Justification

The population level of the Mulchatna Caribou Herd continues to be low, and harvest of the herd has declined since 2003. More adaptive management is needed to ensure conservation of the resource. Changing from a general harvest ticket to a State registration permit will allow for better harvest tracking due to reporting requirements. Better harvest tracking would allow managers to be more responsive to in-season management needs. The new permit requirement would also align State and Federal caribou regulations, which will help reduce regulatory complexity for all users and law enforcement. Shortening the potential season dates for the may-be-announced caribou season in Units 17A remainder and 17C remainder will also reduce regulatory complexity by aligning season dates within the range of the Mulchatna Caribou Herd. Recent illegal hunting issues in the Bethel area highlight the importance of a registration hunt to help prevent potential localized overharvest.

Deleting the reference to delegated authorities in the regulatory language and issuing a delegation of authority letter will clarify the language in the public regulations booklet. The letter will allow the Board to explicitly describe the authorities delegated to the Togiak National Wildlife Refuge Manager. The letter would not expand the current delegations, but would allow the Board change what has been delegated in a more timely manner, if needed.

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Refuge Manager
Togiak National Wildlife Refuge
P.O. Box 270 MS 569
Dillingham, Alaska 99576

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Manager of the Togiak National Wildlife Refuge, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within all drainages west of Right Hand Point in Unit 17A and Units 17A remainder and 17C remainder as it applies to caribou on these lands.

It is the intent of the Board that actions related to management of caribou by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), the Bureau of Land Management, and the Chair of the Bristol Bay Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State and Federal managers and the Chair and applicable members of the Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Togiak National Wildlife Refuge Manager is hereby delegated authority to issue emergency or temporary special actions affecting caribou on Federal lands as outlined under the Scope of Delegation of this section. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

To open and close the season and set the harvest limit, including any sex restrictions, for caribou on Federal public lands in Unit 17A—all drainages west of Right Hand Point.

To open and close the season, set the harvest limit, including any sex restrictions, and identify the hunt area for the may-be-announced season in Unit 17A remainder and 17C remainder.

This delegation may be exercised only when it is necessary to conserve the caribou population or to continue subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within Unit 17A—all drainages west of Right Hand Point, and those portions within Units 17A remainder and 17C remainder.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no action may be on potentially affected subsistence users and non-Federally qualified users. Requests not within your delegated authority will be forwarded to the Federal Subsistence Board for consideration. You will maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management and coordinate with local ADF&G managers, the Bureau of land Management, and the Chair of the Bristol Bay Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

DRAFT

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
Chair, Bristol Bay Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Coordinator, Bristol Bay Subsistence Regional Advisory Council
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

DRAFT

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP14-21 **with modification** as described in the OSM Conclusion. The Council stressed the importance of rebuilding the herd and the registration requirement will enable managers track the harvest of the herd. The herd count is still low, conservation concerns of the population necessitates a registration hunt to monitor the caribou population.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-22 **with modification** as described in the OSM Conclusion and for Unit 18 only, make the harvest limit 2 caribou and strike the bull restriction language as suggested for WP14-26. The modified regulation for Unit 18 should read:

Unit 18—Caribou

Unit 18—that portion to the east and south of the Kuskokwim River—2 caribou ***by State registration permit****;* ~~*no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Sept. 30 and Dec. 20–Jan. 31.*~~	*Aug. 1–Sept. 30* *Dec. 20–the last day of Feb.*
Unit 18 remainder—2 caribou ***by State registration permit****;* ~~*no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1–Jan. 31.*~~	*Aug. 1–Mar. 15*

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-22 **with modification** as described in the OSM Conclusion. Alignment of Federal and State regulations makes it easier on the subsistence user. Local managers can be more responsive to needed openings and closures when necessary.

Seward Peninsula Subsistence Regional Advisory Council

Support Proposal WP14-22. This proposal, if enacted into regulation, would bring the applicable State and Federal regulations into alignment. It would also create enhanced opportunities for subsistence users.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-26 Executive Summary	
General Description	Proposal WP14-26 requests that for Unit 18 - that portion to the east and south of the Kuskokwim River, the caribou hunt be changed to require a joint State/Federal registration permit; the 1 bull harvest restriction be eliminated and the split season be eliminated and a continuous season from Aug.1 to Mar. 15th be established. Additionally, the proponent asks that the Yukon Delta National Wildlife manager be given delegated authority to close or re-open Federal public lands to all users for this hunt if needed for conservation concerns after consultation with the Alaska Department of Fish and Game (ADF&G), the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskokwim Delta Regional Advisory Council. *Submitted by the Yukon Delta National Wildlife Refuge.*
Proposed Regulation	**Unit 18—Caribou** *Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou* ***by a joint ADF&G and Federal registration permit.*** *~~; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1-Sept. 30 and Dec. 20-Jan. 31.~~* — *Aug. 1~~-Sept. 30~~**Mar. 15*** ***Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.*** — *~~Dec. 20-the last day of Feb.~~*
OSM Conclusion	**Support** Proposal WP14-26 **with modification** to administer the hunt via a State registration permit only, retain the harvest limit restrictions, and delegate authority to open or close the season via a delegation of authority letter only. The modified regulation would read: **Unit 18—Caribou**

WP14-26 Executive Summary	
	Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou ***by State*** ~~***a joint ADF&G and Federal***~~ ***registration permit.*** *; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1-**Jan. 31*** ~~*and Dec. 20-Jan. 31*~~*.* *Aug. 1*~~*-Sept. 30*~~***Mar. 15*** ~~***Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.***~~ ~~*Dec. 20-the last day of Feb.*~~
Bristol Bay Regional Advisory Council Recommendation	**Support** Proposal WP14-26 **with modification** as described in OSM conclusion, but do not delegate authority to the Yukon Delta National Wildlife Refuge manager to open or close the season.
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Support** Proposal WP14-26 **with modification** as described in OSM conclusion, but strike bull restriction language.
Western Interior Regional Advisory Council Recommendation	**Support** Proposal WP14-26 **with modification** as described in OSM conclusion but strike bull restriction language.
Seward Peninsula Regional Advisory 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.

WP14-26 Executive Summary	
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-26

ISSUES

Proposal WP14-26, submitted by the Yukon Delta National Wildlife Refuge, requests that for Unit 18 - that portion to the east and south of the Kuskokwim River, the caribou hunt be changed to require a joint State/Federal registration permit; the 1 bull harvest restriction be eliminated and the split season be eliminated and a continuous season from Aug.1 to Mar. 15th be established. Additionally, the proponent asks that the Yukon Delta National Wildlife manager be given delegated authority to close or re-open Federal public lands to all users for this hunt if needed for conservation concerns after consultation with the Alaska Department of Fish and Game (ADF&G), the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskokwim Delta Regional Advisory Council.

DISCUSSION

The proponent requests a change in the hunt structure and season dates in order to align Federal subsistence regulations with recent changes made to State regulations for the Mulchatna Caribou Herd (MCH). The changes modify the hunt from a general hunt to a registration hunt. The proponent states that a registration hunt will allow for better end of season harvest estimates and make it easier for Federal subsistence hunters to harvest caribou. The proponent also states that since the MCH population is near the bottom of its management objective, a registration hunt would allow Federal managers to close Federal public lands to all users to prevent localized overharvest.

After further discussion with the proponent, it was determined that this hunt should be administered via a State registration permit and not by a joint State/Federal permit as written in the original proposal. Furthermore, it was the intent of the proponent to align regulations with the State season and to also work with the State on possible changes to the harvest limit so that hunters could harvest two caribou without having to be concerned about taking two bulls after they have shed antlers in late winter.

Note: Another proposal, submitted by the Bristol Bay Regional Advisory Council for the 2014 -2016 regulatory cycle, requests the requirement of a State registration permit for the MCH in Units 9A, 9B, 9C, 17A, 17A remainder, 17C remainder, 17B, a portion of Unit 18, Unit 18 remainder, and portions of Unit 19A. It also requests a shortening of the season in Units 17A remainder and 17C remainder from Aug. 1 – Mar. 31 to Aug. 1 – Mar. 15.

Existing Federal Regulation

Note: The existing Federal regulations incorporate the recent Federal Subsistence Board approval of Temporary Special Action WSA13-02 (approved on July 26, 2013), as shown in bold.

Unit 18—Caribou

*Unit 18- that portion to the east and south of the Kuskokwim River- 2 caribou **by State registration permit**; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1-Sept. 30 and Dec. 20-Jan. 31.*	*Aug.1- Sept. 30*
	Dec. 20 - the last day of Feb.

Proposed Federal Regulation

Unit 18—Caribou

*Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou **by a joint ADF&G and Federal registration permit.** ~~; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1-Sept. 30 and Dec. 20-Jan. 31.~~*	*Aug. 1~~- Sept. 30~~**Mar. 15***
Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.	~~*Dec. 20-the last day of Feb.*~~

Existing State Regulation

Unit 18 – Caribou

Residents – two caribou by registration permit; however no more than 1 bull may be taken and no more than 1 caribou may be taken from Aug. 1-Jan. 31.[*]	*Aug. 1- Mar. 15*

[*]This regulation was passed by the Alaska Board of Game in February 2013 and will be effective 1 July 2013.

Extent of Federal Public Lands

Federal public lands comprise approximately 66% of Unit 18 and consist of 63% US Fish and Wildlife Service managed lands and 3% Bureau of Land Management managed lands (**Unit 18 Map**).

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 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. These regulations provided abundant hunting opportunities. Numerous modifications were made to the Federal regulations for various management 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 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 the 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 (Board) adopted Proposal WP07-23 with modification to reduce the harvest limits in Unit 9B, a portion of Unit17A, Unit 17B, a portion of Unit 17C, Unit 18, a portion of Unit 19A, and Unit 19B, from five caribou to three due to the 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 necessary for subsistence.

In 2010, Proposal WP10-51 submitted by the Bristol Bay Subsistence Regional Advisory Council, requested that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be changed from Aug. 1 – Mar. 15 to Aug. 1 – Mar. 31, extending the existing season by 16 days. The Board adopted the proposal with modification to make the season ending date Mar. 15 for all units. In addition, Proposal WP10-60 submitted by the Yukon Delta National Wildlife Refuge, requested that the harvest limit for caribou in Unit 18 be reduced from three to two. The Federal Subsistence Board adopted the proposal with modification to include a 1-bull restriction and extend the 1-caribou restriction from Aug. 1 – Nov. 30 to Aug. 1 – Jan. 31.

In 2011, Proposal WP12-42 was submitted by the Yukon Delta National Wildlife Refuge, requested a reduction in the harvest limit from two to one caribou and a reduction in the season by approximately three months in Unit 18. The Board adopted the proposal at its January 2012 meeting with modification to maintain the harvest limit of two caribou, eliminate the March portion of the season, and limit the impact on the MCH to east of the Kuskokwim River.

Wildlife Special Action WSA11-10/11 submitted by the Yukon Delta National Wildlife Refuge in February of 2012, requested a reduction in the season for caribou in Unit 18 of two weeks and called for Federal public lands in Unit 18 south and east of the Kuskokwim River to be closed to the harvest of caribou to all

users starting Mar.1, 2012. The Board rejected the Special Action request because it felt current information suggested there was not an emergency situation with the MCH necessitating such an action.

In February 2013, the Alaska Board of Game adopted Proposal 45A which changed the caribou hunt in Units 9A, 9B, portions of 9C, 17, 18, 19A and 19B from a general hunt to a registration hunt, with seasons and harvest limits aligned within the entire range of the MCH. These changes were made to better assess harvest and to better respond to in-season requests to alter season dates and harvest limits.

Current Events Involving the Species

Between Mar. 5th and Mar. 16th of 2013, 20 tickets were written by US Fish and Wildlife Service officers to hunters in the Bethel area for caribou hunting violations. The majority of tickets were written for having no hunting licenses and no harvest tickets. Additional tickets were written for harvesting over the limit of two caribou and one ticket was written for a chasing violation. Similar numbers of tickets and violations were also given out by State wildlife troopers (Bedingfield 2013, pers. comm.).

Biological Background

The State'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 2009). 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 were more realistic for this herd (ADF&G 2009, Woolington 2011b). 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 2012). Since 2001, bull:cow ratios have been estimated at less than 35:100 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, though this latter increase was likely an artifact of more precise survey techniques. Overall herd size peaked in 1996, at approximately 200,000 animals with a peak bull:cow ratio of 42:100 (Woolington 2011b). 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 2011b). Since 1996, the population, bull:cow ratio, and calf:cow ratio have declined significantly (**Table 1**). Preliminary results from a 2012 photo census suggest the population may still be around 30,000 caribou (Yuhas 2013, pers. comm.). The specific reasons for the population declines are poorly understood but are most likely a combination of factors including deteriorating range conditions, disease, predation, and weather events (Woolington 2011b).

The MCH declined from 1996 to 2008 and estimated bull:cow ratios have been below the management objective since 2001, but recent composition surveys have shown some improvement in the bull:cow ratios. The proportion of bulls classified as large during recent composition surveys (24%–27% between 2010 and 2012) has increased from lows observed in 2004 (7%) and 2006 (9%). In addition, preliminary data shows the number of parturient 2- and 3-year old cows increased in 2013 and calf weights have been good, which

Table 1. Mulchatna Caribou Herd composition counts and population estimates, 1974-2011 (Woolington 2012).

Regulatory Year	Total bulls: 100 cows	Calves: 100 cows	Calves (%)	Cows (%)	Small bulls (% of bulls)	Medium bulls (% of bulls)	Large Bulls (% of bulls)	Total bulls (%)	Composition sample size	Minimum estimate of herd size
1974/75	55.0	34.9	18.4	---	---	---	---	---	1,846	
1978/79	50.3	64.5	27.6	---	---	---	---	---	758	
1980/81	31.3	57.1	30.0	---	---	---	---	---	2,250	
1981/82	52.5	45.1	22.8	---	---	---	---	---	1,235	
1986/87	55.9	36.9	19.2	---	---	---	---	---	2,172	
1987/88	68.2	60.1	26.3	---	---	---	---	---	1,858	
1988/89	66.0	53.7	24.4	---	---	---	---	---	536	
1993/94	42.1	44.1	23.7	53.7	---	---	---	22.6	5,907	150,000[a]
1996/97	42.4	34.4	19.5	56.6	49.8	28.5	21.7	24.0	1,727	200,000[a]
1998/99	40.6	33.6	19.3	57.4	27.8	43.7	28.5	23.3	3,086	---[b]
1999/00	30.3	14.1	9.8	69.3	59.9	26.3	13.8	21.0	4,731	175,000[c]
2000/01[e]	37.6	24.3	15.0	61.8	46.6	32.9	20.4	23.2	3,894	---[b]
2001/02	25.2	19.9	13.7	68.9	31.7	50.1	18.3	17.7	5,728	---[b]
2002/03	25.7	28.1	18.3	65.0	57.8	29.7	12.5	16.7	5,734	147,000[d]
2003/04[f]	17.4	25.6	17.9	69.9	36.2	45.3	18.5	12.2	7,821	---[b]
2004/05[g]	21.0	20.0	14.2	71.0	64.2	28.9	6.9	14.9	4,608	85,000[h]
2005/06[i]	13.9	18.1	13.7	75.8	55.3	33.3	11.5	10.6	5,211	---[b]
2006/07[j]	14.9	25.5	18.1	71.3	57.5	33.7	8.9	10.6	2,971	45,000[k]
2007/08[l]	23.0	15.8	11.4	72.1	52.7	36.0	11.3	16.6	3,943	---[b]
2008/09[m]	19.3	23.4	16.4	70.1	46.8	36.1	17.1	13.5	3,728	30,000[n]
2009/10[o]	18.5	31.0	20.7	66.9	39.7	43.9	16.3	12.4	4,595	---[b]
2010/11[p]	16.8	19.5	14.3	73.3	30.0	43.7	26.3	12.4	4,592	---[b]
2011/2012[q]	21.7	19.0	13.5	71.1	32.2	41.3	26.5	15.4	5,282	---[b]
2012/2013[r]	23.2	29.8	19.5	65.3	38.3	38.1	23.6	15.2	4,853	---[b]

[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 10/7/2008 and 10/8/2008.
[n] Based on photocensus conducted July 7, 2008.
[o] Based on pooling dated from surveys conducted 10/12/2009 and 10/16/2009.
[p] Based on pooling data from surveys conducted 10/10-11/2010 and 10/13/2010.
[q] Based on pooling date from surveys conducted 10/9-11/2011.
[r] Based on pooling date from surveys conducted 10/5-6/2012

suggests the caribou are not nutritionally stressed (Butler 2013, pers. comm.). While the MCH is managed as a single herd, some segments of the population appear to be faring better than others, as estimated bull:cow and calf:cow ratios have been consistently higher in the western portion of the MCH range. Preliminary data shows that calf survival is high in the Kemuk Mountain area (western portion), which has an active intensive management program for wolves, but is lower in the Tundra Lake area (eastern portion) (Butler 2013, pers. comm.). Individuals from eastern and western portions of the MCH range appear to have readily mixed prior to 2007 and 2008, but there has recently been more isolation between caribou in the two areas (Woolington 2011a, 2012).

The MCH ranges across approximately 60,000 square miles, primarily within Units 9B, 9C, 17, 18, and 19. 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). Starting in the mid-1990s, caribou from the MCH began wintering in Unit 18 south of the Kuskokwim River and in 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 (Woolington 2009), while during the winter of 2008/09 a large part of the herd wintered in Unit18 south of the Kuskokwim River with the rest of the herd in the lower Nushagak and Kvichak drainages (Woolington 2011b).

Habitat

Portions of the herds range are showing signs of heavy use with extensive trailing evident along major travel routes. Woolington (2011b) reported that some of the summer and fall range of the MCH in the Nushagak Hills and elsewhere was trampled and showing signs of heavy grazing, while traditional winter ranges on the north and west sides of Iliamna Lake also showed signs of heavy use despite the fact that few caribou appear to continue to utilize these areas.

Harvest History

Harvest on the MCH continues to decline. Total reported MCH harvest was 2,175 in 2005, but had declined to 309 by 2010. The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06. Bulls accounted for two thirds of the harvest in 2009/10 (Woolington 2011b).

In past years, most of the harvest occurred in August and September (47% in 2005/06 and 51% in 2006/07) (Woolington 2009), with the majority of harvest occurring close to villages on State lands. In recent years, February and March have accounted for a high amount of the harvest: 55% in 2008/09 and 42% in 2009/2010 (Woolington 2011b). Reported harvest during the other nine months has always been relatively low. Between 1991 and 2010, harvest in July accounted for less than 0.2% of the total annual harvest; October, November, December and January accounted for less than 8%; and April accounted for less than 9% (Woolington 2011b). 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, harvest by both Federally and non-Federally qualified hunters has generally declined since 2003, when the reported harvest for the unit was at the highest, with the exception of 2010, the last year for which data is available (**Table 2)**.

Table 2. Unit 18 reported caribou harvest, 2000-2009 (USFWS 2013).

Year	Federally qualified hunt-ers	Non-Federally qualified hunters	Total
2000	121	17	138
2001	309	81	390
2002	145	113	258
2003	435	309	744
2004	295	179	474
2005	372	160	532
2006	234	90	324
2007	329	51	380
2008	211	40	251
2009	196	29	225
2010	336	26	362

Effects of the Proposal

If this proposal is adopted, a joint State/Federal registration permit would be required; the 1 bull harvest restriction would be eliminated and the split season would be eliminated establishing a continuous season from Aug.1 to Mar. 15th. Additionally, the proposal would give delegated authority to the Yukon Delta National Wildlife Refuge manager to close or re-open this hunt if necessary for conservation concerns. These changes would align Federal subsistence regulations with recent changes made to State regulations for the MCH, thereby reducing regulatory complexity for hunters. The use of a registration permit would allow managers to better track harvest, be more responsive to in-season management needs and allow harvest opportunity for subsistence users to be maximized. The State registration permit has a requirement to report harvest within 5 days taking a caribou, whereas the general harvest tickets have a requirement to report harvest within 15 of taking the bag limit or the close of the season. Harvest reporting is an important aspect of harvest management, especially with fluctuating populations like the Mulchatna Caribou Herd, and reporting would likely improve as reporting rates are higher with registration permits.

OSM CONCLUSION

Support Proposal WP14-26 **with modification** to administer the hunt via a State registration permit only, retain the harvest limit restrictions, and delegate authority to open or close the season via a delegation of authority letter only (**Appendix 1**). The modified regulation would read:

Unit 18—Caribou

Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou ***by State*** ~~***a joint ADF&G and Federal***~~ ***registration permit.*** *; no more than 1 caribou may be a bull; no more than 1 caribou may be taken*	*Aug. 1*~~*-Sept. 30*~~***Mar. 15***

*Aug. 1-**Jan. 31*** ~~*and Dec. 20-Jan. 31*~~.

~~***Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.***~~ ~~*Dec. 20-the last day of Feb.*~~

Justification

The MCH continues to be at the low end of its management objective and harvest of the herd has been in decline since 2003. More adaptive management is needed to ensure conservation of the resource. Switching from a general harvest to a registration hunt and giving delegated authority to the Yukon Delta National Wildlife manager to close or re-open a hunt will allow for better tracking of harvest and allow managers to be more responsive to in-season management needs, while also maximizing harvest opportunities for subsistence users. In addition, alignment of hunting dates between Federal and State regulations will help reduce regulatory complexity for hunters. Recent illegal hunting issues in the Bethel area highlight the importance of a registration hunt in helping to prevent potential localized overharvest. Creation of a delegation of authority letter will allow for hunt management flexibility through in season adjustment to close and reopen Federal Public lands for this hunt. Retention of the harvest limit restrictions is needed to keep regulations consistent throughout the range of the MCH.

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Yuhas, J. 2013. Federal Subsistence Liaison Team Leader. Personal communication: email. ADF&G. Fairbanks, AK.

Appendix 1

Refuge Manager
Yukon Delta National Wildlife Refuge
P.O. Box 346
Bethel, Alaska 99559

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Yukon Delta National Wildlife Refuge Manager, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within Unit 18, that portion to the east and south of the Kuskokwim River, as it applies to caribou on these lands.

It is the intent of the Board that actions related to management of caribou by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State managers and the Chair and applicable members of the Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Manager of the Yukon Delta National Wildlife Refuge is hereby delegated authority to issue emergency or temporary special actions affecting caribou on Federal lands as outlined under 3. Scope of Delegation of this section. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To open or close the season for caribou on Federal public lands in Unit 18, that portion to the east and south of the Kuskokwim River. You may also close Federal Public Lands to the take of these species by all users.

This delegation may be exercised only when it is necessary to conserve the caribou population or to continue subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within Unit 18 that portion to the east and south of the Kuskokwim River.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no 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 maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management and coordinate with local ADF&G managers, the Togiak National Wildlife Refuge manager, and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

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You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Coordinator, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

DRAFT

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP14-26 **with modification**. The Council's recommendation was a modification of the Office of Subsistence Management recommendation, and supported the use of a State registration permit and retaining the harvest limit restriction; however, the Council did not recommend delegating the authority to open or close the season to the Yukon Delta National Wildlife Refuge manager. The modified regulation would read:

Unit 18—Caribou

Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou ***by State*** ~~***a joint ADF&G and Federal***~~ ***registration permit.*** *; no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1-****Jan. 31*** ~~*and Dec. 20-Jan. 31*~~*.*	*Aug. 1*~~*-Sept. 30*~~***Mar. 15***
~~***Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.***~~	~~*Dec. 20-the last day of Feb.*~~

Justification: Conservation concerns exist for the Mulchatna Caribou Herd. One bull only will protect the breeding population of the herd. The proposed regulation was for two caribou and management of the herd must be managed equally across the herd's range.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-24/25 **with modification** as described in the OSM Conclusion, excluding the language "no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug.1 - Jan. 31."

The modified regulation should read:

Unit 18—Caribou

Unit 18- that portion to the east and south of the Kuskokwim River-2 caribou ***by State*** ~~***a joint ADF&G and Federal***~~ ***registration permit.*** *;* ~~*no more than 1 caribou may be a bull; no more than 1 caribou may be taken Aug. 1*~~ ***Jan. 31*** ~~*and Dec. 20-Jan. 31*~~*.*	*Aug. 1*~~*-Sept. 30*~~***Mar. 15***
~~***Through a letter of delegation: The Yukon Delta National Wildlife manager has the authority to close or re-open Federal public lands to all users for this hunt if necessary for conservation concerns, after consultation with ADF&G, the Togiak National Wildlife Refuge manager, and the chair of the Yukon-Kuskowkwim Delta Regional Advisory Council.***~~	~~*Dec. 20-the last day of Feb.*~~

The Council did not accept the OSM modification. The Council's modification to the original proposal would replace the requirement of a joint ADF&G and Federal permit and replace it with simply a State registration permit. This would reduce paperwork and simplify the process for subsistence users.

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-26 **with modification** as described in the OSM Conclusion. This action tracks harvest and is beneficial to the herd; guidelines are more aligned with the State.

Seward Peninsula Subsistence Regional Advisory Council

No action taken on Proposal WP14-26. The Council took no action on this proposal due to lack of a motion.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-27 Executive Summary	
General Description	Proposal WP14-27 requests a season for moose in Unit 18 " the Kuskokwim area" be established with a Sept. 1– 30 season and a harvest limit of one antlered bull by a joint State/Federal registration permit. Additionally, the hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when the established quota is met. *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 east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.412 Latitude; W162°22.142 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 east of the Unit 18 border and then north of and including the Eek River drainage* ***– 1 Antlered bull by Joint ADF&G/USFWS registration permit RM 615 available at license vendors in the hunt area from August 1 to August 25. Quota is to be announced. Hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when quota is expected to be met.*** *Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.* ~~*No open season*~~ ***Sept. 1 – Sept. 30***

WP14-27 Executive Summary	
OSM Conclusion	**Support** Proposal WP14-27 **with modification** to make this hunt by a State registration permit only, and to delegate authority to close the season and determine annual quotas via a delegation of authority letter.
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Support** Proposal WP14-27 **with modification** as described in OSM conclusion.
Western Interior Regional Advisory Council Recommendation	**Support** Proposal WP14-27 **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** alignment with state regulation changes
Written Public Comments	**None**

STAFF ANALYSIS
WP14-27

ISSUES

Proposal WP14-27, submitted by the Yukon Delta National Wildlife Refuge, requests a season for moose in Unit 18 " the Kuskokwim area" be established with a Sept. 1– 30 season and a harvest limit of one antlered bull by a joint State/Federal registration permit. Additionally, the hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when the established quota is met.

DISCUSSION

The proponent requests establishment of a moose season in the Unit 18 portion of the lower Kuskokwim River. The proponent states that both the USFWS and ADF&G jointly manage a registration hunt (RM 615) in the lower Kuskokwim and that the area has been opened up by Special Action over the last several seasons. The proposal would allow for a jointly managed hunt and would make provisions for an open season by registration with a quota.

Upon further discussion with the proponent, it was pointed out that this hunt would actually be under a State registration permit, not a joint State/Federal permit as written in the original proposal.

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 east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.412 Latitude; W162°22.142 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 east of the Unit 18 border and then north of and including the Eek River drainage.	*No open season*
Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.	

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 east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.412 Latitude; W162°22.142 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 east of the Unit 18 border and then north of and including the Eek River drainage ***– 1 Antlered bull by Joint ADF&G/USFWS registration permit RM 615 available at license vendors in the hunt area from August 1 to August 25. Quota is to be announced. Hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when quota is expected to be met.***	~~*No open season*~~ ***Sept. 1 – Sept. 30***

Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.

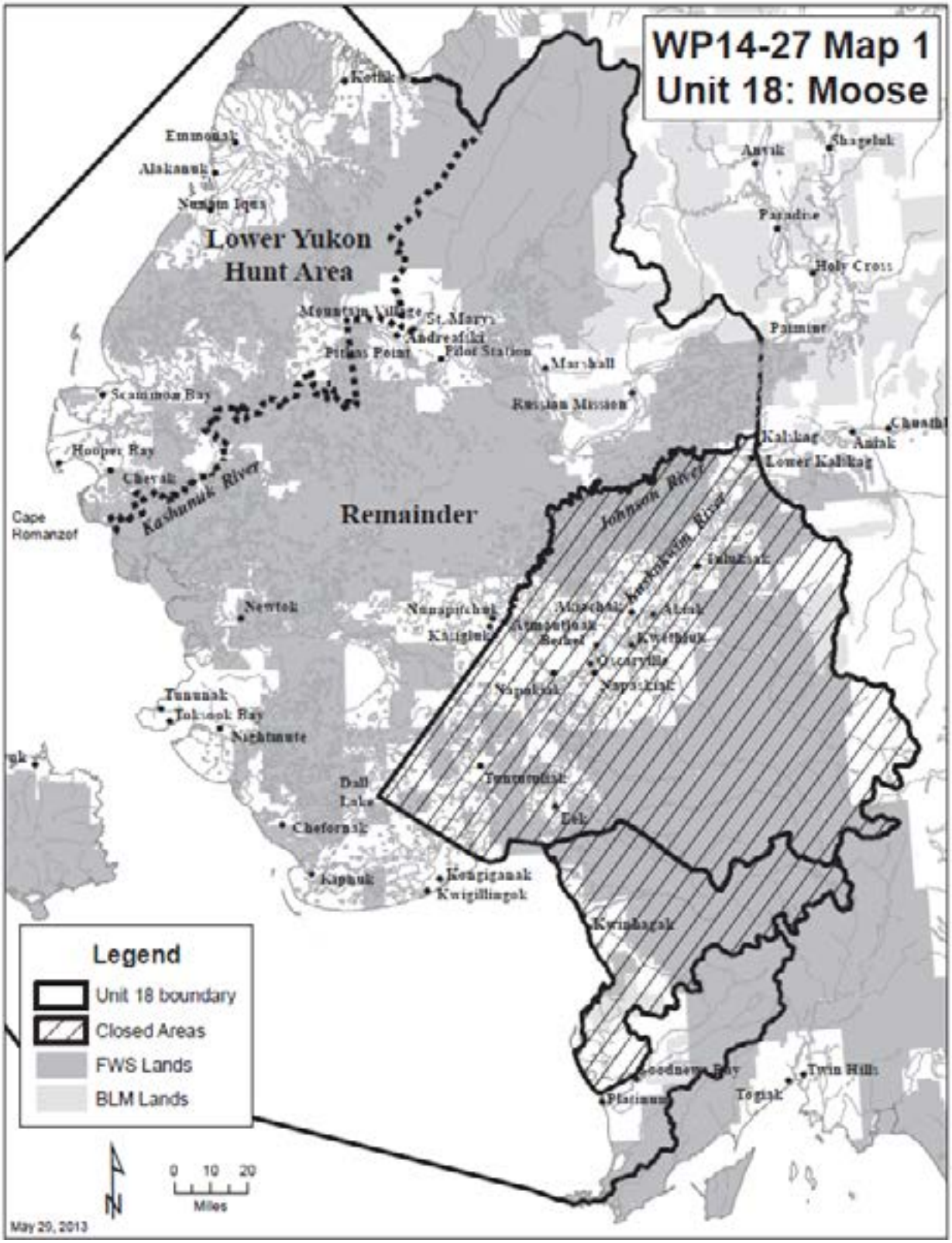
Existing State Regulation

Unit 18 — Moose

Residents – one antlered bull by registration permit	*Sept. 1 – Sept. 10*

Extent of Federal Public Lands

Federal public lands comprise approximately 66% of Unit 18 and consist of 63% US Fish and Wildlife Service managed lands and 3% Bureau of Land Management managed lands (**Map 1**).


WP14-27 Map 1
Unit 18: Moose
Lower Yukon
Hunt Area
Remainder
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Mountain Village
St. Mary's
Andreafski
Pilot Station
Marshall
Russian Mission
Scammon Bay
Hooper Bay
Chevak
Kashunuk River
Cape Romanzof
Newtok
Nunapitchuk
Kasigluk
Tununak
Toksook Bay
Nightmute
Dall Lake
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Eek
Napakiak
Napaskiak
Oscarville
Bethel
Kwethluk
Atmautluak
Akiak
Tuluksak
Johnson River
Kuskokwim River
Aniak
Chuathbaluk
Kalskag
Lower Kalskag
Paimiut
Holy Cross
Paradise
Anvik
Shageluk
Platinum
Goodnews Bay
Togiak
Twin Hills
0 10 20
Miles
N
May 29, 2013
Legend
Unit 18 boundary
Closed Areas
FWS Lands
BLM 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 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.

In 2010, the Board adopted an ANILCA Section 804 determination further limiting who can harvest to residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.

Regulatory History

Federal public lands in the area covered by this proposal have been closed to non-Federally qualified users since 1992. Prior to 2004, Federal and State moose harvest limits for the lower Kuskokwim River area were one bull or one antlered bull, and the fall seasons were approximately one month. The State winter season has varied widely from a continuous fall/winter season (Sept. 1–Dec. 31) to a 10-day December season and a winter "to be announced" season. The Federal winter season has varied from a 10-day season to a "to be announced" season.

In 2003, at the request of local residents, the Alaska Board of Game established a five-year moratorium on moose hunting under State regulations. The Federal Subsistence Board (Board) adopted wildlife proposal WP04-51 in April 2004 that established a five-year moratorium on Federal public lands. The intent of the moratorium was to promote colonization of underutilized moose habitat. Both the Federal and State seasons were closed in the fall of 2004. The moratorium was largely instigated by the Lower Kuskokwim Fish and Game Advisory Committee, which worked with the Alaska Department of Fish and Game, U.S. Fish and Wildlife Service, and area residents to close the moose season for five years or when a population of 1,000 moose were counted in the lower Kuskokwim survey unit. Considerable outreach efforts were made to communicate the impact of the moratorium on the growth potential of the affected moose population to the local communities. In order for the moratorium to succeed, it was essential that local residents understood the purpose of, and were part of this five year strategy.

In March 2009, the Alaska Board of Game established a registration hunt (RM615) in preparation for ending the moratorium on June 30, 2009. The 2009 State season was Sept. 1–Sept. 10 with a harvest limit of one antlered bull by registration permit and a total harvest quota of 75 antlered bull moose. At its fall 2009 meeting, after considerable discussion, the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council did not submit a proposal to open the moose season on Federal public lands in the moratorium area, and those lands remained closed. In November 2009, the Alaska Board of Game adopted a proposal which changed the boundary separating the Unit 18 lower Kuskokwim area from the Unit 18 remainder area.

In May 2010, the Federal Subsistence Board adopted Proposals WP10-58 and WP10-62 with modification to make boundary changes similar to the Alaska Board of Game actions. Adoption of these proposals helped to clarify the boundary for moose hunters and law enforcement. At the same meeting in May 2010, the Board adopted Proposal WP10-54 with modification to reduce the pool of Federally qualified subsistence users eligible to hunt moose on Federal public lands within the lower Kuskokwim. This was necessary because of the 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). As specified in Section 804 of ANILCA, whenever it is necessary to restrict the subsistence uses of populations of fish and wildlife on Federal lands, a priority must be implemented through appropriate limitations based on the application of three criteria including: 1) customary and direct dependence upon the population as a mainstay of livelihood; 2) local residency; and 3) availability of alternative resources. In accordance with Section 804, an analysis was developed that evaluated all users with a positive customary and traditional use determination, and fifteen communities were found to be most dependent on this resource in this area.

While no permanent Federal moose season has been established in the lower Kuskokwim area, in 2010 Wildlife Special Action WSA10-02 was approved to establish a temporary Sept. 1–Sept. 5 moose season in the affected area. In 2011, harvest occurred under the State registration permit.

In 2012, Wildlife Special Action WSA12-06 was submitted by the Yukon Delta National Wildlife Refuge and requested the establishment of a Sept. 1 – Sept. 30 moose season within the lower Kuskokwim River area of Unit 18. The harvest was limited to antlered bull moose via a State registration permit with a harvest quota set prior to the start of the season. The special action was approved by the Board.

Biological Background

State management objectives for Unit 18 include the following (Perry 2010):

- Allow the lower Kuskokwim River moose population to increase above its estimated size of 75–250 moose to at least 2000 moose.

- Maintain the current age and sex structure for both the lower Yukon and lower Kuskokwim populations, with a minimum of 30 bulls:100 cows.

Aerial surveys utilizing geospatial population estimation methods (Kellie and DeLong 2006) have been conducted to estimate the size of the moose population in the Lower Kuskokwim survey unit. The most recent estimates in 2008 and 2011 show a recovery from the low of 70 moose estimated in 2004 (**Figure 1**), the year the moratorium was initiated. The population had an estimated annual growth rate of 65% from 2004 to 2008 (516 moose; estimate without the sightability correction factor) (**Figure 1**). The high annual growth rate was due to high survival and recruitment rates during the moratorium, as well as immigration as moose continued to colonize the area. The population continued to increase between 2008 and 2011, but annual growth rate slowed to 9%. In addition to the Lower Kuskokwim survey area, which primarily consists of State-managed lands, one line-transect survey was conducted on Federal public lands along

tributaries of the Kuskokwim River in 2010. The tributary survey resulted in an estimated 345 moose, which suggests that the hunt area (Lower Kuskokwim and Kuskokwim Tributary areas) likely contains over 1,000 moose.

Birth rates, survival, and recruitment have been estimated by monitoring radio-collared moose in the affected area. Calving data collected on radio collared moose in the lower Kuskokwim River and its major tributaries during May and June 2010 estimated birth rates at 85% for three-year or older cows and 50% for two-year-old cows. The high birth rate for second year cows suggests the population is still increasing in high quality habitat, which allows moose to more quickly attain the body mass needed to breed (Schwartz 2007). Boer (1992) reviewed previous moose literature and found average yearling fecundity for 12 North American populations above, near, and below carrying capacity to be 18, 41, and 65%; respectively. Calf survival was estimated at 36% between May 2009 and December 2010, indicating continued population growth (Wald 2012, pers. comm.).

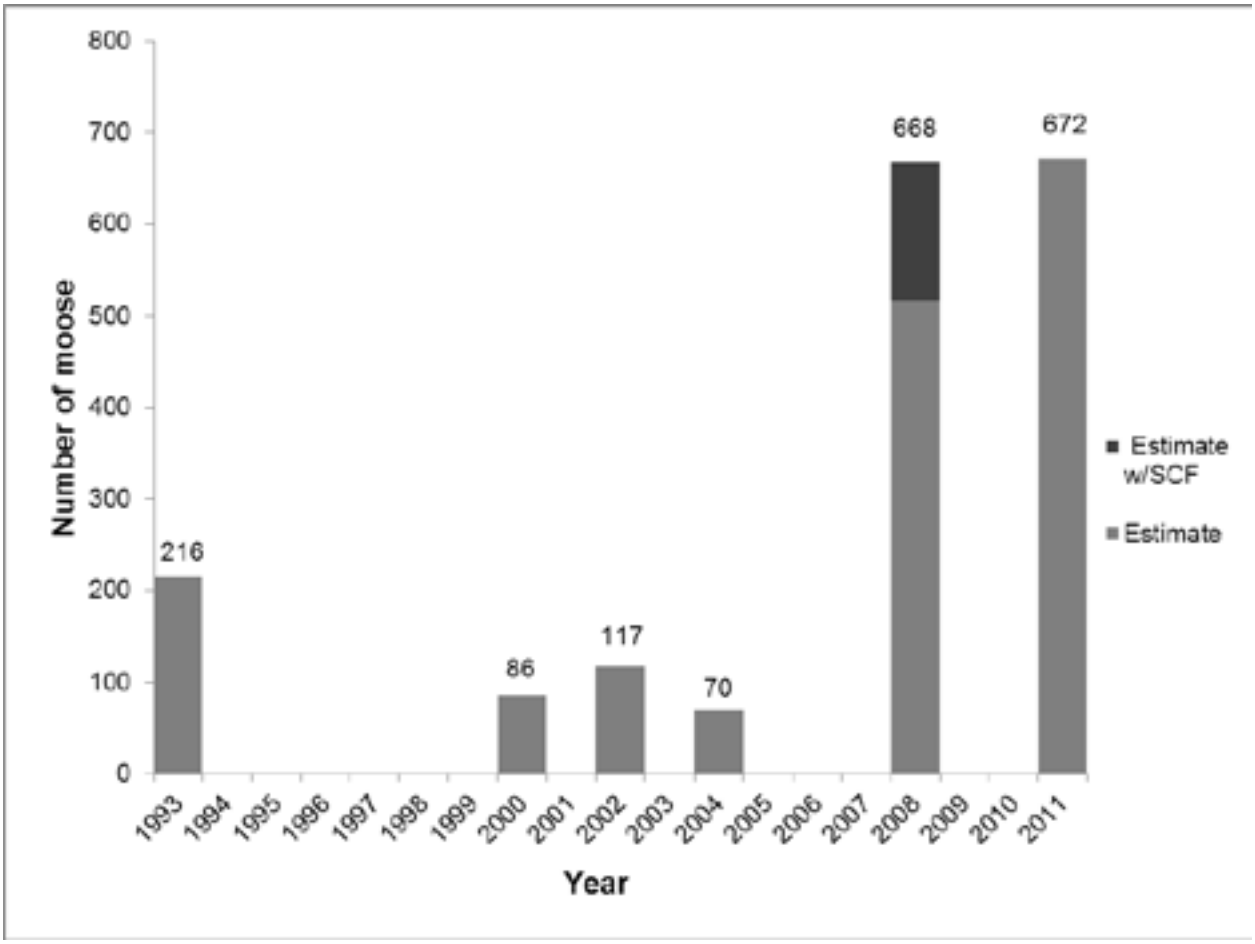


Figure 1. Estimates of moose population size in the lower Kuskokwim trend count area of Unit 18. Surveys use geospatial population estimation techniques (Kellie and DeLong 2006) in all years except 1993, when the Gassaway method was used. A sightability correction factor (SCF) was used in 2008 to account for moose not observed during aerial surveys (Rearden 2012, pers. comm.).

Population composition surveys showed high bull:cow and calf:cow ratios during 2007, when the moratorium was in effect (**Table 1**). Since 2009, when the State reestablished a bull-only hunt, the bull:cow ratio declined, but has remained well above the management goal of 30 bulls:100 cows (Perry 2010). The calf ratios also declined after 2007, but have remained fairly high during subsequent surveys which provides further evidence of good calf survival through November. As harvest continued in 2009 and 2010, bull and calf ratios remained around 50:100 cows (**Table 1**). Between 2011 and 2013, twinning rates were 53%, 50% and 67% respectively, indicating high productivity (Perry 2013, pers. comm.).

Table 1. Population composition estimates of moose surveyed within the Lower Kuskokwim survey area of Unit 18. Surveys were conducted in November and encompassed the lower Kuskokwim and Kwethluk Rivers (Rearden 2013, pers. comm.)

Year	Bulls:100 cows	Calves:100 cows	Total moose observed
2007	98.2	72.7	149
2009	52.3	49.2	258
2010	50.6	49.4	356

Habitat

The riparian corridor along the Kuskokwim River downstream of Kalskag is excellent moose habitat. The forest and brush along the river between Lower Kalskag and Akiachak provides some escape cover for moose while further down the river toward the mouth, the riparian corridor narrows with a lack of escape cover (Perry 2010).

Moose browse was measured along the Kwethluk River from Elbow Mountain to Three-Step Mountain in the summer 2009 and 2010. This area corresponds to previous hunting closures, and the section of the river that has the most extensive moose habitat along the Kwethluk River. Examination of browse species indicated moderate use by moose (and minor use by hare and beaver) with slightly heavier use off the main river channel in the larger willow complexes. The overall browsing index indicated that many forage plants were not severely browsed. Further data analyses is needed to determine precise estimates of each browsing category or to look for significant differences of use along the river and between browse species by moose (Wald 2012, pers. comm.).

Harvest History

The U.S. Fish and Wildlife Service and the ADF&G set a potential 2009 fall quota of 75 moose for the entire area that had been previously closed during the moratorium, which included Federal public lands (FWS 2008). This quota was based on survey results and extrapolated estimates of moose in tributaries that were not surveyed. Federal lands remained closed for the 2009–2010 regulatory year and the hunt was conducted solely on State managed lands, but the quota remained at 75. In September 2009, 112 moose were reported harvested on State managed lands (**Table 2**), which exceeded the quota. Separate quotas were set in 2012, with an allowable harvest of 81 moose on State lands and 19 moose on Federal public

lands (Rearden 2012, pers. comm.). Total reported harvest exceeded the quota by 2 moose with the overharvest occurring on State managed lands.

Table 2. Total reported harvest and harvest reported on Federal public lands in relation to the estimated size of the moose population in the lower Kuskokwim River area of Unit 18, 2008–2011. Federal public lands are closed to the harvest of moose, except by Federally qualified subsistence users (Rearden 2012, pers. comm.).

Year	Reported harvest on Federal land	Total reported harvest
2008	No hunt	No hunt
2009	No hunt	112
2010	10	102
2011	18	110
2012	19	102

Effects of the Proposal

If adopted, this proposal would establish a moose season in the Unit 18 portion of the lower Kuskokwim River from Sept 1 – 30 with a 1 antlered moose harvest limit by joint State/Federal registration permit. This would allow for more harvest opportunities for Federally qualified users in the area while making it easier to hunt on both State and Federal lands without jurisdictional concerns. Additionally, the hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when the established quota is met.

Impacts to the moose population under this proposal would likely be minimal, as the population has continued to increase with limited harvests since 2009, with good productivity. Harvest numbers are not expected to increase from recent years as the most recent quota (81 bull moose on State lands and 19 bull moose on Federal lands) is similar to total annual harvests in the affected area from 2009 to 2012 (**Table 2**). The harvest quota would be based on the status of the moose population, and Federal managers would have the authority to close the seasons early if there was any indication that the harvest may exceed the quota. The harvest quota remains higher on State managed lands since most of the moose favor those lands due to better habitat conditions.

OSM CONCLUSION

Support Proposal WP14-27 **with modification** to make this hunt by a State registration permit only, and to delegate authority to close the season and determine annual quotas via a delegation of authority letter (**Appendix 1)**. The modified regulation would 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 east bank of the Johnson River at its entrance into Nunavakanukakslak Lake (N 60°59.412 Latitude;W162°22.142 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 east of the Unit 18 border and then north of and including the Eek River drainage ***– 1 Antlered bull by State registration permit*** ~~***Joint ADF&G/USFWS registration permit RM 615 available at license vendors in the hunt area from August 1 to August 25.***~~ ***Quota is to be announced.*** ~~***Hunt will be closed by the Yukon Delta National Wildlife Refuge manager by Special Action when quota is expected to be met.***~~	~~*No open season*~~ ***Sept. 1 – Sept. 30***

Federal public lands are closed to the taking of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.

Justification

The moose population along the lower Kuskokwim area of Unit 18 has grown substantially after a five year moratorium on hunting first established in 2003 and productivity is high. Management objectives for both population size and bull:cow composition have been met over the last several years. Additionally, the area has been opened up for hunting by special action the last two years with established quotas being met or exceeded during this time period. The lower Kuskokwim provides adequate forage and escape cover for moose, with high birth rates indicating high quality habitat. Establishment of a season through the use of a State registration permit with set quotas will allow for more harvest opportunities for Federally qualified users in the area while making it easier to hunt on both State and Federal lands without jurisdictional concerns, and also providing for in-season management to prevent conservation concerns for this recovering moose population. Creation of a delegation of authority letter for the Federal land manager will allow for hunt management flexibility through in season adjustment of hunt parameters.

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Appendix 1

Refuge Manager
Yukon Delta National Wildlife Refuge
P.O. Box 346
Bethel, Alaska 99559

Dear Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Yukon Delta National Wildlife Refuge Manager, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within 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 east bank of the Johnson River at its entrance into Nunavakankakslak Lake (N 60° 59.412 Latitude; W 162° 22.142 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 of Arhymot Lake, then following the south bank east of the Unit 18 border and then north of and including the Eek River drainage.

It is the intent of the Board that actions related to management of moose by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State managers and the Chair and applicable members of the Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. <u>Delegation:</u> The Manager of the Yukon Delta National Wildlife Refuge is hereby delegated authority to issue emergency or temporary special actions affecting moose on Federal lands as outlined under 3. Scope of Delegation of this section. Any action greater than 60 days in length (temporary special action) requires a public hearing before implementation. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

2. <u>Authority:</u> This delegation of authority is established pursuant to 36 CFR 242.10(d)(6) and 50 CFR 100.10(d)(6), which states: "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 require-

ments, and open or close specific fish or wildlife harvest seasons within frameworks established by the Board."

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To open or close the season and determine annual quotas for moose on Federal public lands in 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 east bank of the Johnson River at its entrance into Nunavakankakslak Lake (N 60° 59.412 Latitude; W 162° 22.142 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 of Arhymot Lake, then following the south bank east of the Unit 18 border and then north of and including the Eek River drainage.

This delegation may be exercised only when it is necessary to conserve the moose population or to continue subsistence uses.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within 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 east bank of the Johnson River at its entrance into Nunavakankakslak Lake (N 60° 59.412 Latitude; W 162° 22.142 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 of Arhymot Lake, then following the south bank east of the Unit 18 border and then north of and including the Eek River drainage .

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no 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 maintain a record of all special action requests and ra-

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tionale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management and coordinate with local ADF&G managers and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council regarding special actions under consideration. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
Chair, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Coordinator, Yukon-Kuskokwim Delta Subsistence Regional Advisory Council
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-27 **with modification** as described in the OSM Conclusion. The moose population along the lower Kuskokwim River has grown substantially. Management objectives for both population size and bull:cow composition have been met over the last several years. Established season would be less confusing and easier for moose hunters.

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-27 **with modification** as described in the OSM Conclusion. Due to time limitations and scheduling conflicts resulting from the government shutdown in October 2013, the WIRAC is deferring action on this proposal to the YKDRAC.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-28 Executive Summary	
General Description	Proposal WP14-28 requests extension of the fall season for moose in Unit 18 remainder by 9 days and liberalization of the antlered requirement. *Submitted by the Yukon Delta National Wildlife Refuge.*
Proposed Regulation	**Unit 18 - Moose** *Unit 18, remainder – ~~1 moose~~**1 antlered bull or a cow unaccompanied by calf*** *Aug. ~~10~~ **1** – Sept. 30* *1 moose* *Dec. 20 – the last day of February*
OSM Conclusion	**Support** Proposal WP14-28 **with modification** to retain the 1 moose harvest limit but extend the fall season.
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Take no action**
Western Interior Regional Advisory Council Recommendation	**Take no action**
Interagency Staff Committee Comments	If the Board accepts the recommendation of the Y-K Delta and Western Interior Councils a much expanded harvest opportunity would be provided that extends well beyond the original intent of this proposal for a 9-day extension during the fall season and allowing an additional moose to be harvested. Applying the provisions of Proposal WP14-23 would extend the season in this area by 4 months and liberalize harvest. Currently there are no biological concerns for moose in this area and no biological concerns are anticipated as a result of this proposed liberalized harvest opportunity.
ADF&G Comments	**Support with modification** to align bag limits and seasons with those recently adopted by the Board of Game (January 2014)
Written Public Comments	**None**

STAFF ANALYSIS
WP14-28

ISSUES

Proposal WP14-28, submitted by the Yukon Delta National Wildlife Refuge, requests extension of the fall season for moose in Unit 18 remainder by 9 days and liberalization of the antlered requirement.

DISCUSSION

The proponent states that the moose population in Unit 18 remainder is healthy enough to justify liberalization of the season and antler requirement. The population is growing and overall harvest in the fall is lower than other areas of the lower Yukon survey area. This liberalization is being proposed by both State and Federal land managers. In further discussion with the proponent, it was stated that they desired a lengthening of the season, but no change in the harvest limit/antler requirement, so the 1 moose harvest limit would be retained in this proposal.

Existing Federal Regulation

Unit 18 – Moose

Unit 18, remainder – 1 moose	*Aug. 10 – Sept. 30*
	Dec. 20 – the last day of February

Proposed Federal Regulation

Unit 18 - Moose

*Unit 18, remainder – ~~1 moose~~**1 antlered bull or a cow unaccompanied by calf***	*Aug.~~ 10~~ **1** – Sept. 30*
1 moose	*Dec. 20 – the last day of February*

Existing State Regulation

Unit 18 remainder – Moose

Residents, one antlered bull	*Aug. 10 – Sept. 30*
Residents, one moose	*Dec. 20 – Feb. 28*
Nonresidents, one antlered bull	*Sept. 1 – Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 66% of Unit 18 and consist of 63% U.S. Fish and Wildlife Service managed lands and 3% Bureau of Land Management managed lands (**Unit 18 Map**).

Customary and Traditional Use Determinations

The customary and traditional use determination for moose in Unit 18 remainder includes all residents of Unit 18. Additionally, residents of St. Michael, Stebbins, Aniak, Upper Kalskag and Chuathbaluk can hunt in portions of Unit 18 remainder under Federal moose regulations.

Regulatory History

Moose harvest season dates in Unit 18 have varied over the past 10 years, however harvest limits have remained constant at one bull. As the moose population in the area grew, the closure of Federal public lands to non-Federally qualified users was lifted and the seasons were extended.

In 2006, proposal WP06-30 requested the removal of the Federal closure to non-Federally qualified users for the Unit 18 remainder fall moose season (Sept. 1–Sept. 30). The biological information presented in the WP06-30 analysis supported the removal of the closure for not only Unit 18 remainder, but also that portion of Unit 18 downstream from Mountain Village. However, the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council opposed the proposal because of local concerns over increased competition. At its May 2006 meeting, the Federal Subsistence Board (Board) deferred action on the proposal for one year with a commitment to revisit the proposed regulation change at its May 2007 meeting. The intent for the deferral was to allow time for Yukon Delta National Wildlife Refuge (YDNWR) staff to conduct information outreach on the status of the moose population in communities before making a decision.

The rapid growth and current size of the moose population along with local concerns over increased competition created disagreement over the appropriateness of the Federal closure, which lead to several proposals in October 2006:

● Proposal WP07-26 requested a positive customary and traditional use determination for moose

in Unit 18 for the residents of St. Michaels and Stebbins. The Board adopted the proposed regulatory change in May 2007.

● Proposal WP07-27 requested an Aug. 10–Aug. 19 families-only moose season in Unit 18 remainder. The Board did not adopt the proposal at its May 2007 meeting because it cannot adopt regulations that favor families only.

● Proposal WP07-28 requested an earlier season in Unit 18 remainder beginning on Aug. 20 instead of September 1. The Board adopted a modified recommendation of an Aug. 10 season open date for the Yukon River drainage portion of Unit 18 and Unit 18 remainder at its 2007 meeting.

● Proposal WP07-29 requested a liberalization of the harvest limit from one antlered bull to one moose in Unit 18 remainder with a winter season extension to Jan. 20, instead of Jan. 10. The Board adopted the season extension with the modification of one moose for the Yukon River drainage below and including Mt. Village only, due to the very high calf composition and concerns of the population size and growth rate may be adversely affecting the habitat's carrying capacity in that area.

● Proposal WP07-30 requested a continuous one bull harvest limit from September 1 to March 31. Because such liberalizations in harvest limit should be adopted gradually to allow for close monitoring of harvest effects on the population, the Board rejected the proposed regulatory change.

● Proposal WP07-31 requested an Aug. 20–31 moose season with a one antlered bull harvest limit for residents of Andreafsky and St. Mary's within the Andreafsky River drainage of Unit 18 remainder; and Proposal WP07-64 requested the Board extend the fall moose season by adopting the proposed 12-day, Aug. 20–31 extension with a one antlered bull or cow moose harvest limit for residents of Marshall. If a proposal seeks a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource, as was the case with these two proposals, an analysis must be done in accordance with Section 804 of ANILCA if the population necessitates such prioritization. Because the moose population in this area could support harvest by all Federally qualified subsistence users, an "804" analysis was not conducted, and the Board rejected these proposals.

● At its May 2007 meeting, the Board adopted Proposal WP07-32 (deferred proposal WP06-30) to open Federal public lands to non-Federally qualified subsistence users. The Board stated that the closure was no longer warranted as the moose population had increased to the point where additional harvest could occur. The Refuge Manager of the YDNWR made extensive outreach efforts with local residents and committed to lessen competition by prohibiting transporters access to local subsistence use areas (Rearden 2007, pers. comm.).

Proposal WP08-33, submitted by the Association of Village Council Presidents, requested a closure of

18, that portion of the Yukon River drainage and Unit 18 remainder. The proponent requested this closure until three related tasks were accomplished: 1) an accurate assessment of moose harvest needed by residents of Unit 18; 2) an accurate assessment of the moose population in Unit 18; and 3) development of a regionally acceptable moose management plan. The proposal was rejected by the Federal Subsistence Board at its May 2008 meeting.

In 2009, Special Actions WSA09-12/13/14 requested a season extension to Feb. 28 and a change in the harvest limit from one antlered bull to one moose in Unit 18 remainder. The Special Action requests were submitted due to the lack of snow that limited travel and hunting opportunity within an area where the moose population appeared to be increasing and was considered healthy. The Board approved the requests to extend the season and change the harvest limit to one moose.

In 2010, Special Action WSA10-04 requested that the Unit 18 remainder winter moose season be extended to Feb. 28th and the harvest limit be changed from one antlered bull to one moose. This Special Action request was submitted due to adverse travelling conditions in the area as a result of unusually warm weather which made travel by snowmachine difficult for local hunters. The proposal was approved by the Federal Subsistence Board.

At the November 2011 Alaska Board of Game meeting, Proposal 8 was adopted with modification to extend the moose season until the end of February in Unit 18 remainder.

Proposal WP12-48, submitted by the Yukon Delta National Wildlife Refuge, requested a change to the harvest limit for moose in Unit 18 remainder from 1 antlered bull to 1 moose during the winter season as well as an extension of the winter season from Jan. 10 to the last day of February. The proposal was adopted by the Board at its January 2012 meeting.

Biological Background

Moose began to immigrate into the Yukon-Kuskokwim (Y-K) Delta during the mid-to-late 1940s. The Yukon River population occupies most of the available riparian habitat and is growing, while the Kuskokwim population is still small and in the process of colonizing all available riparian habitats. Most of the Y-K Delta is lowland treeless tundra and is therefore not suitable as winter moose habitat (Perry 2010).

Hunting pressure from communities along the Kuskokwim River has limited the growth of moose populations along the riparian corridors, while moose populations along the Yukon River have been similarly slowed, though compliance with hunting regulations has improved moose populations in this area (Perry 2010). There is a large amount of available habitat for moose along the Kuskokwim River drainage and its tributaries, allowing for colonization and population expansion.

The Paimiut survey area in Unit 18 covers the Yukon River just downriver of Marshall to Paimiut. Although this survey unit does not cover the entire Unit 18 remainder, it covers the densest

population of moose in the Unit 18 remainder area. The most recent survey for this area was conducted in 2013. The mid-point of the 2013 survey estimate was 5,697 moose with a density of 3.6 moose per square mile (Crawford 2013, pers. comm.), which was an increase from the 1992 density estimate of 0.64 moose per square mile (Perry 2008).
Additionally, recent surveys on the Andreafsky portion of Unit 18 remainder suggest healthy growth of the population with estimates in 2002 of 418 moose and a 2012 estimate of 2748 moose (without a Sightability Correction Factor) (Rearden 2013, pers. comm.)

The moose population down river of Mountain Village and adjacent to Unit 18 remainder increased significantly from 1994 to 2008. The lower Yukon area has experienced rapid population growth since 1994 with an average growth rate of 27% (1994–2009) (USFWS 2008). The 2008 estimate along the main stem of the Yukon River corridor from Mountain Village to Kotlik was 3,320 moose. From Mountain Village to Emmonak, the moose density estimate was 2.8 moose per square mile.

The State management objective for the Yukon-Kuskokwim Delta and Yukon River moose populations in Unit 18 are to maintain the current age and sex structure, with a minimum of 30 bulls:100 cows. Moose composition surveys from 2005 showed a ratio of 36.9 bulls per hundred cows and 23.9 bulls per hundred cows for the Lowest Yukon and Paimiut survey areas respectively (Perry 2008). In addition, calf survival was much higher in the Lowest Yukon survey area and almost 40% of cows were found to have twins with them in early winter (Perry 2008, Perry 2010). More recent moose composition data for Unit 18 remainder showed a ratio of 42 bulls per 100 cows and 61 calves per 100 cows while 28% of cows had twins with them (Rearden 2011, pers. comm.). These numbers indicate that the moose population has exceeded the management objective for sex structure in the unit.

Habitat

A minimum of 8,000 square miles of moose habitat exists in Unit 18 (Perry 2010). Of this, approximately 4,500 square miles of habitat occurs along the riparian zone of the Yukon River. The most productive moose habitat in Unit 18 is found on the islands and adjacent sloughs from Paimuit to Mountain Village. Several tributaries within the Yukon Delta contain suitable moose habitat. Despite this and even thought the moose population is growing, the area has fewer moose than could be supported by the available forage (Perry 2010).

Harvest History

Moose harvest has increased steadily in Unit 18 and local demand for moose meat is high (Perry 2010). In

Table 1. Fall and winter moose harvest in Unit 18, 2000-2009 (Perry 2010).

Regulatory Year	Fall Harvest	Winter Harvest	Unknown Harvest	Total Harvest
2000-2001	166	5	4	175
2001-2002	140	9	13	162
2002-2003	202	10	11	223
2003-2004	220	13	0	233
2004-2005	189	36	1	226
2005-2006	253	64	0	317
2006-2007	256	70	4	330
2007-2008	370	86	2	458
2008-2009	350	81	11	442

Effects of the Proposal

If this proposal is adopted it would extend the fall season for moose in Unit 18 remainder by 10 days. Extension of the fall season would allow for more hunting opportunities for Federally qualified subsistence users. There would be some reduction in moose numbers, but given the healthy rate of growth of the population in the Andreafsky and Paimuit survey areas over the last few years, additional hunting pressure should not cause any conservation concerns. Extension of the fall season dates would cause misalignment of State and Federal regulations.

OSM CONCLUSION

Support Proposal WP14-28 **with modification** to retain the 1 moose harvest limit but extend the fall season. The modified regulation should read:

Unit 18 - Moose

Unit 18, remainder – 1 moose ~~***1 antlered bull or a cow unaccompanied by calf***~~	*Aug.* ~~*10*~~ ***1*** *– Sept. 30*
1 moose	*Dec. 20 – the last day of February*

Justification

This proposal would allow for more hunting opportunities for Federally qualified users by extending the fall hunting season. Recent surveys in Unit 18 show a moose population that is healthy and growing. Extension of the hunting season and liberalization of harvest in Unit 18 remainder should not have a negative impact on the population given its current rate of growth.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Take no action on Proposal WP14-28. Council's decision to take no action was in reflection of its discussions on proposal WP14-23.

Western Interior Subsistence Regional Advisory Council

Take no action on Proposal WP14-28. Due to time limitations and scheduling conflicts resulting from the government shutdown in October 2013, the WIRAC is deferring action on this proposal to the YKDRAC.

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 recommendation and Federal Subsistence Board action on the proposal.

The Yukon-Kuskokwim Delta (Y-K Delta) Regional Advisory Council (RAC) recommended taking no action on proposal WP14-28 based on the action they took on proposal WP14-23 which was to extend the season to Aug. 1 – Mar. 31 and maintain the harvest restriction for antlered bulls only from August 1st through September 30th.

The Western Interior RAC also recommended taking no action for the same reason as the Y-K Delta RAC.

The Seward Peninsula RAC does not have C&T for this area.

The State supported adopting the proposal with modifications.

If the Board accepts the recommendation of the Y-K Delta and Western Interior Councils a much expanded harvest opportunity would be provided that extends well beyond the original intent of this proposal for a 9-day extension during the fall season and allowing an additional moose to be harvested. Applying the provisions of Proposal WP14-23 would extend the season in this area by 4 months and liberalize harvest.

Currently there are no biological concerns for moose in this area and no biological concerns are anticipated as a result of this proposed liberalized harvest opportunity.

WP14–32 Executive Summary	
General Description	Proposal WP14-32 requests a modification of the Paradise Controlled Use Area (Paradise CUA) boundary in Unit 21E under Federal regulations, by extending the eastern boundary two miles along the east bank of the Innoko River and along the east bank of Paimiut Slough. *Submitted by Robert Walker of Anvik.*
Proposed Regulation	**Unit 21E—Moose** *1 moose; however, only bulls may be taken from Aug. 25–Sept. 30.* — *Aug. 25–Sept. 30* *Feb. 15–Mar. 15* *During the Feb. 15 – Mar. 15 season, a Federal registration permit is required. The permit conditions and any needed closures for the winter season will be announced by the Innoko NWR manager after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee as stipulated in a letter of delegation. Moose may not be taken within one-half mile of the Innoko or Yukon River during the winter season.* *__.26(n)(26)(ii)(B) The Paradise Controlled Use Area, which consists of that portion of Unit 21 bounded by a line beginning at the old village of Paimiut, then north along the west bank of the Yukon River to Paradise, then northwest to the mouth of Stanstrom Creek on the Bonasila River, then northeast to the mouth of the Anvik River, then along the west bank of the Yukon River to the lower end of Eagle Island (approximately 45 miles north of Grayling), then to the mouth of the Iditarod River, then* ***extending two miles easterly*** *down the east bank of the Innoko River to its confluence with Paimiut Slough, then south along the east bank of Paimiut Slough to its mouth, and then to the old village of Paimiut, it closed during moose hunting seasons to the use of aircraft for*
OSM Conclusion	**Oppose**

WP14–32 Executive Summary	
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-32

ISSUES

Proposal WP14-32, submitted by Robert Walker of Anvik, requests a modification of the Paradise Controlled Use Area (Paradise CUA) boundary in Unit 21E under Federal regulations, by extending the eastern boundary two miles along the east bank of the Innoko River and along the east bank of Paimiut Slough.

DISCUSSION

The proponent states that transporters and guides are accessing lakes within two miles of the current boundary east of the Innoko River via aircraft to circumvent the present Paradise CUA boundary to hunt moose. The proponent states the Paradise CUA was created to protect resources for the villages of Holy Cross, Anvik, Grayling, and Shageluk, and that the proposed boundary changes would lessen the impact of those hunters on the moose population.

Existing Federal Regulation

Unit 21E—Moose

1 moose; however, only bulls may be taken from Aug. 25–Sept. 30.	*Aug. 25–Sept. 30* *Feb. 15–Mar. 15*

During the Feb. 15 – Mar. 15 season, a Federal registration permit is required. The permit conditions and any needed closures for the winter season will be announced by the Innoko NWR manager after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee as stipulated in a letter of delegation. Moose may not be taken within one-half mile of the Innoko or Yukon River during the winter season.

__.26(n)(26)(ii)(B) The Paradise Controlled Use Area, which consists of that portion of Unit 21 bounded by a line beginning at the old village of Paimiut, then north along the west bank of the Yukon River to Paradise, then northwest to the mouth of Stanstrom Creek on the Bonasila River, then northeast to the mouth of the Anvik River, then along the west bank of the Yukon River to the lower end of Eagle Island (approximately 45 miles north of Grayling), then to the mouth of the Iditarod River, then down the east bank of the Innoko River to its confluence with Paimiut Slough, then south along the east bank of Paimiut Slough to its mouth,

and then to the old village of Paimiut, it closed during moose hunting seasons to the use of aircraft for hunting moose, including transportation of any moose hunter or part of moose; however, this does not apply to transportation of a moose hunter or part of moose by aircraft between publicly owned airports in the Controlled Use Area or between a publicly owned airport within the area and points outside the area.

Proposed Federal Regulation

Unit 21E—Moose

1 moose; however, only bulls may be taken from Aug. 25–Sept. 30.	*Aug. 25–Sept. 30* *Feb. 15–Mar. 15*

During the Feb. 15 – Mar. 15 season, a Federal registration permit is required. The permit conditions and any needed closures for the winter season will be announced by the Innoko NWR manager after consultation with the ADF&G area biologist and the Chairs of the Western Interior Regional Advisory Council and the Middle Yukon Fish and Game Advisory Committee as stipulated in a letter of delegation. Moose may not be taken within one-half mile of the Innoko or Yukon River during the winter season.

__.26(n)(26)(ii)(B) The Paradise Controlled Use Area, which consists of that portion of Unit 21 bounded by a line beginning at the old village of Paimiut, then north along the west bank of the Yukon River to Paradise, then northwest to the mouth of Stanstrom Creek on the Bonasila River, then northeast to the mouth of the Anvik River, then along the west bank of the Yukon River to the lower end of Eagle Island (approximately 45 miles north of Grayling), then to the mouth of the Iditarod River, then ***extending two miles easterly*** *down the east bank of the Innoko River to its confluence with Paimiut Slough, then south along the east bank of Paimiut Slough to its mouth, and then to the old village of Paimiut, it closed during moose hunting seasons to the use of aircraft for hunting moose, including transportation of any moose hunter or part of moose; however, this does not apply to transportation of a moose hunter or part of moose by aircraft between publicly owned airports in the Controlled Use Area or between a publicly owned airport within the area and points outside the area.*

Existing State Regulation

Unit 21E—Moose

Resident:	*One antlered bull*	*HT*	*Sept. 5–25*
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 - 25*

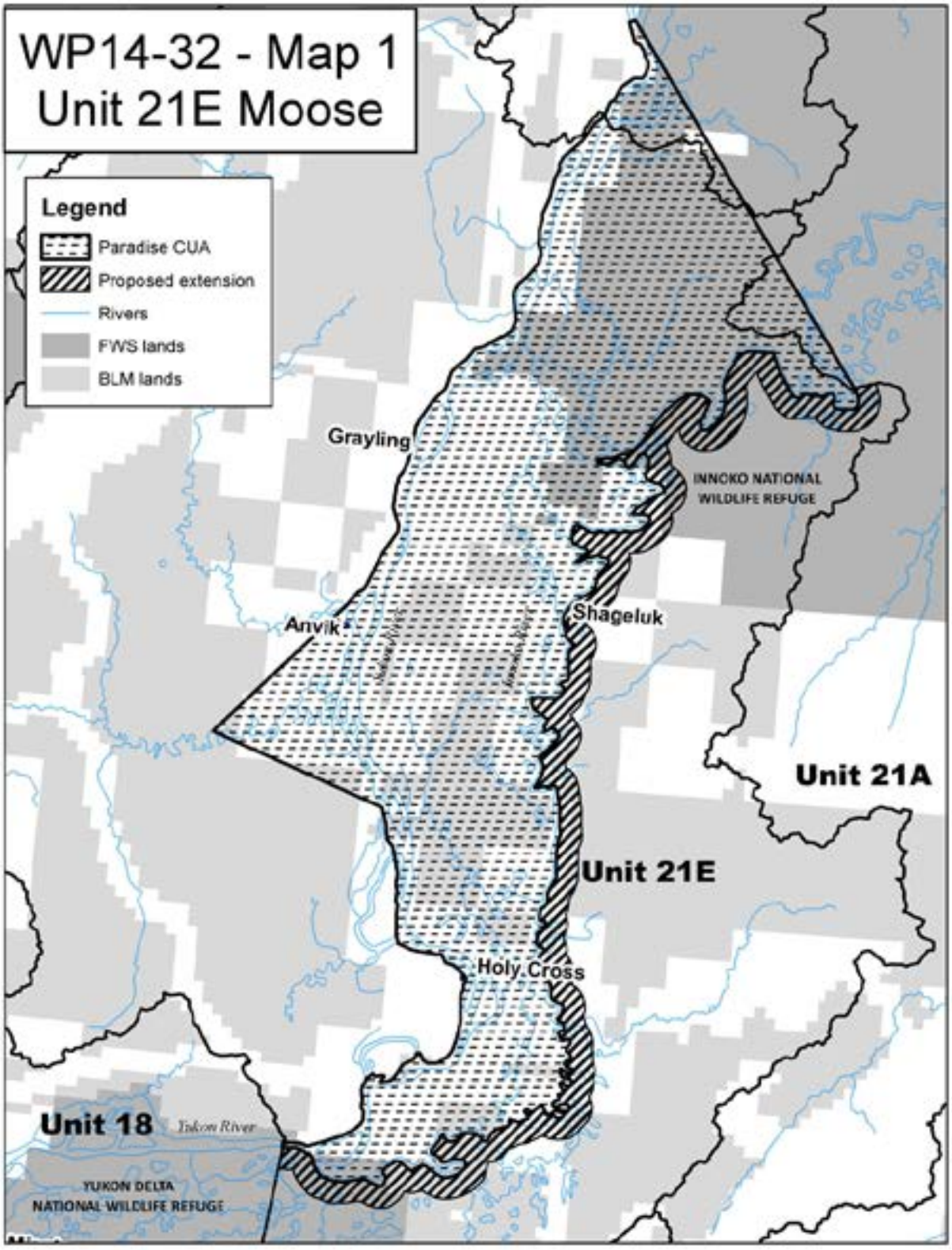
Paradise Controlled Use Area: bounded by a line beginning at the old village of Paimiut, then north along the west bank of the Yukon River to Paradise, then northwest to the mouth of Stanstrom Creek on the Bonasila River, then northeast to the mouth of the Anvik River, then along the west bank of the Yukon River to the lower end of Eagle Island (approximately 45 miles north of Grayling), then to the mouth of the Iditarod River, then down the east bank of the Innoko River to its confluence with Paimiut Slough then south along the east bank of Paimiut Slough to its mouth and then to the old village of Paimiut. The area is closed to the use of aircraft for hunting moose, including transportation of any moose hunters, their hunting gear, and/or parts of moose; however, this does not apply to the transportation of moose hunters, their hunting gear, and/or parts of moose by aircraft between publicly owned airports within the controlled use area or the transportation into the area of game meat that has been processed for human consumption.

Extent of Federal Public Lands

Federal public lands comprise approximately 60% of Unit and consists of 48% BLM and 12% FWS managed lands (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Unit 21E, Aniak, Chuathbaluk, Kalskag, Lower Kalskag, and Russian Mission have a positive customary and traditional use determination to harvest moose in Unit 21E 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.


WP14-32 - Map 1
Unit 21E Moose
Legend
Paradise CUA
Proposed extension
Rivers
FWS lands
BLM lands
Grayling
INNOKO NATIONAL
WILDLIFE REFUGE
Anvik
Shageluk
Unit 21A
Unit 21E
Holy Cross
Unit 18
Yukon River
YUKON DELTA
NATIONAL WILDLIFE REFUGE

Rural residents of Unit 21E and Russian Mission have a positive customary and traditional use determination to harvest moose in the remainder of Unit 21E.

Regulatory History

The Paradise CUA is almost entirely within Unit 21E. It 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 CUA 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 CUA access restriction and the State's moose seasons for Units 21E were adopted by the Federal Subsistence Board (Board) in 1990.

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 interested associated with hunting in the area. The result of the planning effort was the Yukon-Innoko Moose Management Plan (Management Plan), which was completed in March 2006. The Board endorsed the Management Plan in May 2006 through Resolution 06-0201. The Management Plan presented recommendations for harvest management at different moose population levels and levels of hunting pressure, predation management, and habitat management (ADF&G 2006). The Management Plan also listed goals and strategies for cooperative moose management and information needs. Harvest management recommendation 1.7 was to maintain the Paradise CUA as currently established.

Table 1. Fall compositions surveys conducted in Unit 21E, 2007–2011 (Peirce 2012).

Year	Moose observed	Ratios		
		Bulls:100 cows	Yearling bulls:100 cows	Calves:100 cows
2007	84	74	26	66
2008	186	62	29	37
2009	153	32	21	18
2010	287	61	15	51
2011	201	64	22	47

Biological Background

Population estimates have been sporadically conducted using Geospatial Population Estimation (GSPE) Surveys (Kellie and Delong 2006). 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. Results from winter surveys in 2000, 2005, 2009, and 2012 suggest that the moose population in Unit 21E is stable, as the 90% confidence intervals for observable moose overlap between survey years (**Figure 1**).

Four moose composition surveys were conducted in Unit 21E between 2007 and 2011; however, it is important to note that the surveys did not follow a rigid survey design (Peirce 2010). Therefore, variation in the number of observed moose could be attributed to changes in moose abundance or other factors, such as the amount of area searched or search intensity. Bull:cow ratios have generally been high (62–74 bulls:100 cows), although the ratio was lower in 2009 (**Table 1**). However, the low number of bulls in 2009 may be due to differences in survey area, as weather precluded biologists from including an area where high numbers of bull have been observed during previous surveys (Peirce and Seavoy 2010). Calf:cow ratios met the State management objective of 30–40 calves:100 cows in all years surveyed, except for 2009 (**Table 1**). Twinning surveys showed an increasing trend in twinning rate between 2007 and 2009, but decreased to 32% in the 2013 survey (**Table 2**). There is an ongoing moose collaring study that should help address some of the moose survey data limitations in Unit 21E.

Table 2. Spring moose twinning surveys conducted in Unit 21E, 2007–2013 (Peirce 2012, Seavoy 2013).

Year	Total Moose	Cows with 1 calf	Cows with 2-3 calves	Twinning rate (%)
2007	148	18	7	28
2008	194	17	15	47
2009	182	12	12	50
2010	256	32	22	41
2011	-	-	-	-
2012	-	-	-	-
2013	339	38	18	32

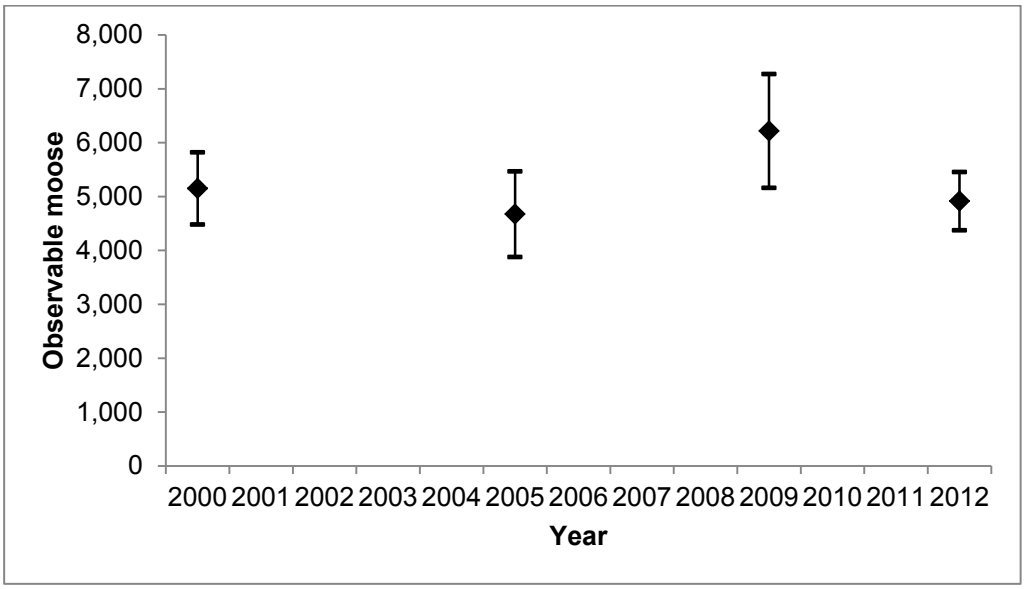


Figure 1. Unit 21E population estimates (± 90% CI) from Geospatial Population Estimation surveys conducted during March, 2000–2012 (Peirce 2010, 2012).

Harvest History

The total reported moose harvest by residents of Grayling, Anvik, Shageluk, Holy Cross (GASH communities) and Russian Mission under State regulations had a slightly increasing trend between 1983 and 2010 (**Figure 2**), and averaged 41 moose between 2000 and 2010 (OSM 2013). Federally qualified subsistence users also harvested 6, 9, and 7 moose during the Federal winter season in 2010, 2011, and

2012; respectively (OSM 2013). During the Federal winter seasons, an average of 46 Federal registration permits were issued (range: 45–48 permits) and 15–27 permits were reportedly used in attempts to harvest moose during 2010–2012 (OSM 2013). Harvest by other residents of Alaska increased between 1983 and 1997, but reported harvest has since declined from 158 moose in 1997 to 49 moose in 2010 (**Figure 2**). The nonresident harvest has generally been low, with recent annual harvests of 7 to 16 moose between 2005 and 2010 (**Figure 2**).

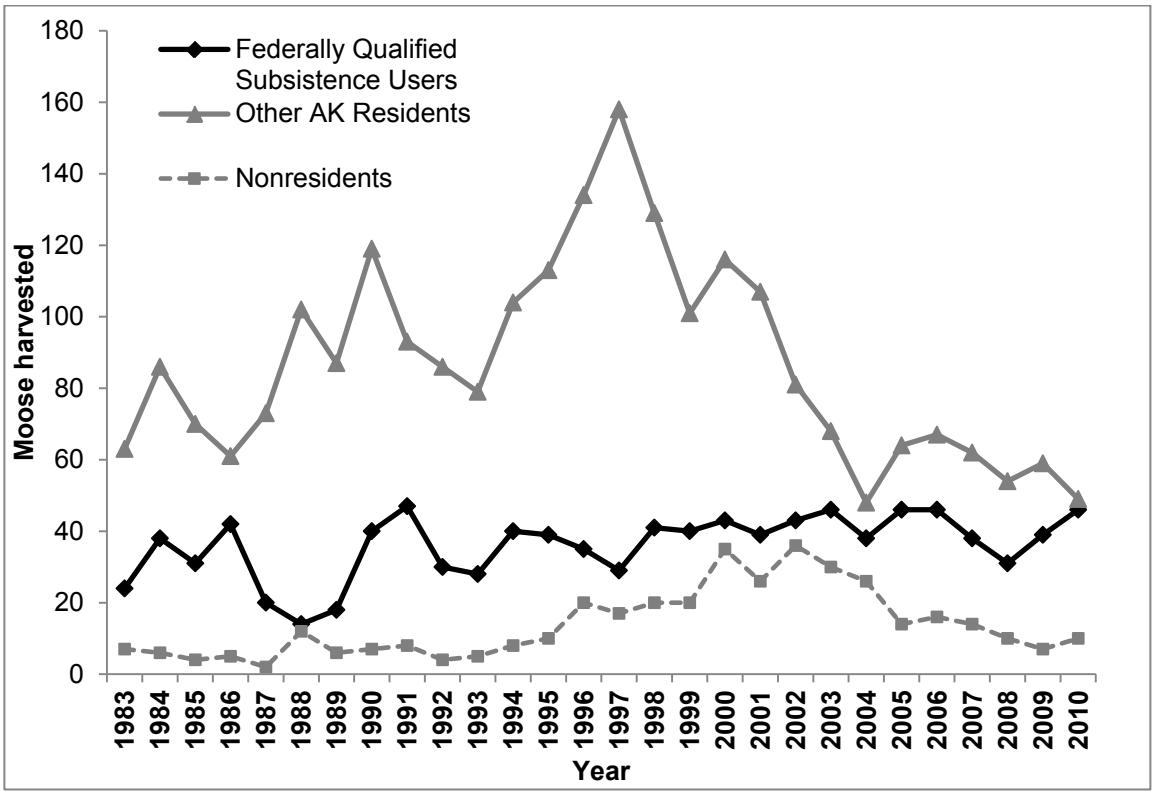


Figure 2. Reported harvest of moose under State harvest regulations in Unit 21E, by residency; 1983–2010 (OSM 2013). Federally qualified subsistence users were residents of Grayling, Anvik, Shageluk, Holy Cross, and Russian Mission.

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 much 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).

Effects of the Proposal

If this proposal is adopted, the eastern boundary of the Paradise Controlled Use Area would be extended two miles east of and parallel to the Innoko River under Federal regulations. The area affected by the boundary extension consists of approximately 57% Federal public land, consisting of Innoko National Wildlife Refuge (NWR) and Yukon Delta NWR lands, and BLM managed lands (**Map 1**).

The expanded portion of the controlled use area would not adequately address the proponent's concerns about non-Federally qualified subsistence users accessing lakes within two miles of the present boundary. Federal regulations would not apply on the remaining 43% of the expanded area that consists of non-Federal land, which means that moose hunters would still be permitted to land airplanes within the area where the proponent is seeking to exclude them. While the Federal Subsistence Board can create or modify controlled use areas under Federal regulations, it does not have the authority to restrict aircraft access on State-managed lands.

The moose population in the affected area is stable and harvest by non-Federally qualified users has declined. There are no conservation concerns necessitating Board action.

OSM CONCLUSION

Oppose Proposal WP14-32.

Justification

The proposed modification to the Paradise Controlled Use Area in Unit 21E would not adequately address the proponent's concerns about non-Federally qualified subsistence users accessing lakes within two miles of the present boundary. Moreover, there are currently no conservation concerns that would justify a Federal closure in the affected area. The moose population has been stable, and limited composition data suggests it can sustain current harvest levels. Reported harvest by Federally qualified subsistence users has remained relatively stable, while nonlocal harvest has declined.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-32. Air access is allowed on the waterways directly adjacent to the Paradise Controlled Use Area which does not incorporate the characteristics of other controlled use areas of being closed to aircraft landing on both sides of a major access corridor. This proposal has merit and should also be submitted through the Alaska Board of Game. Proposal to Board of Game is needed to extend the boundary like in other controlled use areas. It was a shortcoming in the creation of this controlled use area that they did not originally cover both sides of the river. The waterways in the area are heavily utilized by local users using watercraft and does not maintain equal footing with outside hunters using aircraft. This causes direct competition with local and non-local hunters. We need a sustainable bull/cow ratio.

The Council does not agree with the OSM claim that the FSB cannot restrict access to Federal Public Lands. Also feel the Solicitor's interpretation allows the FSB to restrict non-local users.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-49 Executive Summary	
General Description	Proposal WP14-49 requests modification of the fall season dates for the Unit 12 caribou hunt that takes place east of the Nabesna River and Nabesna Glacier and south of the winter trail, and also requests the establishment of a winter hunt and a meat on the bone requirement. The proposal requests that the fall season be changed from Sept. 1 – Sept. 30 to Aug. 10 – Sept. 20 and a Feb. 1 – Mar. 31 winter season be established. *Submitted by Gillam Joe*
Proposed Regulation	***__.26(n)(iii) You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of the caribou until you remove the meat from the field or process it for human consumption.*** ***Unit 12 - Caribou*** *Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.* — *~~Sept. 1~~**Aug. 10** – Sept. ~~30~~**20*** ***Feb. 1 – Mar. 31*** *Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.*
OSM Conclusion	**Support** Proposal WP14-49 **with modification** to change the fall season to the dates requested in the proposal, but not establish a winter season. The modified regulation should read: **Unit 12 - Caribou** **_.26(n)(iii) You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of the caribou until you remove the meat from the field or process it for human consumption.** Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only. — *~~Sept. 1~~**Aug. 10** – Sept. ~~30~~**20***

WP14-49 Executive Summary	
Eastern Interior Regional Council Recommendation	**Support** Proposal WP14-49 **with modification** to remove the meat on bone requirement, not adopt a winter season and modify the fall season. The modified regulation would read: **Unit 12 – Caribou** *Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.* — ~~*Sept. 1*~~***Aug. 10*** *– Sept. 30* *Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.* — ~~***Feb .1 – Mar. 31***~~
Southcentral Regional Council Recommendation	**Support** Proposal WP14-49 **with modification** to remove the meat on bone requirement and modify the seasons. The modified regulation would read: **Unit 12 – Caribou** *Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.* — ~~*Sept. 1*~~***Aug. 10*** *– Sept. ~~30~~**30*** *Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.* — ~~***Feb .1 – Mar. 31***~~
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** on meat on bone, **Support** Board of Game decisions
Written Public Comments	**1 Support / 1 Oppose / 1 Neutral**

STAFF ANALYSIS
WP14-49

ISSUES

Proposal WP14-49, submitted by Gillam Joe, requests modification of the fall season dates for the Unit 12 caribou hunt that takes place east of the Nabesna River and Nabesna Glacier and south of the winter trail, and also requests the establishment of a winter hunt and a meat on the bone requirement. The proposal requests that the fall season be changed from Sept. 1 – Sept. 30 to Aug. 10 – Sept. 20 and a Feb. 1 – Mar. 31 winter season be established.

DISCUSSION

The proponent states that the fall season dates should be adjusted to provide Federally qualified users an opportunity to harvest caribou before the rut, as the rut approaches in late September, meat quality declines significantly. Additionally, the proponent states that establishing a winter hunt would give subsistence users more opportunity and easier access to hunt the Chisana caribou herd (CCH) since the affected area is remote and difficult to access without the aid of a snowmachine. The proponent states the area is remote and the meat on the bone requirement will ensure that all the edible meat is removed from the field.

Note: Proposal WP14-45 has been submitted that would add the community of Nabesna and residents of the hunt area to the customary and traditional use determination for caribou in the area of interest.

Existing Federal Regulation

Unit 12 - Caribou

Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.	*Sept. 1 – Sept. 30*

Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.

Proposed Federal Regulation

_.26(n)(iii) You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of the caribou until you remove the meat from the field or process it for human consumption.

Unit 12 - Caribou

Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.	~~*Sept. 1*~~***Aug. 10*** *– Sept.* ~~*30*~~***20***
	Feb .1 – Mar. 31

Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.

Existing State Regulation

Unit 12 remainder - Caribou

Residents and nonresidents	*No open season*

Extent of Federal Public Lands

Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border is approximately 99% Federal public lands, all of which are managed by the Wrangell-St. Elias National Park and Preserve **(Unit 12 Map)**.

Customary and Traditional Use Determinations

For Unit 12 caribou, the Board has recognized the customary and traditional uses of Unit 12 residents (including Tanacross, Tok, Tetlin, Northway, and Nabesna) and residents of Chistochina, Dot Lake, Healy Lake, and Mentasta Lake.

In 2012, the Board adopted an ANILCA Section 804 determination further limiting who can participate in the hunt to residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.

Regulatory History

Because of its small population size, the CCH has never supported a large harvest. Between 1989 and 1994 under State regulations, the harvest limit was 1 bull caribou and the annual harvest ranged between 16–34 animals (Gross 2007). Furthermore, between 1991 and 1994 under Federal regulations, the harvest limit was 1 bull caribou [_.23(n)(12)(ii)]. By 1991, due to declining population numbers the harvest was reduced through voluntary compliance by guides and local hunters. In 1994 the bull portion of the population declined below the ADF&G's management objective and hunting of Chisana caribou was closed by both the Alaska Board of Game and the Federal Subsistence Board. There was no legal harvest of Chisana caribou in Alaska between 1994 and 2011.

In 1989 and 1990 the reported harvest of Chisana caribou in the Yukon was 18 and 11 animals, respectively (Gross 2007). Gross also reported that the estimated unreported harvest of Chisana caribou between 1989 through 2002 ranged from 1 – 20 animals each year. After 2001, Yukon First Nation members voluntarily stopped harvesting Chisana caribou and there continues to be no legal harvest of Chisana caribou in the Yukon.

In 2010, the State of Alaska Board of Game approved a hunt for residents and nonresidents from September 1 through 30 on the CCH for one bull by drawing permit. The hunt is authorized in the portion of Unit 12 within the White River drainage and that portion within the Chisana River drainage upstream from the winter trail that runs southeast from Pickerel Lake to the Canadian Border (5 AAC 85.025(a)(7). However, on Federal Public Land the Federal closure supersedes the existing State regulation and thus Federal public lands are closed to hunting of the CCH under State regulations at this time.

In 2012, the combined proposals WP10-104 and WP12-65/66 were addressed by the Federal Subsistence Board (Board). WP10-104 requested establishment of a joint Federal/State draw permit for the CCH in Unit 12 with a harvest limit of one bull and a season of Sept. 1 – Sept. 30. WP12-65 requested establishment of a Federal registration hunt for the CCH with a harvest limit of one bull and a season of Aug. 10 – Sept. 30, while WP12-66 requested establishment of a Federal registration hunt with a harvest limit of one bull and a season of Sept. 1 – Sept. 30, with the hunt restricted to Federal public lands in Unit 12 east of the Nabesna River and the Nabesna Glacier. The Board took no action on WP10-104 and WP12-65 and adopted WP12-66 with modification to list the communities allowed to harvest caribou in Unit 12, that portion east of the Nabesna River and Nabesna Glacier, and lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border: Northway, Mentasta, Tetlin, Tok, Chisana, and Chistochina . The authority to manage the Federal hunt was granted by delegation of authority to the Wrangell-St. Elias National Park and Preserve Superintendent by letter of delegation from the Board. Proposal WP12-68, submitted by the Cheesh'na Tribal Council, requested the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination. The Board adopted the proposal.

Biological Background

A five-year management plan for the CCH has been developed through a cooperative effort between 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. The plan was finalized in October of 2012 and provides a framework for monitoring the CCH population and criteria for implementing a hunt through 2015. In addition to a stable or increasing population trend, the plan also requires the observed bull:cow ratio be no less than 35 bulls per 100 cows with a three year calf:cow ratio above 15 calves per 100 cows. If the CCH population falls below these guidelines, no harvest will be allowed. If population goals indicate a harvest is sustainable, the plan calls for an annual bulls-only harvest not exceeding 2% of the estimated population, with the harvest being equally distributed among the Yukon and Alaska. Harvest allocation within Alaska would be determined through the respective Federal and State regulatory process (Chisana Caribou Herd Working Group 2012).

The CCH is a small, nonmigratory herd inhabiting eastcentral Alaska and southwestern Yukon, Canada on the Klutlan Plateau and near the headwaters of the White River. Genetic analysis conducted by Zittlau et al. (2000) indicated that the herd is genetically similar to woodland caribou herds and that the genetic distance between the CCH and five other nearby caribou herds was large, suggesting that herd has been distinct for thousands of years. Little is known about CCH population trends prior to the 1960s. The herd was first surveyed in 1977 and has been continuously tracked since 1988. Since this tracking began, the majority of Chisana caribou have been located east of the Nabesna River (Bentzen 2011).

The CCH increased through the 1980s and reached a peak of 1,900 caribou in 1988. Beginning in 1990, the CCH experienced a decline in population size. Concern over the decline led to implementation of an intensive captive rearing program in Canada, conducted between 2003 to 2006 by USGS and the Canadian Wildlife Service. The recovery effort was designed to increase recruitment and calf survival resulting in overall population growth. The radio-collaring program intensified in 2003 as a result of the captive rearing program, and survey methods became more effective, therefore sex and age composition and herd size estimates before and after 2003 are not comparable (**Table 1**). Past declines were attributed to poor calf recruitment and high adult mortality associated with adverse weather conditions, poor habitat and predation (Gross 2007). Results from the 2010 census show the CCH population is stable, with an estimated herd size of 682 caribou (Chisana Caribou Herd Working Group 2012) (**Table 1**). The 3-year average bull:cow ratio of 43:100 is above the minimum 35:100 ratio stated in the Management Plan. The number of calves in the herd increased in 2010, but decreased again in 2011 and 2013. The 3-year average calf:cow ratio of 18:100 is above the minimum 15:100 ratio set in the Management Plan. However, the last population estimate was done in 2010, and no surveys or composition counts were conducted in 2012 due to adverse weather conditions. A population estimate for 2013 is not yet complete (Putera 2013, pers. comm.), so use of four year old data to make management decisions must be done with caution given the tenuous nature of this herd.

Table 1. Fall sex and age composition of the Chisana Caribou Herd, 2000-2013 (Chisana Caribou Herd Working Group 2012, Putera 2014).

Date	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size
2000[a]	20	6	5	80	15	412	425
2001[a]	23	4	3	79	18	356	375
2002[a]	25	13	10	72	18	258	315
2003[b]	37	25	15	62	23	603	720
2005[b]	46	23	14	59	27	646	706
2006[b]	48	21	13	59	28	628	N/A
2007[b]	50	13	8	61	30	719	766
2008	44	21	13	61	27	532	N/A
2009	48	15	9	61	30	505	N/A
2010	42	23	14	61	25	622	682
2011	38	16	14	66	25	542	N/A
2013	49	16				631	N/A

[a] Surveys conducted by ADF&G based on a visual search of the herd range.
[b] USGS survey results.

Harvest History

The CCH has historically been an important food source for the Athabascans of Alaska and the First Nations of the Yukon in Canada (Gross 2007). During the early to mid-1900s, the CCH was used as a subsistence food source by the Ahtna and Upper Tanana Athabascans. Although subsistence hunting has declined in recent years, the CCH continues to be an important aspect of Upper Tanana and Ahtna Athabascan culture. Subsistence use of the CCH declined after 1929. For the last 60 years, few people in Alaska or the Yukon have depended on the CCH as a food source (Bentzen 2011), although First Nation members continued to harvest from the CCH in the Yukon through the 1990s.

In addition to providing an important subsistence resource, in the late 1920s, Chisana caribou became economically important to local hunters as guided hunting became common in the Chisana area. The caribou from the Chisana herd were harvested by nonresident hunters guided by local guides through 1994 when hunting was closed. Primarily five guide/outfitters hunted the herd (4 operated in Alaska and 1 in the Yukon). Bulls were desired by sport hunters because of their large stature. From 1990-1994, 43% of the hunters participating in hunting CCH were nonresidents, who took 58% of the harvest. Local subsistence users accounted for 9% of the harvest during that time period (Gross 2007).

At its January 2012 meeting the Federal Subsistence Board (Board) authorized a limited harvest of the CCH consistent with the herd's management plan. The Board delegated authority to the Wrangell-St. Elias National Park and Preserve Superintendent to open the season, announce the harvest quota, the number of permits to be issued and the reporting period, and to close the season. Based on the estimated population size and the guidance in the management plan, the harvest quota for the 2012 was set at seven animals.

The National Park Service met with participating communities and associated tribal governments and other stakeholders to ask for their input regarding permit distribution. As a result, a decision was made to allocate two permits to each of the four eligible communities with federally recognized tribal governments (Chistochina, Mentasta Lake, Northway, and Tetlin) with the understanding that all community residents, not just tribal members, would be considered for permit distribution. Any remaining permits would be made available to Tok and Chisana residents on a first come-first served basis. The number of permits was limited to fourteen and the reporting period requirement was set at within three days of harvest. Nine permits were issued and three animals were harvested (Cellarius 2013).

Effects of the Proposal

If this proposal is adopted, it would modify the existing fall hunting season, changing it from Sept. 1 – Sept. 30 to Aug. 10 – Sept. 20 and would also establish a winter season from Feb. 1 – Mar. 31 as well as requiring all edible meat to remain on the bone until out of the field or processed for human consumption. Making the fall season earlier should help alleviate some of the concerns users have about quality of meat later in the fall during the rut, while a meat on the bone requirement will ensure that all edible meat is removed from the field. A winter season would give Federally qualified users better access to the CCH in a remote area through the use of snowmachines and create more hunting opportunities as well.

OSM CONCLUSION

Support Proposal WP14-49 **with modification** to change the fall season to the dates requested in the proposal, but not establish a winter season.

The modified regulation should read:

> ***_.26(n)(iii) You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of the caribou until you remove the meat from the field or process it for human consumption.***
>
> **Unit 12 - Caribou**

Unit 12 – that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – 1 bull by Federal registration permit only.	*~~Sept. 1~~**Aug. 10** – Sept. ~~30~~**20***

> *Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok.*

Justification

The current data on the CCH indicate a population that is stable. In addition, bull:cow and cow:calf ratios are above the minimum thresholds established in the management plan for the herd. However, the most recent survey data is three years old and management decisions should be conservative in nature. Moving the fall season dates to earlier in the season should satisfy the proponents concerns about quality of meat so close to the rut and having a meat on the bone requirement should help ensure that all edible meat is removed from the field. A winter hunt would be provide easier access to hunters and thus increase hunting success. However, establishment of a winter season is not advisable at this time due to a lack of more recent population estimate.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support WP14-49 **with modification** (based on the SRC suggested modifications) to make the fall season Aug 10 –Sept 30, there would be no winter season and there would be no meat on the bone requirement. The proposed regulation will be beneficial to subsistence users. Conservation of the herd is not a concern, not supporting a winter portion season, takes away any conservation concern issues.

Eastern Interior Subsistence Regional Advisory Council

Support WP14-49 **with modification.** The Council discussed the proposal and heard a full briefing from OSM and NPS staff and voted to support the proposal with the following modifications which were also recommended by the Wrangell-St. Elias Subsistence Resource Commission:

(a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted.

The Council supported extended fall hunt subsistence opportunity since total harvest is controlled by limited permits but the hunt area is difficult to access. The extended fall season would support local hunters taking a caribou in cooler weather but is still before the rut.

The Council expressed concern that a winter hunt would cause additional stress to the caribou herd during an already difficult time of year and concurred with the Park Service that loss of antlers in winter makes it difficult to differentiate male from female. The Council expressed concern over the small population size of this herd and ongoing conservation efforts in both the US and Canada and felt it could not support a winter hunt.

The Council feels individual hunters should be able to decide whether to keep meat on the bone and should know how to handle to meat well to prevent spoilage. The large size of the animals and remote location may be difficult to pack out all bones, hunters who wish to keep bones may do so but it gives an option to leave some bones behind if needed.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-49: We support Proposal 14-49 to "modify the season dates for the Unit 12 caribou hunt that takes place east of the Nabesna Road and Glacier and south of the Winter Trail", with a fall season from August 1Oth to September 20th and adding a winter season from February 1 to March 31st. Changing the Unit 12 Caribou season dates in this area will provide for subsistence needs. Federally qualified subsistence users will be able to access hunting areas to harvest a caribou during the winter months. Snow machines could be used to hunt with during the winter months to harvest a Unit 12 caribou in this remote, inaccessible area.

Ahtna Inc. Customary and Traditional Use Committee

Neutral Proposal WP14-49: Requests that if the proposal submitted by Gillam Joe recommending an additional winter hunt period is adopted, that the language similar to WP14-45 be added to include all qualified residents of the hunt area in any future hunts.

Jessica Braga, Ptarmigan Lake

Oppose Statewide Proposal WP14-49: There should not be a Chisana caribou herd harvest for the following concerns:

- With the limited biological data (three years old) the current caribou hunt in Unit 12 should not take place. The lack of recent bull-cow or cow-calf rations does not support a harvest let alone a proposed winter hunt.

- The past history of poor calf populations, adverse weather conditions, limited winter habitat and calf predation do not support this hunt with limited biological data.

- The continued harvest of Chisana caribou would reduce the current small population that basically stays in a small habitat area.

- There has not been any caribou hunting since 1994 due to declining population. To my knowledge the Yukon Territory Canada First Nation members have stopped the harvest of the Chisana caribou herd due to the small population.

- Harvest information indicates that most of the past harvest was taken by non-residents and only nine percent by subsistence users.

- A proposed winter hunt is questionable with only three year old data on a small herd.

- A hunt will potentially displace the caribou from their limited natural winter habitat and cause more stress.

- If a hunt takes place current survey information is critical to the herd dynamics and future growth.

- If the proposed hunt takes place Ahtna Native members should be given priority for customary and traditional use of the caribou resource similar to First Nation People in the Yukon Territory.

Jim Hannah, retired Chitina District Ranger/Pilot

Wrangell-St. Elias National Park
Subsistence Resource Commission
P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

RECEIVED

November 1, 2013

Tim Towarak, Chair
Federal Subsistence Board
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage, AK 99503

Dear Chairman Towarak:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Chistochina on October 29 and 30, 2013. The SRC reviewed the federal subsistence wildlife proposals for the Wrangell-St. Elias area being considered for the 2014-2016 regulatory cycle and would like to provide comments for the following proposals:

WP14-01: Require trap marking, trap checks every 6 days, and harvest reports (statewide)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously opposes the proposal. A statewide proposal that would make federal trapping regulations more restrictive than state regulations is not needed. Additionally, enforcing the requirement that traps be checked every six days would be difficult. If there are local problems with trappers, those problems should be addressed locally, for example by talking to the protection officer for the area. The Alaska Department of Fish and Game's annual trapper survey already collects considerable information from trappers in Alaska, and an additional reporting requirement is not needed.

WP14-14: Revise customary and traditional use determination for goat in Unit 11 to include residents of Kenny Lake
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal. Kenny Lake is surrounded on all sides by other rural communities that have a positive customary and traditional use determination (C&T) for goat in Unit 11, and Kenny Lake residents already have C&T for most other large mammal species in Unit 11. The data presented in the analysis as well as common sense support recognizing Kenny Lake as having a positive C&T for goat in Unit 11.

WP14-15 & 45: Revise list of communities and areas eligible to hunt caribou in the SE portion of Unit 12 (Chisana herd)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports WP 14-15 as written. The SRC supported the inclusion of Nabesna during the initial ANILCA

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

Section 804 analysis and continues to support its inclusion in the list of communities most dependent on this resource. Adding residents of the hunt area outside of Chisana is common sense. They live in a remote area with limited access to other resources and should be able to harvest a resource in their own back yards. The commission took no action on WP14-45.

WP14-16: Establish a winter moose hunt in the southern portion of Unit 11

The Wrangell-St. Elias National Park Subsistence Resource Commission supports the proposal with modification to add to the delegation of authority the ability to limit the number of permits and to announce the reporting period. This season would provide additional subsistence opportunity on a moose population that is difficult to access during the existing fall season and consequently lightly harvested. The delegation of authority to the park superintendent to open the season; announce the harvest quota, number of permits to be issued and reporting period; and close the season would provide the tools needed to limit the harvest to a sustainable level and thereby address any conservation concerns. Educational material could be provided to the permittees about how to distinguish antlerless bulls from cows and such a handout could also remind hunters not to harass the animals with their snowmachines.

WP14-49: Revise the season dates for the caribou hunt in the SE portion of Unit 12 and add a meat-on-the-bone salvage requirement (Chisana herd)

The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with the following modifications: (a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted. Expanding the fall season would provide additional subsistence opportunity. Hunters who prefer to hunt during August, well before the rut, would be able to do so. And hunters for whom meat storage is easier later in the season when the weather is cooler could hunt in late September. Establishing a winter season is not supported at this time due to the small harvest quota and lack of good data about where the animals are during the winter. Regarding the meat-on-the-bone requirement, there is no evidence of a meat spoilage problem, and SRC members agree that individual hunters should be able to decide whether or not to keep the meat on the bone. Hunters who make use of the bones or otherwise prefer to keep the meat on the bone would have the option to do so, but hunters who harvest meat in locations that require long distance packing would have the option of leaving some of the bones behind.

Thank you for the opportunity to comment.

Sincerely,

Karen Linnell

Karen Linnell
Chair

cc: NPS Alaska Regional Director
Superintendent, Wrangell-St. Elias National Park and Preserve
Southeast, Southcentral and Eastern Interior Regional Advisory Councils
Governor of Alaska

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

WP14-51 Executive Summary	
General Description	Proposal WP14-51 requests that the Red Sheep and Cane Creek drainages be opened to non-Federally qualified subsistence users Aug. 10 – Sept. 20 in the Arctic Village Sheep Management Area (AVSMA) of Unit 25A, and that person hunting within the Red Sheep Creek/Cane Creek portion of the AVSMA of Unit 25A possess proof of completion of a department-approved hunter ethics and orientation course (to include land status and trespass information) upon hunting in this area. *Submitted by the State of Alaska.*
Proposed Regulation	*Unit 25A — Arctic Village Sheep Management Area — 2 rams by Federal registration permit only. Federal public lands**, except the drainages of Red Sheep Creek and Cane Creek during the period of Aug. 10–Sept. 20 in accordance with State regulation 5AAC 92.003(i),** are closed to the taking of sheep except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik hunting under these regulations.*[1] Aug. 10 –Apr. 30 [1] *5 AAC 92.003 Hunter education and orientation requirements. (i) Before a person hunts within the Red Sheep Creek/Cane Creek portion of the Arctic Village Sheep Management Area of Unit 25A, that person must possess proof of completion of a department-approved hunter ethics and orientation course, including land status and trespass information.*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**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 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	**1 Oppose**

STAFF ANALYSIS
WP14-51

ISSUES

Proposal WP14-51, submitted by the State of Alaska, requests that the Red Sheep and Cane Creek drainages be opened to non-Federally qualified subsistence users Aug. 10 – Sept. 20 in the Arctic Village Sheep Management Area (AVSMA) of Unit 25A, and that person hunting within the Red Sheep Creek/Cane Creek portion of the AVSMA of Unit 25A possess proof of completion of a department-approved hunter ethics and orientation course (to include land status and trespass information) upon hunting in this area.

DISCUSSION

In January 2012, the Federal Subsistence Board closed the Red Sheep Creek and Cane Creek drainages to sheep hunting except by Federally qualified residents of Arctic Village, Venetie, Fort Yukon, Kaktovik and Chalkyitsik. The proponent states that the Red Sheep and Cane Creek drainages were closed unnecessarily. The proponent further states that the area was closed because of user conflicts focused mainly on issues of trespass. The proponent proposes lifting the closure to non-Federally qualified users and requiring hunters to complete an ethics and orientation course prior to hunting sheep in the Red Sheep and Cane Creek drainages. The Alaska Board of Game adopted an ethics and orientation course requirement to safeguard against user conflicts in this area in March 2012. The proponent states that an ethics and orientation course would alleviate the need for closing the Red Sheep Creek and Cane Creek drainages to non-Federally qualified sheep hunting.

Title VIII, § 815(3) of the Alaska National Interest Lands Conservation Act (ANILCA) addresses the restriction on the take of fish and wildlife for nonsubsistence uses. The Secretaries have empowered the Federal Subsistence Board (Board) to implement Title VIII of ANILCA. Title § 815(3) of ANILCA states,

> *Nothing in this title shall be construed as—*
>
> *(3) authorizing a restriction on the taking of fish and wildlife for nonsubsistence uses on the public lands (other than national parks and park monuments) unless necessary for the conservation of healthy populations of fish and wildlife, for the reasons set forth in §816, to continue subsistence uses of such populations, or pursuant to other applicable law;*

The Board's 2007 closure policy notes the following:

> Proposed closures of Federal public lands and waters will be analyzed to determine whether such restrictions are necessary to assure conservation of healthy populations of fish and wildlife resources or to provide a meaningful preference for qualified subsistence users. 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).

The full closure policy is included as **Appendix A**.

Existing Federal Regulation

Unit 25A — Sheep

Unit 25A — Arctic Village Sheep Management Area – 2 rams by Federal registration permit only. Federal public lands are closed to the taking of sheep except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik hunting under these regulations.	*Aug. 10 – Apr. 30*

Proposed Federal Regulation

Unit 25A — Sheep

*Unit 25A — Arctic Village Sheep Management Area — 2 rams by Federal registration permit only. Federal public lands**, except the drainages of Red Sheep Creek and Cane Creek during the period of Aug. 10–Sept. 20 in accordance with State regulation 5AAC 92.003(i),** are closed to the taking of sheep except by rural Alaska residents of Arctic Village, Venetie, Fort Yukon, Kaktovik, and Chalkyitsik hunting under these regulations.*[2]	*Aug. 10 – Apr. 30*

Existing State Regulations

Unit 25A — Sheep

Residents, one ram with full-curl horn or larger	*Aug. 10 –Sept. 20*
OR	
Three sheep by permit available online at hunt. alaska.gov or in person in Fairbanks and Kaktovik beginning Sept. 19. The use of aircraft for access to hunt sheep and to transport harvested sheep is prohibited in this hunt except into and out of the Arctic Village and Kaktovik airports.	*Oct. 1 – Apr. 30*

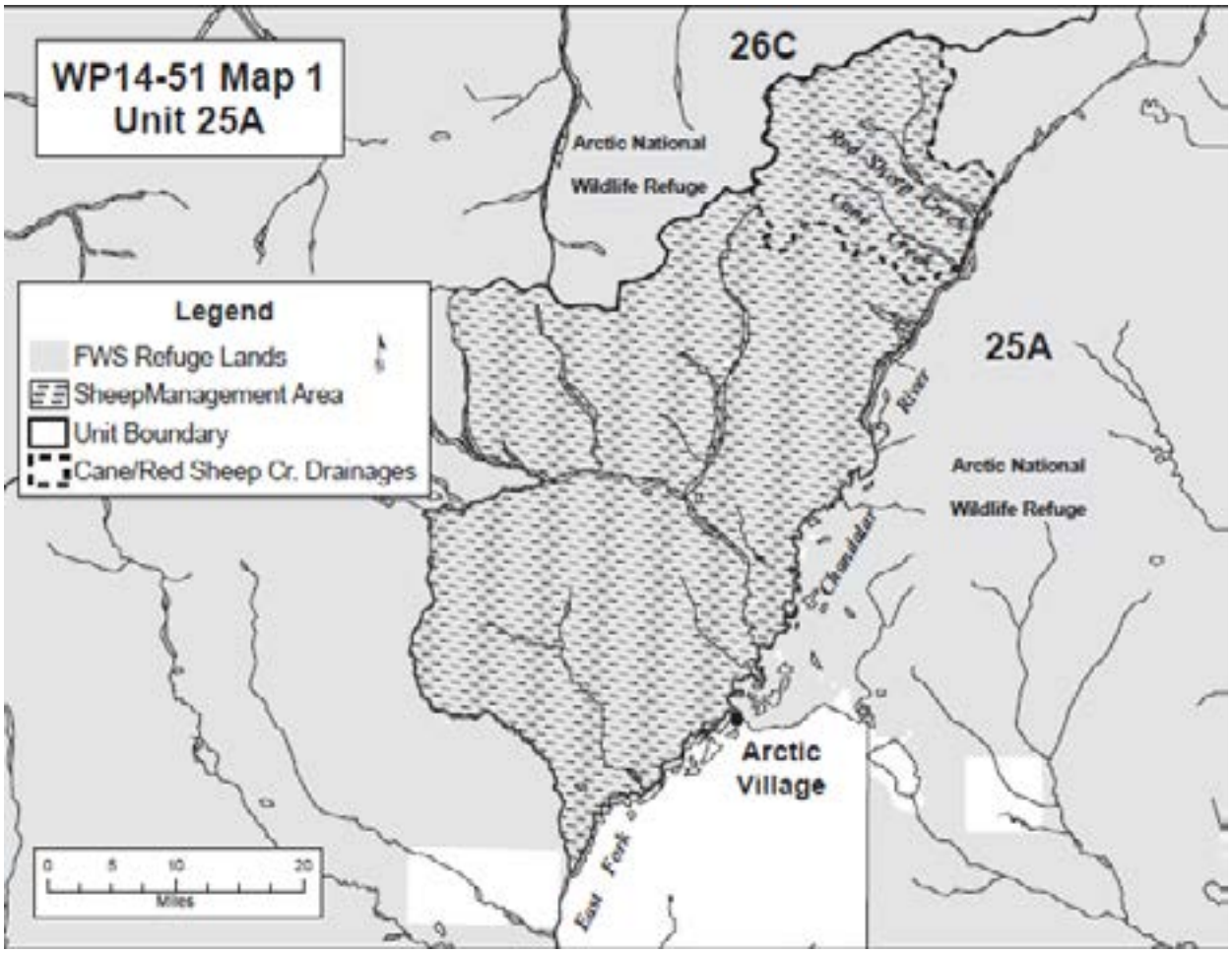
[2] 5 AAC 92.003 Hunter education and orientation requirements. (i) Before a person hunts within the Red Sheep Creek/Cane Creek portion of the Arctic Village Sheep Management Area of Unit 25A, that person must possess proof of completion of a department-approved hunter ethics and orientation course, including land status and trespass information.

No motorized access from the Dalton Highway.

One ram with full-curl or larger for nonresidents *Aug. 10 – Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 76% of Unit 25A and consist of 74% U.S. Fish and Wildlife Service managed lands and 2% Bureau of Land Management managed lands (**Map 1**).



Customary and Traditional Use Determinations

Residents of Arctic Village, Chalkyitsik, Fort Yukon, Kaktovik, and Venetie have a positive customary and traditional determination for sheep in Unit 25A.

Regulatory History

The opening and closing of the Red Sheep and Cane Creek drainages in the Arctic Village Sheep Management Area (AVSMA) to non-Federally qualified subsistence users have been before the Federal

Subsistence Board (Board) nine times since 1991. The issue has been contentious. See **Map 1**.

In 1995, the AVSMA, which is closed to all but Federally qualified subsistence users, was expanded to include the Red Sheep and Cane Creek drainages. The initial closure was established to provide for continued subsistence use of sheep in the area (FSB 1995). In 2006, the Board addressed Proposal WP06-57, submitted by Alaska Department of Fish and Game (ADF&G), which requested removal of the Federal closure within the AVSMA. The Board rejected the proposal in May 2006, but requested that the Arctic National Wildlife Refuge staff conduct a sheep population survey within the affected area. The Board intended to revisit the issue at its May 2007 meeting, pending the results of a population survey and a revised analysis.

In July 2006, the U.S. Fish and Wildlife Service submitted Special Action WSA06-03, which requested that the closure to non-Federally qualified users for harvesting sheep in the Red Sheep and Cane Creek drainages be lifted during the Aug. 10–Sept. 20 portion of the 2006 season. This request followed a commitment by the Board to address the closure following completion of a sheep population survey. Results of the survey found that the sheep population in these drainages was healthy, so the Board adopted the Special Action to lift the closure effective for the 2006 season. Subsequent to action on Special Action WSA06-03, ADF&G submitted Proposal WP07-56, which requested lifting the Federal closure within the Red Sheep and Cane Creek drainages. The Board adopted this proposal in May 2007 because sheep populations in these drainages were determined to be healthy (FSB 2007:305).

In January 2012, the Board adopted wildlife proposal 12-76 to close the Red Sheep and Cane Creek drainages to non-Federally qualified subsistence users for sheep hunting. Both the Eastern Interior and the North Slope Regional Advisory Councils supported this closure. Eight Arctic Village residents testified in favor of the closure in person at the Eastern Interior Council meeting and ten residents testified by teleconference; four people testified in favor of the closure at the Board meeting (FSB 2012:191). The Yukon Flats Fish and Game Advisory Committee supported closing the area. One Board member (the Regional Director of the U.S. Fish and Wildlife Service) emphasized at the Board meeting that the Red Sheep and Cane Creek area falls entirely within the Arctic National Wildlife Refuge or Native allotments. He made a motion to support the closure with the following in his justification: 1) "Pressure from non-local hunting is affecting the use of and access to traditional prime sheep hunting areas and camp area[s]"; 2) the State's proposal to require hunter education and ethics orientation did not "go far enough"; 3) the activities in the area by non-Federally qualified users "have resulted in displacement of sheep, pushing them out of range which has then prevented Federal subsistence hunters from being able to harvest sheep"; and 4) the Arctic National Wildlife Refuge staff supports the closure (FSB 2012:224-226). The Board passed the motion.

For additional regulatory history on this closure see **Appendix B**.

Current Events Involving Species

At the Eastern Interior Subsistence Regional Advisory Council in Fairbanks, Alaska in November of 2013, Hollis Twitchell, the Assistant Refuge Manager and Pilot with the Arctic National Wildlife Refuge, discussed issues related to the Red Sheep and Cane Creek drainages. Mr. Twitchell spent several weeks in

the area in August and September of 2012 to conduct law enforcement activities. There was a concern that non-Federally qualified hunters might access the closed area that summer since the State hunting regulations handbook had neglected to include information about the area being closed to sheep hunting for those users. Mr. Twitchell did end up making contact with a group that was actively hunting in the Red Sheep drainage. They did not harvest any sheep and left the area after being informed of the closure. Another party was contacted in relation to a trespass issue on a native allotment in the area. Similar work was carried out during the summer of 2013. Eight to ten parties were dropped off in the area and they hiked up the drainages to access other portions of the refuge. Therefore, the closed area continues to be used by non-Federally qualified users as an access point to other areas (Twitchell, pers. comm. 2013).

Biological Background

The current ADF&G management objectives for the Unit 25 sheep population are to manage for a maximum sustainable harvest of Dall sheep rams with full-curl or larger horns (Caikoski 2011).

Surveys were conducted in 2006, 2007, 2008, and 2012 within the Red Sheep and Cane Creek drainages. Densities of sheep have remained stable with a density of 1.7 sheep/mile^2 in 2006 (Payer 2006) and 1.8 sheep/mile^2 in 2012 (Wald 2012). In 2006, a total of 188 sheep were counted from Red Sheep and Cane Creek, while 197 sheep were counted in 2012. Although densities of sheep in the area are low relative to other areas in the Brooks Range, this is probably a reflection of the poor habitat quality of the area (Payer 2006). In 2008, during a sheep population-composition survey, 130 sheep in 20 groups were observed (Payer 2008) with a ratio of 59 lambs:100 ewes, suggesting good productivity. A 2012 survey from Red Sheep to Cane Creek counted 113 ewe-like animals, 35 lambs, 35 "other" rams, and 14 mature rams (Wald 2012).

In 1991, the density of Dall sheep in the Red Sheep and Cane Creek drainages was estimated to be 2.25 sheep/mile^2 (Mauer 1996), which was higher than that found during surveys in 2006 (1.7 sheep/mile^2 and 2012 (1.8 sheep/mile^2). The sheep population may have declined during this interval despite harvest restrictions for non-Federally qualified users. This is consistent with trends observed in other Brooks Range sheep populations, and likely reflects incomplete recovery from weather-related declines during 1990–1994 (Mauer 1996). Thirty-two of 96 rams (33%) were classified as "mature" in the 2006 survey (Payer 2006) and 6 of 14 rams (43%) were classified as "mature" in the 2007 survey. The "mature" category included rams with full-curl horns as well as larger-bodied rams having horns with massive bases and horn tips pointing upwards. These latter rams may have been less than full curl, but could not be differentiated from full-curl rams from a fixed-wing aircraft.

Mauer (1996) estimated sheep density in the southern part of the AVSMA between Cane and Crow Nest Creeks to be only 0.2 sheep/mile^2. Most of the sheep that Mauer (1996) observed in this area were clustered around mineral licks between Crow Nest and Ottertail Creeks. Similarly, Payer (2006) surveyed the area between Ottertail and Crow Nest Creeks (but not the remainder north of Ottertail Creek to Cane Creek), and observed 87 sheep, 85 of which were associated with two mineral licks.

There are significant differences in sheep abundance and distribution within the AVSMA (Mauer 1990). Specifically, the region north of Cane Creek has supported a sheep density approximately eight times greater than the region between Crow Nest and Cane Creeks. This is probably related to differences in geology and vegetation; shale formations that occur more commonly north of Cane Creek support more vegetation and therefore this area supports more sheep (Smith 1979).

Harvest History

Arctic National Wildlife Refuge staff members have engaged in outreach efforts to encourage Federally qualified users to document their harvests in general, as well as their use of the AVSMA for sheep hunting. Nonetheless, data on reported use of the AVSMA by Federally qualified users is sparse, and just how many sheep are harvested by Federally qualified subsistence users in the AVSMA is not known. Compliance with the harvest permit system is generally low for residents of Arctic Village, consistent with harvest reporting in other parts of rural Alaska (cf. Andersen and Alexander 1992). A total of six Federal permits to harvest sheep in the AVSMA sheep were issued between 1991 and 2004; none were returned (USFWS 2007). Between 2005 and 2007, 27 Federal registration permits were issued for the AVSMA; 4 sheep were reported harvested and 23 harvest reports were not returned. No permits were issued in 2008 and 2009. Four permits were issued in 2010 for the AVSMA, and of these, one sheep was reported harvested (USFWS 2011).

Some information from household surveys is available on sheep harvests by Arctic Village, Fort Yukon, and Kaktovik residents (**Table 1**), although the data does not specify location of harvest. ADF&G household survey data indicates that Arctic Village residents harvested three sheep in 1993, one in 1996, and five in 1997 (**Table 2)** (ADF&G 2011). Dinero (2003) reported that 5 (14%) of 35 Arctic Village households (out of 40 total households in the community) harvested sheep during the year of his study (1998–1999). At the Board meeting in January 2012, Bob Childers noted that typically between two and five sheep are harvested each year. He also noted that adult rams are generally harvested, although elders prefer ewes or younger sheep because they are easier to eat (FSB 2012:193). Giddeon James from Arctic Village testified that there are about two to four good sheep hunters, who then share what they harvest with the Arctic Village residents as well as other villages, including Ft. Yukon (FSB 2012:202).

Harvest success by non-Federally qualified hunters in Red Sheep and Cane Creek drainages averaged 69% from 2006 to 2009 (2010 data not yet available). Sheep harvests under State regulations ranged from 2–7 sheep annually between 2006 and 2009 (**Table 3**). However, between 2006, when the Red Sheep and Cane Creek drainages were re-opened, and 2009, a total of 18 rams were harvested by non-Federally qualified hunters (Payer 2011, pers. comm.).

Table 1. The use and harvest of Dall sheep based on household surveys (ADF&G 2011).

		Percentage of Households					Dall Sheep Harvest				
Community	Study Year	Using Sheep (%)	Hunt-ing Sheep (%)	Harvest-ing Sheep (%)	Giving Sheep (%)	Receiv-ing Sheep (%)	Reported (Number)	Expanded to House-holds Not Surveyed (Number)	Lower Estimate (Number)	Higher Estimate (Number)	95% Con-fidence Interval (+/- %)
Arctic Village	1997							5			
	1996							1			
	1995							0			
	1994							0			
	1993							3			
Fort Yukon	1998							0			
	1997							0			
	1996							0			
	1995							0			
	1994							0			
	1993							0			
	1987	9	3	0	0	9	0	0	0	0	0
Kaktovik[a]	1992	70		28	32	64	33	44	32	56	27
	1986	75		9	9	68	15	17	10	24	41
	1985	79		21	21	74	37	47	28	66	40

Blank cell=question not asked or information not available.

[a] The majority of the harvest of Dall sheep by residents of Kaktovik was in Unit 26 (Jacobson and Wentworth 1982).

Table 2. Summary of Dall Sheep Harvests from Household Surveys in Arctic Village 1993-1997 ADF&G 2011, CSIS Database

Community Name	Study Year	Resource	Percent Harvesting	Percent Receiving	Units	Estimated Harvest	Estimated Pounds Harvested
Arctic Village	1993	Dall Sheep	unkwn	unkwn	Individual	3	312
Arctic Village	1993	Dall Sheep, Male	unkwn	unkwn	Individual	3	312
Arctic Village	1996	Dall Sheep	unkwn	unkwn	Individual	1	104
Arctic Village	1996	Dall Sheep, Male	unkwn	unkwn	Individual	1	104
Arctic Village	1997	Dall Sheep	unkwn	unkwn	Individual	5	520
Arctic Village	1997	Dall Sheep, Sex Un-known	unkwn	unkwn	Individual	5	520

Table 3. Summary of Dall Sheep Harvest for Red Sheep & Cane Creek Drainages under State regulations ADF&G 2011

Year	Number Hunters	Number Successful Hunts
2006	9	7
2007	5	5
2008	8	4
2009	4	2
2010	Not yet available	
Average	6.5	4.5

Subsistence Considerations

Of the five communities with recognized customary and traditional uses of Dall sheep in Unit 25A, the residents of Arctic Village have the strongest ties to and are the primary users of the Red Sheep and Cane Creek drainages (USFWS 1993; see also Reed et al. 2008, Gustafson 2004, Dinero 2003). Sheep hunting is a "longstanding" tradition for Arctic Village residents, most of whom are Gwich'in Athabascan (Caulfield 1983:68; Dinero 2003; Gustafson 2004; EIRAC 2006, 2007, 2011), and the Red Sheep and Cane Creek areas have been a longstanding focus of this activity. Sheep are a prestigious subsistence resource and providing sheep meat to the community is highly respected (cf. Caulfield 1983 and Dinero 2003 for discussion). Sheep are also known as an important "hunger food," that is, a food source that is critical when caribou are unavailable (Caulfield 1983, Dinero 2011, pers. comm.; Gilbert 2011, pers. comm.). Local people report increasing uncertainty of caribou migrations in recent years, declining quality of caribou meat, and increasing difficulty and travel distance to obtain moose in recent years: in light of this, local residents claim that sheep are an increasingly important resource (Gilbert 2011 pers. comm.; Swaney 2011, pers. comm.) As noted by one prominent elder, "…when we have no caribou, that's the time we have to go up [to get sheep]" (Gilbert 2011, pers. comm.).

The public record supports the fact that Arctic Village residents have a long history of using the Red Sheep and Cane Creek drainages, and that it continues be a culturally significant area to them. Extensive discussion included in previous proposal analyses (cf. Proposal 58 in 1993, Proposal 54 in 1994, and Proposal WP14-51 in 2012) pointed to regular use of these drainages by residents of Arctic Village (USFWS 1993, 1995). Gustafson (2004), in study of traditional ecological knowledge, discusses the importance and continued use of the Red Sheep Creek Area for sheep hunting. Testimony by Arctic Village residents in 2006, 2007, and 2011 at the Eastern Interior Regional Advisory Council meeting about hunting in the Red Sheep and Cane Creek drainages demonstrates continued hunting in these areas. Discussions with Refuge Information Technicians from Arctic Village, other Arctic National Wildlife Refuge staff, researchers working in the area, and subsistence hunters from Arctic village also confirm continued sheep

hunting in the Red Sheep and Cane Creek drainages (Bryant 2011, pers. comm.; Dinero 2011 pers. comm.; Mathews 2011, pers. comm.; John 2011, pers. comm.).

The trip from Arctic Village to Red Sheep Creek is over 100 miles and residents use great effort both physically and economically to hunt sheep in these drainages (Bryant 2011, pers. comm., John 2011, pers. comm., Gilbert 2011, pers. comm., Swaney 2011, pers. comm.). The residents of Arctic Village have repeatedly expressed concerns about non-Federally qualified users hunting sheep in Red Sheep and Cane Creek drainages and have provided testimony and public comment at numerous Council and Federal Subsistence Board meetings to attest to the importance of Red Sheep Creek, to describe their use of the area, and to explain that the presence of non-Federally qualified users has affected their access and reduced their harvest opportunities (EIRAC 2006, 2007, 2011; FSB 1991, 1995, 2006, 2007, and 2011; USFWS 1993, 1995, 1996, 2006, 2007; Swaney 2011, pers. comm.; Gilbert 2011, pers. comm.; John 2011, pers. comm.; and see **Appendix B**).

Among the Gwich'in, there is a story about how Red Sheep Creek was named which illustrates the link between subsistence and religious practices and beliefs. It also underscores the importance of this area to the residents of Arctic Village. The story relates Red Sheep Creek to the Episcopalian Church, an influential factor in establishing Arctic Village, and sheds some light on why Arctic Village residents consider Red Sheep Creek a revered place (Dinero 2007, 2011, pers. comm.). The story begins with people who were hungry. One day at the church someone spotted caribou moving in the brush. Upon closer inspection people realized they were looking at unusual sheep with red markings, or what many say were crosses on their coats. The next day, the people followed the red sheep far into the mountains where they were finally able to harvest them. The hides of the sheep were kept and passed down because of their distinctive markings (Dinero 2011, pers. comm.). The story of the red sheep links a prestigious subsistence resource (sheep) to traditional and modern beliefs and practices, and demonstrates the complementary nature of subsistence to place, tradition, culture, and modern beliefs.

Traditionally Arctic Village residents have harvested sheep in early fall (late August or early September) or in early winter (November) (Caulfield 1983; FSB 2007). "Sheep taste best in the fall," as documented in earlier research (USFWS 1994:353, Proposal 54). Residents generally travel to hunt sheep by boat, then by foot from hunting camps in the fall or by snowmachine in late fall, but not in winter given the dangerous terrain and winter weather (USFWS 1993, Proposal 58).

Arctic Village residents have commented that allowing non-Federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek during the time when Arctic Village residents customarily and traditionally harvested sheep (with the exception of November) affects Arctic Village residents' ability to access an important sheep hunting area. Since 1993, Arctic Village residents have noted to the Board that plane traffic and use by non-Federally qualified users have interfered with their ability to successfully hunt sheep in the Red Sheep and Cane Creek drainages. Residents reported that plane fly-overs "spooked" sheep and that, "older rams can climb to higher elevations, making them more difficult to hunt" (USFWS 1993: 4, Proposal 58; see also USFWS 1994, Proposal 54 for additional discussion). Giddeon James from Arctic Village explained that Red Sheep and Cane Creek are both very narrow valleys, and consequently flights through the area disturb the sheep (FSB 2012:201). These disturbances have continued to be described by

Arctic Refuge staff (Voss 2011, pers. comm.; Matthews 2011, pers. comm.), and local residents (Swaney 2011, pers. comm., John 2011 pers. comm., Gilbert pers. comm.). Frid (2003) found that fixed-wing aircraft disrupted resting or caused fleeing behavior in Dall sheep in the Yukon Territory during overflights. This disruption was of a longer duration during direct flight approaches. Results of this study could help provide managers with guidelines for determining spatial and temporal restrictions to aircraft in areas frequented by this species.

While there may be no clear conservation reasons to close Red Sheep and Cane Creek to non-Federally qualified subsistence users, from the perspective of Arctic Village residents, there are reasons related to adverse impacts on subsistence users to do so. Arctic Village residents have testified that allowing non-Federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek during August 10 to September 20 adversely affects their ability to hunt in their traditional hunting area, and impairs their ability to successfully harvest sheep.

Other Alternative Considered

One alternative to a closure would be to move the season opening from August 10 to July 31. Arctic Village residents have stated that the influx of non-Federally qualified users has interfered with their traditional subsistence uses and practices, especially if airplanes displace sheep to higher elevations. The season extension would allow ten additional days at the beginning of the season without competition from non-Federally qualified users. The timing of the season extension may not be preferred by Arctic Village residents as they generally harvest sheep in early fall (late August or early September) or early winter (November). Concerns also have been raised by Arctic Village residents in the past that opening the season too early makes it too hot to care for the sheep meat adequately (FSB 1995:623). Federally qualified subsistence users already have priority to harvest later in the season as the Federal season is currently Aug. 10 – Apr. 30, whereas the State season is Aug. 10–Sept. 20. The Board considered, but did not adopt, this alternative in 2012 (FSB 2012).

Effects of Proposal

If adopted, this proposal would open the Aug. 10 – Sept. 20 sheep hunting season to non-Federally qualified hunters in Red Sheep and Cane Creek drainages and require all sheep hunters, including Federally qualified users, in these drainage to possess proof of completion of an ADF&G-approved hunter ethics and orientation course incorporating State regulations (5AAC 93.001(i)) directly into Federal regulations. The State has not developed this course, which makes it difficult to anticipate any effects on subsistence users. Details of the State course are needed prior to adopting any proposal based on such a course.

Adopting this proposal and opening this area to non-Federally qualified users may adversely affect subsistence users' access and ability to harvest sheep in the area and thereby fail to provide a meaningful preference for Federally-qualified subsistence users.

If adopted, this proposal would not affect the Dall sheep population in the proposal area. The most recent population surveys indicate good productivity of the sheep population. Allowing sheep hunting by non-Federally qualified hunters in these drainages is not a conservation concern because non-Federally

qualified users would be limited to one full curl ram during the hunting season. A harvest of full curl rams would not be expected to reduce the productivity of the local sheep population.

OSM CONCLUSION

Oppose Proposal WP14-51.

Justification

Section 815(3) of ANILCA authorizes restrictions on the taking of fish and wildlife for nonsubsistence uses on Federal public lands only if necessary for the conservation of healthy populations of fish and wildlife, to continue subsistence uses of such populations, or pursuant to other applicable law. The proposal under consideration addresses the subsistence use clause of Section 815(3), which provided the basis for the Board's action to close the area to non-Federally qualified sheep hunters in 2012.

While there may be no clear conservation reasons to close Red Sheep and Cane Creek to non-Federally qualified users, there are reasons based on potential adverse effects to subsistence users to do so. Arctic Village residents have testified that allowing non-Federally qualified users to harvest sheep in Red Sheep Creek and Cane Creek during August 10 to September 20 adversely affects their ability to hunt in their traditional hunting area and impairs their ability to successfully harvest sheep. While the efforts of the proponent to require hunter education and ethics orientation are recognized as good-faith efforts, such efforts do not go far enough to assure that Arctic Village residents have continued opportunity to harvest sheep in the Red Sheep and Cane Creek drainages and to receive the benefits of a subsistence priority.

In addition, adopting this proposal would require Federally qualified subsistence users to take a State-approved hunter ethics and orientation course, which to date has not been developed. However, the State intends to work with the affected users to develop the course.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Oppose WP14-51. The Council heard extensive testimony from tribal and community members form Arctic Village and Venetie expressing the importance of sheep in this are to their culture and community. The public testimony also noted that air traffic disturbance and hunter activity was pushing the sheep further away and higher. The council also heard updates form ANWR staff on surveys of hunter and flight activity in this area. Overall the Council expressed cultural importance of the sheep and the area to Arctic village and other residents for this hunt area to be an overriding concern. The Council encouraged harvest reporting and better documentation of use and noted that this issue has come before the Council several times before.

North Slope Subsistence Regional Advisory Council

Oppose WP14-51. The Council discussed concern for this regions needs and noted that other activities do impact access to important resources for subsistence. Deflection or disturbance of sheep by sport hunters and aircraft flights make it difficult for the community to reach the sheep for subsistence hunting. The council noted that cultural concerns regarding this hunt have been expressed at previous public meetings (Kaktovik has C&T for sheep in this area so these proposals come before the NSRAC). The Council noted that their previous Chair, Fenton Rexford of Kaktovik has specifically been very engaged in testimony on Red Sheep Creek area in the past. Council members with connection to this hunt area noted that these sheep are a very important subsistence food shared in the community – even if local harvest numbers are not high effort to reach the animals is considerable and the sharing of the meat and organs is widespread and important. They also stressed that these sheep and location have special cultural and medicinal value due to the history and relationship of the community as well the mineral licks that the sheep frequent in this area which makes their meat contain unique qualities.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP14-51: As a RAC member we met this in this area and have dealt with the sheep in this area over and over again. The current regulations are good and have sound reasoning with years of discussions with the people of this area. The people of Arctic Village depend on this resource and the State fails to listen to their testimony.

Donald Woodruff, Eagle

WP14-01 Executive Summary	
General Description	Proposal WP14-01 requests the establishment of new statewide provisions for Federal trapping regulations that require trapper identification tags on all traps and snares, establish a maximum allowable time limit for checking traps, and establish a harvest/trapping report form to collect data on non-target species captured in traps and snares. *Submitted by Kevin Bopp of Nome.*
Proposed Regulation	*§___.26 Subsistence taking of wildlife* *(d) The following methods and means of trapping furbearers for subsistence uses pursuant to the requirements of a trapping license are prohibited* ***or required****, in addition to the prohibitions listed at paragraph (b) of this section:* *…* ***(7) Traps and snares must be individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's Alaska driver's license number or State identification card number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's Alaska driver's license number or State identification card number. If a trapper chooses to place a sign at a trap/snaring site rather than tagging individual trap/snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.*** ***(8) All traps and snares must be checked within 6 days of setting them and within each 6 days thereafter.*** ***(9) Trappers must record and report all non-targeted species taken and their condition when found. Non-targeted species harvest reports must be turned in within 30 days of the end of the trapping season.*** ~~**Units 1–5 – Special Provisions**~~ ~~*Trappers are prohibited from using a trap or snare unless the trap or snare has been individually marked with a permanent metal tag upon*~~

WP14-01 Executive Summary	
	~~*which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number. The trapper must use the trapper's Alaska driver's license number or State identification card number as the required permanent identification number. If a trapper chooses to place a sign at a snaring site rather than tagging individual snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.*~~
OSM Conclusion	**Oppose**
Southeast Regional Advisory Council Recommendation	**Oppose**
Southcentral Regional Advisory Council Recommendation	**Oppose**
Kodiak/Aleutian Regional Advisory Council Recommendation	**Oppose**
Bristol Bay Regional Advisory Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Oppose**
Western Interior Regional Advisory Council Recommendation	**Oppose**

WP14-01 Executive Summary	
Seward Peninsula Regional Advisory Council Recommendation	**Oppose**
Northwest Arctic Regional Advisory Council Recommendation	**Oppose**
Eastern Interior Regional Advisory Council Recommendation	**Oppose**
North Slope Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**3 Oppose**

STAFF ANALYSIS
WP14-01

ISSUES

Proposal WP14-01, submitted by Kevin Bopp, requests the establishment of new statewide provisions for Federal trapping regulations that require trapper identification tags on all traps and snares, establish a maximum allowable time limit for checking traps, and establish a harvest/trapping report form to collect data on non-target species captured in traps and snares.

DISCUSSION

The proponent states the regulatory changes would result in more responsible trappers and trapping. Requiring identification tags with the trapper's name and license number may increase accountability of trappers. Some trappers may be less likely to set traps and snares close to people's homes and high public-use areas, which could ease tension between user groups. The trap checking interval requirement will ensure that animals do not remain in traps or snares too long, which could help ensure furs are found in good condition and increase the likelihood of releasing any captured non-target species. The proponent also recommends that all non-target species caught in traps and snares be recorded on a new harvest report form. Information included on the form would include the species captured, whether the animal was found dead or alive, and whether it was released in good or bad condition. If animals are found dead, the report would also include information on whether the animal was consumed by other animals.

Existing Federal Regulation

No Statewide regulations currently exist that require the marking of traps and snares with identification tags, trap-check intervals, and reporting of non-target species captured in traps and snares.

> **Units 1–5—Special Provisions**
>
> *Trappers are prohibited from using a trap or snare unless the trap or snare has been individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number. The trapper must use the trapper's Alaska driver's license number or State identification card number as the required permanent identification number. If a trapper chooses to place a sign at a snaring site rather than tagging individual snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.*

Proposed Federal Regulation

> *§___.26 Subsistence taking of wildlife*

(d) The following methods and means of trapping furbearers for subsistence uses pursuant to the requirements of a trapping license are prohibited ***or required****, in addition to the prohibitions listed at paragraph (b) of this section:*

…

(7) Traps and snares must be individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's Alaska driver's license number or State identification card number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's Alaska driver's license number or State identification card number. If a trapper chooses to place a sign at a trap/snaring site rather than tagging individual trap/snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.

(8) All traps and snares must be checked within 6 days of setting them and within each 6 days thereafter.

(9) Trappers must record and report all non-targeted species taken and their condition when found. Non-targeted species harvest reports must be turned in within 30 days of the end of the trapping season.

~~**Units 1–5—Special Provisions**~~

~~*Trappers are prohibited from using a trap or snare unless the trap or snare has been individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number. The trapper must use the trapper's Alaska driver's license number or State identification card number as the required permanent identification number. If a trapper chooses to place a sign at a snaring site rather than tagging individual snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.*~~

Existing State Regulation

Units 1–5*—Trappers are prohibited from using a trap or snare unless the trap or snare has been individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number; the trapper must use the trapper's Alaska driver's license number or state identification card number as the required permanent identification number; if a trapper chooses to place a sign at a snaring site rather than tagging individual snares, the sign must be at least 3 inches by 5 inches*

in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.

Unit 1C, Gustavus, that portion west of Excursion Inlet, north of Icy Passage*—All traps/snares must be checked within 3 days of setting them and within each 3 days thereafter.*

Units 12 and 20E—*You may not trap within one-quarter mile of any publicly maintained road, by using a snare with a cable diameter of 3/32 inch or larger that is set out of water, unless the snare has been individually marked with a permanent metal tag upon which is stamped or permanently etched the trapper's name and address, or the trapper's permanent identification number, or is set within 50 yards of a sign that lists the trapper's name and address, or the trapper's permanent identification number; the trapper must use the trapper's Alaska driver's license number or state identification card number as the required permanent identification number; if a trapper chooses to place a sign at a snaring site rather than tagging individual snares, the sign must be at least 3 inches by 5 inches in size, be clearly visible, and have numbers and letters that are at least one-half inch high and one-eighth inch wide in a color that contrasts with the color of the sign.*

Incidental Catch*—Continuing to take, or attempting to take, furbearers at a site where a moose, caribou, or deer has been taken incidentally is a violation. Any moose, caribou, or deer that dies as a result of being caught in a trap or snare, whether found dead or euthanized, is the property of the state. The trapper who set the trap or snare must salvage the edible meat and surrender it to the state. No trapper may use any part of a moose, caribou or deer caught incidentally in a trap or snare. If such an incidental take occurs, the trapper must move all active traps and snare at least 300 feet from the site for the remainder of the regulatory year.*

Extent of Federal Public Lands

The proposal would apply to all Federal public lands in Alaska. Federal public lands comprise approximately 65% of Alaska and consist of 23% BLM, 21% FWS, 15% NPS, and 6% USFS managed lands.

Customary and Traditional Use Determinations

Customary and traditional use determinations for specific areas and species are found in subpart C of 50 CFR part 100, §___.24(a)(1) and 36 CFR 242 §___.24(a)(1).

Regulatory History

The Alaska Board of Game adopted a marking requirement for traps and snares in Units 1–5 in 2006. Federal regulations were aligned with the State requirements in Units 1–5 when the Federal Subsistence Board adopted Proposal WP12-14 in 2012. The Southeast Alaska Subsistence Regional Advisory Council (Council) supported the proposal due to the benefit of aligning State and Federal regulations and reducing the uncertainty of whether current regulations required traps to be marked. However, the Council

expressed concern that there was a lack of evidence as to why traps should be marked under either State or Federal regulations (FWS 2012)

Trapping Background

In an overview of trapping controversies, Andelt et al. (1999; *references therein*) listed recommended trap-check intervals of daily or almost daily for live-capture traps set on land in response to animal welfare concerns; however, daily trap checks would not be practicable in much of Alaska due to the remoteness of areas, length of trap lines, and harsh weather conditions. Some considerations for how often traps should be checked include the intent of the trap (live capture or kill trap), ambient temperatures, and placement of traps, which could allow rodents or scavengers to destroy the pelt (Stanek 1987). Other considerations for trap check schedules include work schedules, distance to traplines, river ice conditions, and the price of fuel (Scotton 2013, pers. comm.). In 2006/2007, the average trapline in Alaska was 23.1 miles long and the longest reported trapline was 250 miles (ADF&G 2010). Trap-checking intervals of two to three days were generally used by trappers near Kaiyuh Flats, Alaska to prevent pelt damage from scavengers, and beaver sets were also checked frequently to prevent any captured beavers from being frozen in the ice (Robert 1984). Trappers from Skwentna, Stevens Village, and Fort Yukon reportedly checked trap lines "once a week or every few days", but some trappers "waited ten days to two weeks" (Wolfe 1991:27). During 2010/2011, 79% of trappers from across the state reportedly conducted trapping activities 1–3 days per week (ADF&G 2012a).

Effects of the Proposal

If the proposal is adopted, Federally qualified subsistence users trapping under Federal regulations throughout the State will be required to mark traps and snares with identification tags, check snares and traps every 6 days or less, and record any non-target species caught in traps or snares on a newly established trapping report form. The proposed requirements have the potential to benefit all users by promoting humane and ethical trapping techniques and practices. However, dramatic differences in land ownership, population concentrations, terrain, and habitats would limit the effectiveness of the proposed statewide regulations. Individual traplines can span across Federal and State managed lands and, therefore, could have different regulatory requirements along the line. Alternatively, Federally qualified subsistence users could simply choose to trap under State regulations and avoid the proposed requirements, as both Federal and State trapping regulations are applicable on Federal public lands, as long as the State regulations are not inconsistent with or superseded by Federal regulations.

In most situations, the requirement to individually mark traps and snares with identification tags would result in inconsistent State and Federal regulations on Federal public lands that would necessitate outreach effort to avoid confusion among users. Under Federal regulations, traps and snares are required to be marked with identification tags only in Units 1–5, but these marking requirements were adopted to align with State regulations to reduce regulatory complexity (see Regulatory History). Within portions of Unit 15, over 60 percent which lies within Kenai National Wildlife Refuge, and those portions of Unit 7 that are contained within Kenai NWR, a trapping permit is required and a stipulation of Kenai NWR's permit includes the marking of traps and snares. Also, under State regulations, all snares within a ¼ mile of a

public road in Units 12 and 20E are required to be marked. Federally qualified subsistence users trapping on Federal public lands outside of these specific areas would be required to mark traps and snares with identification tags that include the trapper's name and license number. However, Federally qualified subsistence users or non-Federally qualified subsistence users trapping on Federal public lands would not be required to mark traps and snares under State regulations.

The requirement to mark traps and snares would also result in additional burden and cost for Federally qualified subsistence users trapping under Federal regulations. Copper tags stamped with a trapper's identification information, including fasteners, cost approximately $26 per 100 tags (including shipping) or less (approximately $15–$20) for "write-your own" tags (FWS 2012). In addition, trappers often trade or borrow equipment from family members or friends, and changes of identification tags on large numbers of traps or snares would require significant effort (Scotton 2013, pers. comm.).

Frequent trap checks are beneficial for animal welfare and can decrease the likelihood of pelt damage of trapped furbearers. However, the trap check time requirement would also result in inconsistent State and Federal regulations, and would require significant law enforcement and public educational efforts. The requirement could result in human health and safety issues by requiring trappers to check traps during periods of inclement weather, especially in remote units where trap lines are long. The back cover of the State trapping regulations includes a Code of Ethics, reprinted from the Alaska Trappers Manual, which includes checking traps regularly and trapping in the most humane way possible. While the items listed in the Code of Ethics are not regulatory in nature, they provide general guidelines for responsible trapping.

Few requirements for trap check intervals are currently in State or Federal regulations, and those regulations have been put in place in response to specific incidents or in areas with high potential for user conflict. Under State regulation in Alaska, the only trap check time requirement in regulation is a 72-hour trap check in a small area in Unit 1C near Gustavus, which was adopted due to multiple moose being incidentally caught in snares (ADF&G 2012b). In addition, a 4-day trap check requirement is required on the more accessible and heavily trapped portions of the Kenai National Wildlife Refuge (Kenai NWR) as a stipulation of the Refuge Special Use Permit in order to increase the potential for safe release of incidentally-caught non-target animals including bald eagles, moose and domestic dogs.

If the proposal is adopted, a new trapping report form would be established to report any non-target species caught under Federal trapping regulations. Trapping reports may provide useful information regarding which non-target species are captured and how often they can be released in good condition. However, some of the information requested for the report form may be difficult to interpret, especially subjective observations such as the condition of trapped animals. In addition, it is unknown how the data from the proposed form would be used, as there is no indication of any management agency that is requesting information on the incidental capture of non-target species across the state. To limit the capture of non-target species, trappers can review informational sources such as the Best Management Practices for Trapping in the United States, which evaluate traps and trapping systems based on animal welfare, efficiency, selectivity, practicality, and safety (AFWA 2006). Overall, it is in the best interest of trappers to minimize the capture of non-target animals, as those traps or snares become unavailable for capturing target animals.

The new trapping report form for non-target species would require additional time commitments for Federally qualified subsistence users and staff of Federal land management agencies. The time commitment for Federally qualified subsistence users would be minimal, but may be an incentive to simply trap under State regulations where a report is not required. The time commitment for Federal staff could be substantial, as trapping reports from Federal lands across the state may have to be collected and analyzed.

The establishment of a new trapping report form would have to meet the information collection requirements subject to approval by the Office of Management and Budget, 50 CFR § 100.9 [2009], and in accordance with the Paperwork Reduction Act, OMB Control Number 1018-0075.

OSM CONCLUSION

Oppose Proposal WP14-01.

Justification

The proposed requirements for individually marking traps and snares, setting maximum trap check intervals, and reporting the incidental harvest of non-target species could lead to more humane trapping methods under Federal regulations; however, these regulatory provisions would not likely be manageable on a statewide basis due to vast differences in land ownership, population concentrations, and habitats. Regulations of this nature would be better suited in response to issues on an area-specific basis, like similar restrictions currently in State and Federal trapping regulations (e.g., Kenai NWR Refuge Special Use Permit requirements). Alignment issues would require a substantial increase in law enforcement and public educational efforts, and requiring trappers to check traps during inclement weather could lead to health and safety issues. In many instances, Federally qualified subsistence users may simply trap under State regulations to avoid the additional proposed Federal restrictions.

While the information gathered from a harvest report form of non-target species caught in traps and snares could provide useful information, it would be an unnecessary requirement for Federally qualified subsistence users. In addition, the report would require additional time commitments for Federally qualified subsistence users and Federal staff that are currently unwarranted. Similar reports would be more useful in areas with specific issues with the capture of non-target species, such as areas with threatened or endangered species or significant user-conflict issues.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP14-01. Although the Southeast Council may be in agreement with some aspects of the proposal, the issues addressed in the proposal are not the same in every Region. Proposals to address issues specific to a region should be made to that region as the solutions may not make any sense to other regions.

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP14-01. The Council did not support the proposal citing there is no conservation concern on furbearers and the proposed regulation will be a burden to subsistence users.

Kodiak/Aleutians Subsistence Regional Advisory Council

Oppose Proposal WP14-01. This proposal, if enacted into regulation, would be difficult to enforce, and there is no indication that a conservation concern justifies the proposal.

Bristol Bay Subsistence Regional Advisory Council

Oppose Proposal WP14-01. The proposed regulation if adopted would unnecessarily hamper management and law enforcement efforts. The Lake Clark Subsistence Resource Commission voted in opposition of the proposal. It is an unnecessary burden to subsistence users in the region. Additionally, fluctuations in winter weather will make it difficult to enforce the proposed regulation.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Oppose Proposal WP14-01. Council is not in support of proposal WP14-01 because winter dangerous trail conditions exist when weather is the factor. It would not be possible to check trap lines on schedule while there is inclement weather condition in trapping area where small drainages don't freeze due to snow cover and there is open water underneath the winter trail covered with snow.

Western Interior Subsistence Regional Advisory Council

Oppose Proposal WP14-01. This motion is addressing a specific issue by the proponent in a specific area; there is no bearing on statewide Federal public lands. If adopted, this action would place a burden on subsistence users. The proposed timeline for checking traps and snares could pose a safety issue, as weather and temperature are deciding factors on when users can make checks on trap lines.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP14-01. The proposal, if enacted into regulation, would impose an unnecessary burden on subsistence users and amount to micromanaging trapping practices on a statewide basis. If there are any concerns, they should be addressed on a regional level.

Northwest Arctic Subsistence Regional Advisory Council

Oppose Proposal WP14-01. If adopted, this proposal would be a burden on subsistence users, and is not a necessary action to take in the Northwest Arctic region. Weather conditions can often determine when trappers can check traplines and safety issues could arise with the proposed 6 day maximum time limit.

Eastern Interior Subsistence Regional Advisory Council

Oppose Proposal WP14-01. Council concurs with OSM recommendation that the proposal is not well thought out and has many safety concerns. The Council stated it is unrealistic to check traps even in dangerous weather conditions. Opposed to a proposal that would make federal regulations more restrictive than state regulations.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Oppose Statewide Proposal WP14-01: With kind personal regards to Kevin Bopp, who gave us one of the best lead dogs we ever had, I strongly disagree with this. Trap tags might work for short traplines, but when you run 80 miles of traps, tags for every trap would be very onerous and also subject to loss when an animal is caught. The time limit proposal is utterly unworkable for many people. It usually takes us 10-12 days by dog team to make the round trip of up to 130 miles to check our traps. If we had to check every trap every 6 days, we would have to cut the length of our line in half, which would eliminate the most profitable distant areas, cutting profit more than in half; AND we'd be forced to travel even when it was not safe, eg -60° or blowing in excess of 50 mph. Additionally there are times travel is physically impossible due to flooding, bad ice or other hazards. That's why previously proposed time limits have never been established. This becomes even more unworkable for fly-in pilots for whom travel in weather extremes can quickly prove fatal. Neither of these even actually directly address the mentioned problem of trapping near settlements/highways.

Miki and Julie Collins, Lake Minchumina

Oppose Statewide Proposal WP14-01: We oppose Statewide Proposal WP14-01 to create new regulations for requiring that identification tags be put on traps and snares and that traps and snares be checked every 6 days. It will be cumbersome, unnecessary and burdensome for federally qualified trappers to have constraints placed upon them to have to put identification tags on snares and traps and to check traps and snares every 6 days. Incidental catch of non-target species and reporting it is good, and should be done voluntarily by trappers. Traps and snares should only be checked if weather conditions are safe to check snares and traps. In rural areas, temperature conditions can be minus forty to fifty for 3 consecutive weeks. It would be unsafe to have regulations in place stating that snares and traps must be checked every six days.

Ahtna Inc. Customary and Traditional Use Committee

Oppose Statewide Proposal WP14-01: The release of live animals from traps is a huge safety issue and is very dangerous. A state wide regulation to mark your traps and check traps on a 6 day schedule is also a safety issue and very dangerous for the trapper. I've trapped the same area for 32 years in the Eastern Interior and a 6 day check would put the trapper in extreme risk at 50 and 60 degrees below when the fur is not moving and also dies very quickly in a trap. Trapper

know how often to check their trap in a specific area, they want the fur in the best possible condition. If Mr. Bopp has issues with the trappers in his area he can meet with them at Fish and Game Advisory meetings, Federal Subsistence meeting and City Council meetings in his area. It is a shame that people who know nothing about trapping want to impose regulations on the whole state.

Donald Woodruff, Eagle

Wrangell-St. Elias National Park
Subsistence Resource Commission
P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

RECEIVED

November 1, 2013

Tim Towarak, Chair
Federal Subsistence Board
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage, AK 99503

Dear Chairman Towarak:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Chistochina on October 29 and 30, 2013. The SRC reviewed the federal subsistence wildlife proposals for the Wrangell-St. Elias area being considered for the 2014-2016 regulatory cycle and would like to provide comments for the following proposals:

WP14-01: Require trap marking, trap checks every 6 days, and harvest reports (statewide)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously opposes the proposal. A statewide proposal that would make federal trapping regulations more restrictive than state regulations is not needed. Additionally, enforcing the requirement that traps be checked every six days would be difficult. If there are local problems with trappers, those problems should be addressed locally, for example by talking to the protection officer for the area. The Alaska Department of Fish and Game's annual trapper survey already collects considerable information from trappers in Alaska, and an additional reporting requirement is not needed.

WP14-14: Revise customary and traditional use determination for goat in Unit 11 to include residents of Kenny Lake
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal. Kenny Lake is surrounded on all sides by other rural communities that have a positive customary and traditional use determination (C&T) for goat in Unit 11, and Kenny Lake residents already have C&T for most other large mammal species in Unit 11. The data presented in the analysis as well as common sense support recognizing Kenny Lake as having a positive C&T for goat in Unit 11.

WP14-15 & 45: Revise list of communities and areas eligible to hunt caribou in the SE portion of Unit 12 (Chisana herd)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports WP 14-15 as written. The SRC supported the inclusion of Nabesna during the initial ANILCA

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

Section 804 analysis and continues to support its inclusion in the list of communities most dependent on this resource. Adding residents of the hunt area outside of Chisana is common sense. They live in a remote area with limited access to other resources and should be able to harvest a resource in their own back yards. The commission took no action on WP14-45.

WP14-16: Establish a winter moose hunt in the southern portion of Unit 11

The Wrangell-St. Elias National Park Subsistence Resource Commission supports the proposal with modification to add to the delegation of authority the ability to limit the number of permits and to announce the reporting period. This season would provide additional subsistence opportunity on a moose population that is difficult to access during the existing fall season and consequently lightly harvested. The delegation of authority to the park superintendent to open the season; announce the harvest quota, number of permits to be issued and reporting period; and close the season would provide the tools needed to limit the harvest to a sustainable level and thereby address any conservation concerns. Educational material could be provided to the permittees about how to distinguish antlerless bulls from cows and such a handout could also remind hunters not to harass the animals with their snowmachines.

WP14-49: Revise the season dates for the caribou hunt in the SE portion of Unit 12 and add a meat-on-the-bone salvage requirement (Chisana herd)

The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with the following modifications: (a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted. Expanding the fall season would provide additional subsistence opportunity. Hunters who prefer to hunt during August, well before the rut, would be able to do so. And hunters for whom meat storage is easier later in the season when the weather is cooler could hunt in late September. Establishing a winter season is not supported at this time due to the small harvest quota and lack of good data about where the animals are during the winter. Regarding the meat-on-the-bone requirement, there is no evidence of a meat spoilage problem, and SRC members agree that individual hunters should be able to decide whether or not to keep the meat on the bone. Hunters who make use of the bones or otherwise prefer to keep the meat on the bone would have the option to do so, but hunters who harvest meat in locations that require long distance packing would have the option of leaving some of the bones behind.

Thank you for the opportunity to comment.

Sincerely,

Karen Linnell
Chair

cc: NPS Alaska Regional Director
Superintendent, Wrangell-St. Elias National Park and Preserve
Southeast, Southcentral and Eastern Interior Regional Advisory Councils
Governor of Alaska

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

WP14-03 Executive Summary	
General Description	Proposal WP14-03 requests that the female deer harvest season in Unit 2 be eliminated. *Submitted by Ron Leighton.*
Proposed Regulation	**Unit 2 – Deer** *5 **male** deer~~; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec.31~~.The harvest limit may be reduced to 4 **male** deer based on conservation concerns.* *July 24 – Dec. 31* *The Federal public lands on Prince of Wales Island, excluding the southeastern portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward in 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 Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-03

ISSUES

Proposal WP14-03, submitted by Ron Leighton, requests that the female deer harvest season in Unit 2 be eliminated.

DISCUSSION

The proponent is concerned that the harvest of female deer contributes to the decline of the deer population and thus, believes it is harder for subsistence users to achieve their customary and traditional harvest levels of deer.

The issues include 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; whether adopting the proposal would maintain, increase or decrease subsistence opportunity; and whether adopting the proposal would negatively impact subsistence users in Unit 2.

Existing Federal Regulation

Unit 2 – Deer

5 deer; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec.31. The harvest limit may be reduced to 4 deer based on conservation concerns.	*July 24 – Dec. 31*
The Federal public lands on Prince of Wales Island, excluding the southeastern portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward in 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 ***male*** *deer~~; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec.31~~.The harvest limit may*	*July 24 – Dec. 31*

be reduced to 4 ***male*** *deer based on conservation concerns.*

The Federal public lands on Prince of Wales Island, excluding the southeastern portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward in 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 Regulation

Unit 2 — Deer

4 bucks	*Aug. 1 – Dec. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 74% of Unit 2. The U.S. Forest Service manages 73% of Unit 2 lands as part of the Tongass National Forest. The U.S. Fish and Wildlife Service manage less than 1% as part of Alaska Maritime National Wildlife Refuge (Forrester Island) (see **Unit 2 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 1A, 2 and 3 have a positive customary and traditional use determination for deer in Unit 2.

Regulatory History

Alaska hunting regulations permitted the harvest of antlerless deer from 1955 through 1977 (**Table 1**). Since 1978, the State has not allowed for the harvest of antlerless deer in Unit 2, except during 1987. The Federal regulation allowing the harvest of one female deer in Unit 2 was established in 1995 and remains in effect. Current seasons and harvest limits are as liberal as they have ever been since 1925.

There have been seven proposals to the Federal Subsistence Board (Board) requesting closure of the female deer harvest season since 1997 (P97-07, P98-09, P98-10, P98-12, P00-005, WP01-03, and WP07-07). The most recent was in 2007. All seven proposals were rejected by the Board. Rationale for rejecting the proposals included that some subsistence hunters rely on harvesting female deer to meet their subsistence needs; female harvest is a small portion of the total harvest and does not appear to be causing a conservation concern, and the deer population appears to be stable with the current level of female deer harvest.

Table 1. Regulatory history for Unit 2 deer.

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, bucks 3" or greater antler growth
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 only
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	Antlered deer
1987	State Subsistence/General	01 Aug - 30 Nov	3	Antlered deer, 1 antlerless deer from 10/10-10/31
1988 - 2013	State Subsistence/General	01 Aug - 31 Dec	4	Antlered deer/bucks
1991 - 1994	Federal Subsistence	01 Aug - 31 Dec	4	Antlered deer
1995 - 1997	Federal Subsistence	01 Aug - 31 Dec	4	No more than one may be an antlerless deer. Antlerless deer may be taken only during 10/15-12/31.
1998 - 2002	Federal Subsistence	01 Aug - 31 Dec	4	No more than one may be an antlerless deer. Antlerless deer may be taken only during 10/15-12/31 by Federal registration permit only.
2003 - 2005	Federal Subsistence	24 Jul - 31 Dec	4	No more than one may be an antlerless deer. Antlerless deer may be taken only during 10/15-12/31 by Federal registration permit only.
2006 - 2009	Federal Subsistence	24 July – 31 Dec	5	No more than one may be an antlerless deer. Antlerless deer may be taken only during the period 10/15–12/31.
2010 - 2014	Federal Subsistence	24 July – 31 Dec	5	No more than one may be a female deer. Female deer may be taken only during the period 10/15–12/31.

Biological Background

Sitka black-tailed deer spend the winter and early spring at low elevation where there is less snow accumulation and forests provide increased foraging opportunities. Fawning occurs in late May and early

June as vegetation greens-up, providing abundant forage to meet energetic needs of the lactating doe. Some deer migrate and follow the greening vegetation up to alpine for the summer while others remain at lower elevations. The breeding season, or rut, generally occurs October through November and peaks in late November (ADF&G 2009). Wolves and black bears are the primary predators present in Unit 2 and may reduce deer populations.

Deer populations in southeast Alaska fluctuate, primarily influenced by winter snow depths (Olson 1979). Deer have trouble meeting their energy needs in winter (Hanley and McKendrick 1985, Parker *et al*. 1999) and winters with long periods of deep snow that restrict the availability of forage, can result in deer depleting their energy reserves to the point of starvation (Olson 1979).

Summer nutrition is important for building body reserves for sustaining deer through the winter (Stewart *et al*. 2005). Few studies have been conducted on summer habitat conditions because winter habitat carrying capacity is generally considered to be the limiting factor for deer in southeast Alaska. However, deer populations at or above habitat carrying capacity are affected by intra-specific competition for food and may 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). In addition, nutritionally stressed does produce smaller and fewer fawns (Olson 1979).

Maximum sustained yield (MSY) is theoretically the highest level of deer harvest that can be sustained indefinitely (**Figure 1**). At low population levels, habitat does not constrain reproductive rates but because the population is small, population increases are slow. In populations below MSY, mortality is thought to be additive (i.e., deer not harvested would have survived) and harvesting females lowers recruitment (Ballard *et al*. 2001, Kie *et al*. 2003). At moderate population densities, approximately half of habitat carrying capacity, individuals and populations are at maximum productivity. As populations grow beyond MSY and approach carrying capacity, competition between individuals for resources lowers productivity and mortality becomes compensatory (i.e., harvested deer would not have survived) (Ballard *et al*. 2001, Kie *et al*. 2003). Person (2001) determined that MSY for mule deer is approximately 63% of habitat carrying capacity.

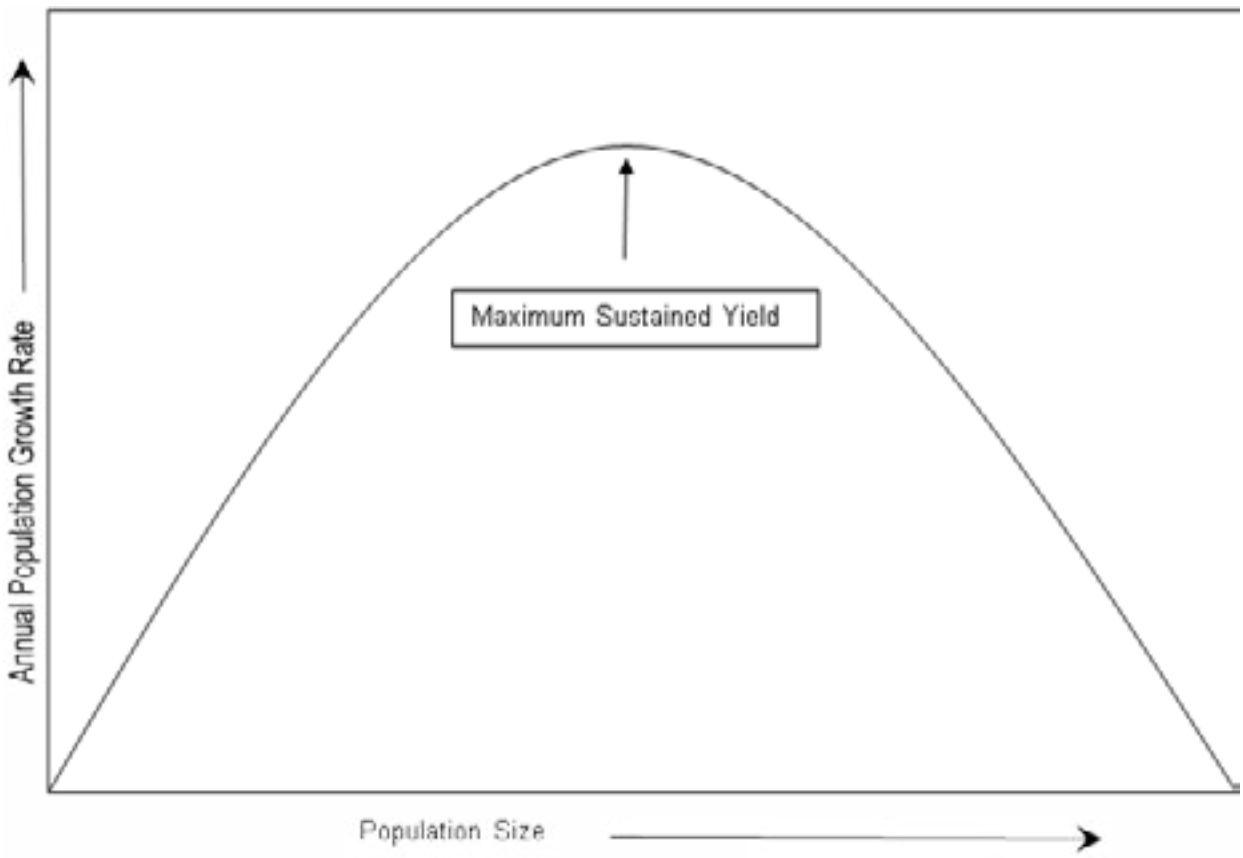

Figure 1. Hypothetical maximum sustained yield graph.

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. Some areas of Unit 2 have been impacted by large scale changes in habitat due to timber harvest, while the habitat is largely intact in other areas. Areas with substantial timber harvest are expected to have lower long-term carrying capacity compared to pre-harvest conditions.

Recent population indices

There are no methods to directly count deer in southeast Alaska, 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 2011). Brinkman et al. (2013) questioned the value of pellet-group surveys for monitoring population trends due to the variability in the data compared to DNA based counts. Although pellet-group surveys remain the only widely available deer population data, the results should be interpreted with caution. **Figure 2** shows pellet-group survey results for Unit 2. The pellet-group data suggests a generally increasing population trend since a low during the late 1990s and early 2000s. This contrasts with Brinkman et al. (2011) who used a DNA based technique and estimated a 30% population decrease from 2006–08 which they attributed to three consecutive deep snow winters. Brinkman's study was limited to three watersheds and the population changes during the study varied by watershed. It appears that populations increased after those severe winters and Bethune (2011) felt that by 2010 the Unit 2 deer population was healthy, stable to increasing, and at a 12 to 15 year high

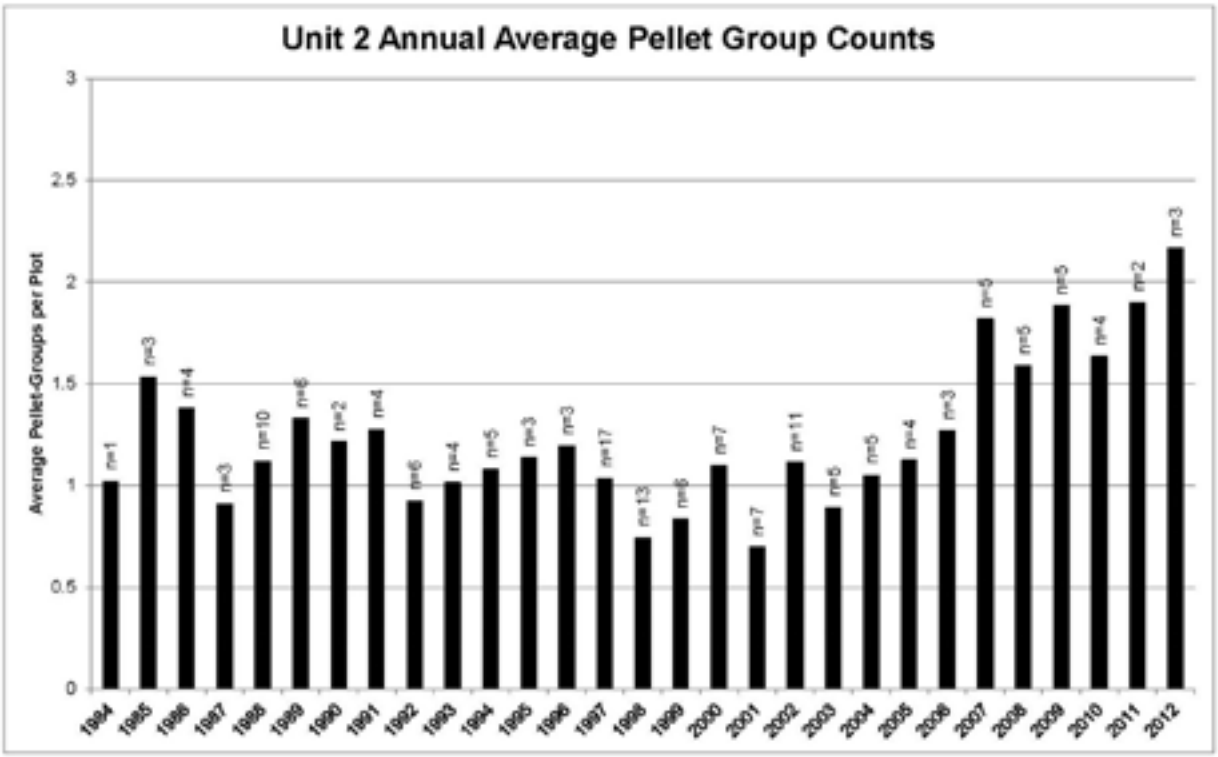

Figure 2. Average annual pellet group counts per plot in Unit 2, 1984–2012.

Harvest History

Harvest data reported below are provided by ADF&G (McCoy 2013, pers. comm.) and are gathered by several reporting systems including the Region 1 deer survey, Unit 2 deer harvest report, and the Statewide deer report. The Region 1 deer survey is the most consistent report, covering the years 1997–

2010 and is 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. The Unit 2 deer report was in place from 2005–2010 and was instituted specifically for reporting deer harvest in Unit 2. The Statewide deer report replaced the other deer harvest reporting systems in 2011 and requires reporting of harvest by all deer hunters. Different expansion factors are used for the various data sets so that total harvest estimates between years are comparable (McCoy 2013, personal communication).

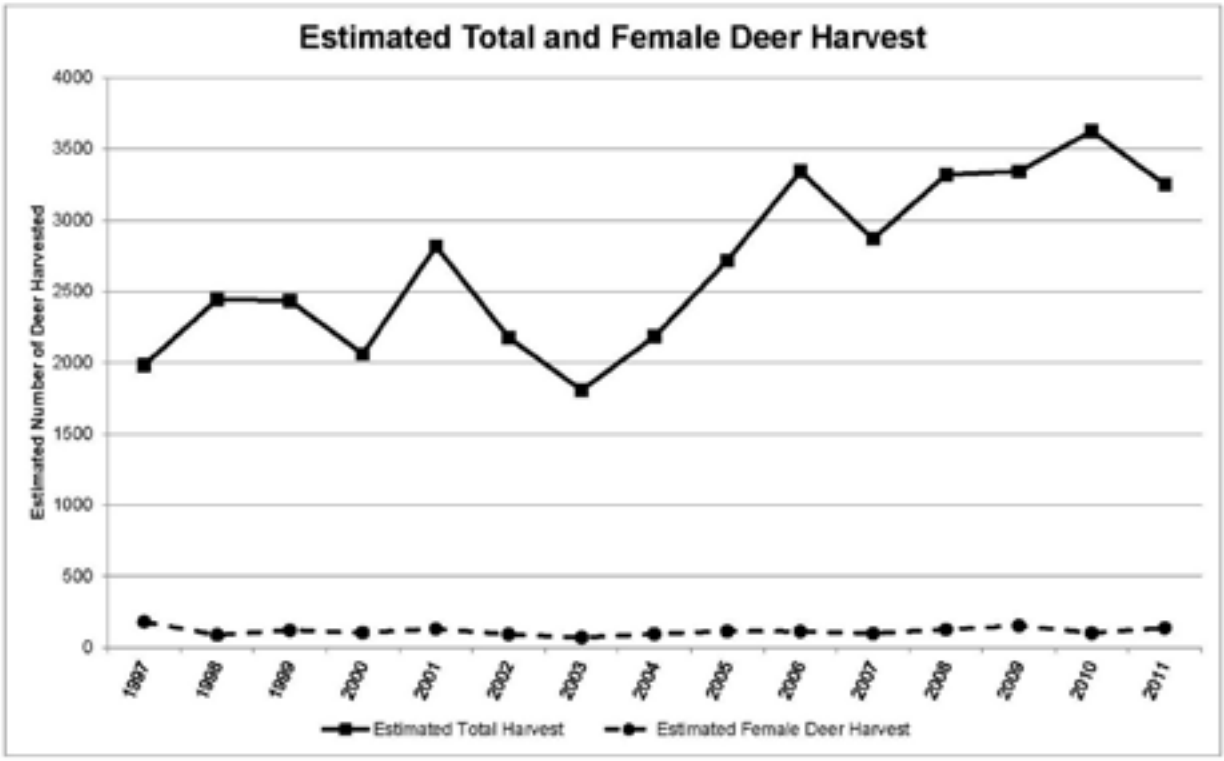

Figure 3. Estimated harvest of total deer and female deer in Unit 2, 1997–2011.

Figure 3 shows the estimated total deer harvest and female deer harvest in Unit 2 from 1997–2011. The estimated total harvest averaged 2691 deer and the estimated female deer harvest averaged 114 during this period. Harvests in recent years are the highest they have been since 1997 and are well above the

ADF&Gs Unit 2 harvest objective of 2,700 (Bethune 2011). Estimated female deer harvest has been consistently in the range of 4% of the total harvest. ADF&G has concerns about high levels of unreported deer harvest in Unit 2, particularly of female deer harvest (Bethune 2011). The average number of deer harvested per hunter has stayed stable in recent years and is higher than the average in the late 1990s (**Figure 4**). The average number of days it takes to harvest a deer also appears to have been stable over the last several years and is lower than the late 1990s (**Figure 4**). These harvest data support the pellet group data indicating that the deer population in Unit 2 is healthy and stable to increasing.

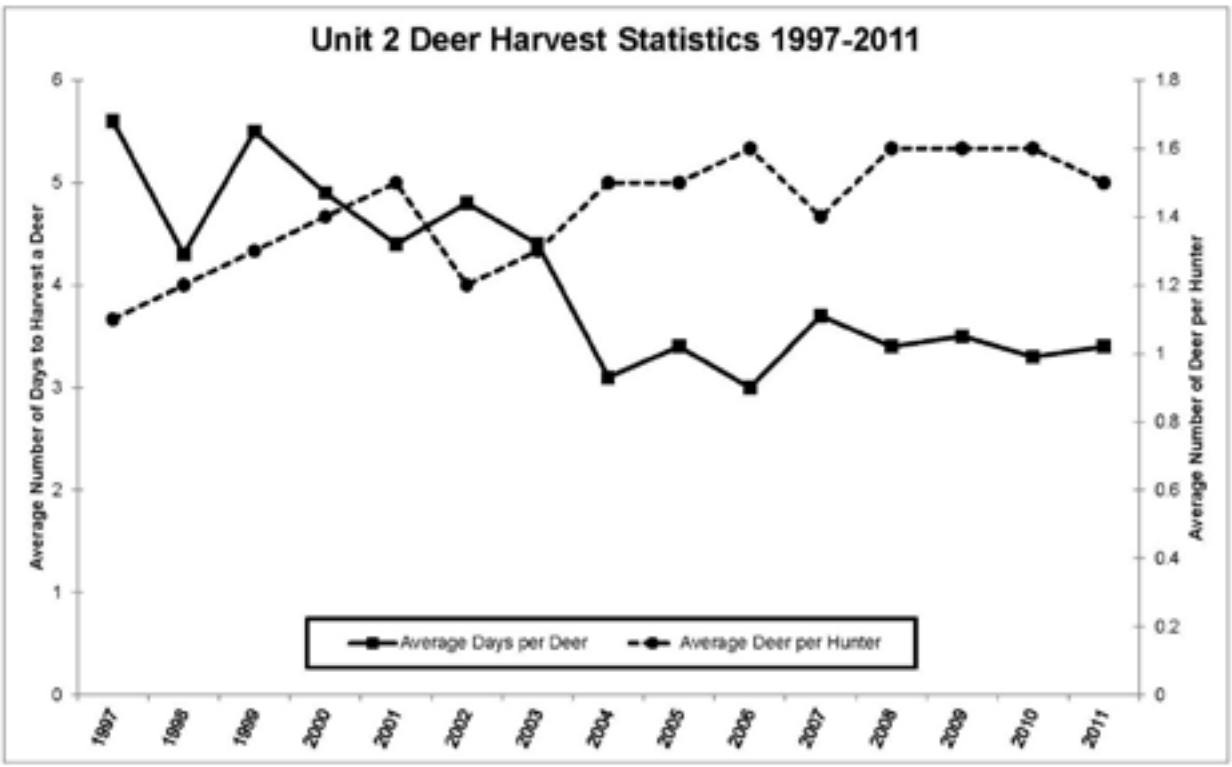

Figure 4. Average hunter effort (days per deer) and harvest per hunter in Unit 2, 1997–2011.

Effects of the Proposal

If this proposal is adopted, it would likely reduce deer harvest. Although the harvest limit would not change, it would reduce the likelihood of encountering a harvestable deer. Eliminating the harvest of female deer does not appear necessary for conservation of the resource at this time. The relationship between the current population level and the habitats carrying capacity is unknown, but current female deer harvest does not appear to be limiting the population on a unit-wide scale.

Adopting this proposal would reduce opportunity and decrease harvest efficiency for subsistence users. More trips would result in no harvest or more effort to harvest a male deer instead of the first deer encountered. Efficiency of effort is a characteristic of subsistence harvests.

OSM CONCLUSION

Oppose proposal WP14-03.

Justification

This proposal would reduce opportunity for subsistence users. It is not necessary for conservation of the resource. A small but stable portion of the reported harvest is female deer. It would appear from this small portion, that most subsistence users do not harvest female deer. However, for those that do harvest them, it likely improves the efficiency of their harvest. Deer population and harvest statistics suggest the deer population is healthy in spite of historically high harvest levels and season lengths. Existing female deer harvest does not appear to be limiting the deer population.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP14-03. The evidence provided in the staff analysis shows a healthy deer population in Unit 2 and there is no general conservation concern at this time. The number of female deer harvest reported appears to be stable and not increasing. The Council recognizes that the deer population on the North section of Prince of Wales Island is depressed and has been slow to recover from recent harsh winters.

The minority opinion noted that residents of the northernmost communities on Prince of Wales Island are spending more time than other residents of Prince of Wales Island to harvest a deer and eliminating the doe harvest may assist in rebuilding the deer population in that area. Harvesting doe deer is not necessary to satisfy subsistence needs as there are adequate buck deer available in most areas of Unit 2. Harvesting doe deer may decrease the total deer population in Unit 2.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-04 Executive Summary	
General Description	Proposal WP14-04 requests that Federally-qualified subsistence users 60 years and older and those with disabilities be allowed an earlier start date for harvesting deer under Federal regulation. *Submitted by Ron Leighton.*
Proposed Regulation	**Unit 2 - Deer** *5 deer; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec. 31. The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeastern 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* ***Only Federally-qualified users 60 years of age and older or 70% disabled are eligible to hunt from June 15 through July 23. Only male deer may be taken. Any deer taken during this season count against the 5 deer limit. A Federal Unit 2 disabled/elderly deer hunter permit is required during this season. The definition of "70-percent physically disabled" is: a person who presents to a US Forest Service permit issuing official either written proof that the person receives at least 70-percent disability compensation from a government agency for a physical disability or an affidavit signed by a physician licensed to practice medicine in the state, stating that the person is at least 70-percent physically disabled.*** — ***June 15–July23***

WP14-04 Executive Summary	
OSM Conclusion	**Support** WP14-04 **with modification** to remove the physically disabled category, reduce the early hunt start date by one week rather than five weeks, remove the requirement of a Federal permit, and prohibit designated hunting during the early season
Southeast Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-04

ISSUES

Proposal WP14-04, submitted by Ronald Leighton, requests that Federally-qualified subsistence users 60 years and older and those with disabilities be allowed an earlier start date for harvesting deer under Federal regulation.

DISCUSSION

Federal staff contacted Mr. Leighton to clarify the key points of what he was proposing. Mr. Leighton agreed that the language shown under "**Proposed Federal Regulation**" meets his intent. This analysis will analyze the clarified language.

The proponent is a disabled veteran that also meets the age requirement in his proposal. He indicated he has a harder time harvesting deer than he used to, and that during the 2012 hunting season he was unable to harvest any deer. Although he is familiar with the Federal Designated Hunting system, he indicated that because he lives in a remote cove, he has a harder time finding a Federally-qualified subsistence user to harvest on his behalf. He believes this could also be a factor for other individuals 60 and over or that are physically disabled.

The proponent is concerned that these individuals have a harder time harvesting the deer needed for their households because of competition from younger, disability free hunters. By allowing both individuals 60 and older and the physically disabled an earlier season, these subsistence users will be able to harvest deer that are less spooky, which can be located road side, at lower elevations on the island and on beaches. As a result, the individuals will feel more personal worth in providing their own household sustenance. The proponent defined the minimum qualifying age for the hunt at 60, which is the same age requirement under State regulation for issuance of a permanent identification card.

Although the proponent has indicated a starting date of June 15, he would be satisfied with any start date that gives individuals 60 and older or physically disabled an opportunity to harvest on their own without competition. He feels the earlier harvest of male deer should not be a problem because they are easily identifiable by their developing antlers, and that hunters already have a season harvest limit in place.

Existing Federal Regulations

Southeastern Alaska Area—General provisions

Unit 2 – Deer

5 deer; however, no more than one may be a female deer. *July 24–Dec. 31*

Female deer may be taken only during the period Oct. 15–Dec. 31. The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeastern 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.

Other Disability Related Federal Regulation

Unit 2—Unit Specific regulation

You may not shoot ungulates, bear, wolves, or wolverine from a boat, unless you are certified as disabled.

Proposed Federal Regulation

Unit 2 – Deer

5 deer; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec. 31. The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeastern 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*
Only Federally-qualified users 60 years of age and older or 70% disabled are eligible to hunt from June 15 through July 23. Only male deer may be taken. Any deer taken during this season count against the 5 deer limit. A Federal Unit 2 disabled/elderly deer hunter permit is required during this season. The definition of "70-percent physically disabled" is: a person who presents to a US Forest Service permit issuing official either written proof that the person receives at least 70-percent disability compensation from a government agency for a physical disability or an affidavit signed by a physician licensed to practice medicine in the state, stating that the person is at least 70-percent physically disabled.	***June 15–July23***

Existing State Regulations

Southeastern Alaska Area—General provisions

> *Unit 2 – deer (hunting)*
> *Four bucks, August 1 – December 31*
>
> *Harvest tickets must be validated in sequential order, and unused tickets must be carried when you hunt.*

There are no age specific or disabled-only hunts in any of the Southeast Alaska game management units. State regulations do have provisions for residents meeting specific age and/or disability criteria allowing someone else hunt for them (proxy hunting) and also allowing for disabled persons in Units 1-5 to take big game from a boat if they obtain a disability permit from ADF&G. Proxy hunting and the ability to apply for a disability permit (**Appendix A**) are governed by the following provisions:

Statewide—Proxy hunting provisions

> *An Alaska resident (the beneficiary) may obtain an authorization allowing another Alaska resident (the proxy) to hunt moose, caribou, or deer for them if they are blind, 70-percent disabled*, or 65 years of age or older. A person may not be a proxy for more than one beneficiary at a time.*
>
> **Definition of "70-percent disabled" – a person who presents to ADF&G either written proof that the person receives at least 70-percent disability compensation from a government agency for a physical disability or an affidavit signed by a physician licensed to practice medicine in the state, stating that the person is at least 70-percent disabled.*

Statewide—Other age related/disability provisions

> *Resident hunters 60 years or older may obtain a free, permanent identification card. This replaces the annual sport fishing, hunting, and trapping licenses, and with this permanent ID, king salmon and state duck stamps are no longer required. However, any required harvest tickets, tags and permits are still needed.*
>
> *Disabled veterans who are Alaska residents may qualify for a free hunting and fishing license (this does not include trapping). This replaces the annual sport fishing and hunting licenses and king salmon and state duck stamps are no longer required. To receive this license you must have been honorably discharged from military service, be eligible for a loan under AS18.56.101, and be certified by the US Veteran's Administration as having incurred a 50 percent or greater disability during military service. Written proof from the VA is required at the time of application.*

A person with physical disabilities may take big game from a boat in Units 1-5, and may take black bear from a boat in Unit 6D, if they obtain a disability permit. A disabled hunter permit holder may only shoot from a boat when the motor is turned completely off and when progress from the motor has ceased. Applications are available at the ADF&G office nearest the hunt area.

Extent of Federal Public Lands

Federal public lands comprise approximately 74% of Unit 2. The U.S. Forest Service (USFS) manages 73% of all lands as part of the Tongass National Forest. The U.S. Fish and Wildlife Service manages less than 1% of all lands as part of Alaska Maritime National Wildlife Refuge (Forrester Island) (**see Unit 2 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 1A, 2, and 3 have a positive customary and traditional use determination for deer in Unit 2.

Federal Regulatory History

Following years of numerous Unit 2 related deer proposals (>30) to the Federal Subsistence Board (Board), the Unit 2 Deer Planning Subcommittee (Subcommittee) was formed to work together to address contentious deer management issues in Unit 2. At the request of the Board, the Southeast Subsistence Regional Advisory Council (Council) established the 12-member Subcommittee in 2004 to address concerns that subsistence deer hunters in Unit 2 were not able to harvest enough deer to meet their needs. The Subcommittee included residents of Craig, Hydaburg, Ketchikan, Petersburg, Point Baker and Wrangell, along with representatives from State and Federal wildlife management agencies to reflect the range of users of Unit 2 deer. The Subcommittee developed management recommendations at a series of five public meetings held in communities that depend upon Unit 2 deer. Both Federally-qualified and non-federally qualified deer hunters participated at these meetings.

Based on their findings, the Subcommittee recommended to the Council that no major changes to Unit 2 deer harvest management (season, bag limits, etc.) occur during 2005-2007, with the exception of reopening deer hunting on federal public lands on the southeast portion of Prince of Wales Island to non-federally qualified hunters, in 2006. For future years, the Subcommittee recommended that deer harvest management tools could be applied in Unit 2 as deer population trends and hunting use patterns change. The degree to which these tools would be employed would be decided through the established public regulatory processes (SERAC 2006).

In Southeast Alaska, there are no hunts specifically for Federally-qualified users 60 and older or that are physically disabled. There are, however, two sheep hunts in Federal regulation with specific seasons for Federally-qualified users that are 60 years of age or older in Units 11 and 12.

In 1998, the Board supported WP98-28 creating a sheep season in Unit 11 for Federally-qualifed users 60 years of age or older. Although the State had concern that ANILCA did not allow the

Board to create age specific hunts, legal counsel to the Board indicated that the proposal had "*rationale distinction based on an adequate administrative record."* As a result, the season was extended one month beyond the regular sheep season, when sheep are at lower elevations to allow the opportunity for those "*elders who are still capable of hunting, but cannot climb high enough into the mountain to find sheep during the early season, to continue to hunt and pass on traditional knowledge about sheep hunting to younger family members* (FWS 1998)."

During 2004 two proposals were considered which addressed age related sheep hunts in Unit 11 and Unit 12. WP04-24 requested that designated hunting be allowed for the late season elder hunt in Unit 11. This proposal was opposed by the Southcentral and Eastern Interior Regional Advisory Councils and rejected by the Board because adoption of proposal would contradict the original purposes for establishing the hunt (FSB 2004).

In 2004, the Board also considered WP04-80 which asked for a sheep season in Unit 12 that paralleled the 60 and older sheep hunt in Unit 11. Although there were suggestions during the Southcentral and Eastern Interior Council meetings that youth provisions be included for Unit 12, the eventual recommendation from both Councils was to support the late season hunt in Unit 12 for 60 and older only, as originally proposed, and consider the youth provisions when more details were available (EIRAC 2004, SCRAC 2004). The Board adopted the proposal creating the late sheep season only for those users 60 and older in Unit 12, staying consistent with both Councils' recommendations (FSB 2004).

During 2005, the Cheesh'na Tribal Council submitted WP05-06 with the goal of allowing Federally-qualified users 60 and older "to resume their traditional practices of teaching their grandchildren how to hunt sheep." The proponent acknowledged that although WP04-80 established the late season to allow only subsistence users 60 and older to hunt when the sheep would be more easily accessible, this proposal would allow grandchildren and similar younger relatives to accompany these users for educational purposes. They stated that the age related regulation "neglected one aspect of the traditional instructional process, that the young people should have the opportunity to take the animal, rather than simply observing their elders doing so." WP05-06 was adopted by the Board at its May 2006 meeting and established the combined 60 and older/youth hunt with the season of Sept. 21–Oct. 20.

During the 2012 cycle, WP12-32 was submitted to the Board. The proposal requested the season dates for the combination 60 and older/youth sheep hunts in Units 11&12 be changed to an earlier season of August 1st through August 9th. Both Councils supported the proposal with modification to retain the existing season ending date for the hunt in regulation. Although this modification had support from the Wrangell-St. Elias Subsistence Resource Commission, ADF&G felt that the earlier season would be acceptable only as long as it began on August 10. Because of the low reported harvest on Federal permits from these hunts, the Board supported the proposal as modified by the Councils (FSB 2012)

Biological Background

Please see Proposal WP14-03 for a complete biological back ground for Sitka black-tail deer in Unit 2.

Harvest History

The majority of the deer harvest in Unit 2 has been reported from five Wildlife Analysis Areas (WAA). These WAA's are located in the central portion of the island, have high road densities, and are located in close proximity to most Prince of Wales Island communities (Turek et al. 2004, Paul and Straugh 1999). Prior to 2005, it was very difficult to accurately estimate deer harvests by those over the age of 60 in Unit 2. Since the implementation of the joint USFS and ADF&G Unit 2 deer harvest report in 2005, identifying Unit 2 deer harvest by user group greatly improved. Beginning in 2011, the hunt report form was attached to all deer harvest tickets issued in Alaska. A summary of deer harvest in Unit 2 since 2005 can be found in **Table 1**. For a more in depth history of Unit 2 deer harvest, please see the harvest history section within analysis for proposal WP14-03.

Table 1. Estimated Sitka Black-tail deer harvest, State proxy harvest and Federal designated harvest in Unit 2 (2005-2011). (Yuhas 2013; USFWS 2013).

Year	Deer harvest estimate Unit 2	Federally qualified deer harvest estimate by age 60 and older	% of harvest by age 60 and older	State proxy harvest Unit 2	Federal Designated harvest in Unit 2
2005	2717	135	5%	34	40
2006	3344	202	6%	41	50
2007	2869	152	5%	6	53
2008	3318	213	6%	10	66
2009	3345	270	8%	25	71
2010	3625	271	7%	20	52
2011	3250	164	5%	n/a	61
Ave.	3210	201	6%	23	56

Population Demographics

Although rural residents of Units 1A, 2, and 3 qualify for the Unit 2 subsistence deer hunt, the majority of the participating Federally-qualified subsistence users reside in Unit 2. These users reside in one of the eleven communities located in the unit which are a part of the Prince of Wales Borough. The borough also includes the remote outlying communities of Metlakatla and Hyder. According to the 2010 census, it is estimated that 5,500 people reside in the borough. An estimated 16.8% of the Federally-qualified subsistence users who could harvest deer on POW are age 60 or older. The breakdown by age segment can be found in **Table 2** (Department of Labor and Workforce Development 2012).

Determining the actual number of rural residents meeting the "disabled" category is problematic. Within Alaska, disability can be determined by State agencies such as the Department of Labor & Workforce Development or the Department of Health and Social Services. There are also Federal agencies such as the Social Security Administration or Department of Veteran's Affairs. Each agency has its own process and standards for making determinations so accurate numbers of Federally-qualified users meeting "disabled" requirements may be undeterminable (Fader 2013).

Table 2. 2010 population estimates and percentage of population by age group (age 60 and over) in the Prince of Wales Borough. (Department of Labor and Workforce Development 2012)

Age Group	60-64	65-69	70-74	75-79	80-84	85-89	Over 90
Number	363	263	137	92	42	19	6
% of borough population	6.6%	4.9%	2.5%	1.7%	0.7%	0.3%	0.1%

Designated Hunting

Deer is a vital food staple and an important protein source for many rural Alaskans. The hunting of deer in Southeast Alaska can be a physically demanding task which not every household in a given community is able to undertake. It is common for able-bodied, younger individuals to take on the responsibility of harvesting meat for families and individuals outside of their household (i.e. the elderly and single mothers).

In 1997, the ADF&G Division of Subsistence conducted key respondent interviews in Prince of Wales (POW) Island communities and Ketchikan regarding subsistence deer hunting on POW Island. Hunting and sharing practices are similar throughout most POW Island communities, and it was noted that some hunters regularly supplied deer to other households as well as their own (Turek et. al 2004). Several individuals mentioned this pattern specifically in their responses. Communities such as Hydaburg, which is predominantly populated by Alaska Natives, had similar answers to the same questions as Pt. Baker and Port Protection whose populations are mostly Caucasian.

Federal designated hunting does occur in Unit 2 under the terms of a Federal Designated Hunting permit. The hunter may hunt for another Federally-qualified user (recipient), so documenting age or disability of the recipient is not required. Determining numbers of deer harvested for a disabled recipient is impossible as Federal regulation does not require the recipient to prove disability. Although the permit requires the hunter to enter a permit/harvest ticket number for the recipient when reporting harvest, the hunting license or Permanent identification number of the recipient are not required. Federal designated harvests can be found in **Table 1**.

Access

Historically, most gathering activities occurred near settlements accessible by foot or boat. Subsistence use in Southeast Alaska is concentrated near individual communities and along the beaches (USFS 1997). The introduction of motorboats and the development of road systems associated with timber harvest activities have led to a shift in subsistence use to areas where motorized access is easily achieved. Ellanna and Sherrod (1987) reported that most deer were "skiff harvested" prior to 1981.

A rapid change of hunting methods occurred between 1982 and 1984. In 1982, 67% of hunters interviewed reported the exclusive use of boats for deer hunting, by 1984 only five percent of the responding hunters, hunted only from boats. Hunters reported in a 2003 survey that road systems are extensively used for hunting deer (USFS 2003). ADF&G also noted that the percentage of hunters using passenger vehicles to hunt deer has greatly increased over the past years. Fifty percent of hunters drove vehicles to hunt in 1993 compared to 77% from 1996 to 1999 (ADF&G 2000). Comments gathered during public scoping for the Access and Travel Management Plan (ATM) conducted by the USFS substantiated these statistics (USFS 2009a).

Unit 2 Federal lands are a part of two USFS ranger districts. The northern half of the island is located in the Thorne Bay Ranger District, while the southern half is in the Craig Ranger District. Most USFS roads in Unit 2 were built to harvest timber between 1950 and 1980. Generally, these roads were constructed and reconstructed by timber sale purchasers to gain access for removing timber. Unit 2 contains approximately 1,687 miles of Forest Service roads (USFS 2009a). Both districts received direction to review the road base mileage on their districts to identify road systems which could be removed from the road inventory. In 2009, the ATM analyzed approximately 1363.5 miles of Forest Service roads area on POW to determine if they should be maintained.

As a part of the ATM review process, roads were scored for subsistence use as high, medium, low or no score. Within the central WAAs, 132 miles of roads that scored as high for subsistence use, will be either decommissioned or stored (USFS 2009b). Based on the alternative selected for implementation of the ATM, approximately 427 miles of existing roads on POW will remain open to and maintained for either highway vehicles, off highway vehicle (OHV), or for mixed use. Within the five WAAs where the highest deer harvests occur, the ATM reduces the available road mileage from 945 miles to 360 miles. With either full road closure, or closures to the end reaches of the road systems, subsistence users may be unable to access customary hunting locations. Additional road closures may also occur in the area because of proposed wolf related mitigations as proposed in the Record of Decision for the Big Thorne Draft Environmental Impact Statement (Dillman 2013). These reductions in overall road mileage may increase competition between all user groups.

Other alternatives to consider

Although the proponent seeks to expand the deer hunting season for subsistence users 60 and over and for the physically disabled, keeping the earlier hunt only for subsistence users 60 or older may be a better option. Determining disability has been shown to be complex and problematic, and would require a Federal permit to participate in the hunt. Keeping the earlier

season only to within the month of July is preferred by managers, as the hunt will fit within the Federal wildlife regulatory year (July 1 – June 30). A hunt that spans two regulatory seasons creates complexity by requiring two sets of harvest tickets, two harvest limits and complicates harvest reporting.

Effects of the Proposal

This proposal increases the opportunity to hunt deer with reduced competition within Unit 2 for Federally-qualified subsistence users over the age of 60 or those that can demonstrate a 70% physical disability.

With a season starting date in June, Federally-qualified users will need to have two sets of deer harvest tickets to participate. Prior year harvest tickets would be required for the June portion of the hunt and any deer harvested during this month would fall under the previous year's harvest limit. The hunter would then have to obtain new harvest tickets with the change of the regulatory year (July 1). Harvest reporting would be complicated since harvest before July 1 would be reported in one regulatory year and the harvest after July 1 would be reported in another regulatory year.

The earlier season would provide an advantage for Federally-qualified users 60 and older or that are physically disabled to harvest for themselves without having to rely entirely on Federal Designated hunting provisions. The stated purpose of this proposal is for persons over 60 and those with disabilities to have the satisfaction of harvesting a deer themselves. Allowing designated hunting during this special season is not consistent with this purpose. The Board has previously rejected a proposal requesting allowance of designated hunting during the 60 and over sheep hunts in Units 11 and 12, as allowance of designated hunting during an extended season for elders defeated the purpose of the hunts.

A five week "head start" may provide too much of an advantage at the expense of other Federally qualified subsistence hunters. A one week "head start" should provide adequate opportunity to fulfill the stated purpose of harvesting less wary deer for themselves.

OSM CONCLUSION

Support Proposal WP14-04 **with modification**. The modified language would remove the physically disabled category, reduce the early hunt start date by one week rather than five weeks, removes the requirement of a Federal permit and prohibits designated hunting during the early season. The modified regulation would read:

5 deer; however, no more than one may be a female deer. Female deer may be taken only during the period Oct. 15–Dec. 31. The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeastern portion (lands south	*July 24–Dec. 31*

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.	
Only Federally-qualified users 60 years of age and older are eligible to hunt from July 17 through July 23. Only male deer may be taken. Any deer taken during this season count against the deer harvest limit for Unit 2. Designated hunter provisions do not apply during this season.	***July 17–July 23***

Justification

Adoption of the proposal, as modified, provides additional opportunity for Federally-qualified subsistence users over the age of 60. Currently, a very small percentage of the overall deer harvest is taken by those over 60. The Federal Subsistence Board has established 60 as the minimum age for two other Federal subsistence hunts in other management units. Age as a defining option, removes the need for a specific permit to participate in the early hunt. Age can be determined in the field by the hunter's state issued driver's license, permanent identification card or other photo identification and removes the need for a Federal permit.

Establishing a special season for disabled persons to hunt would be challenging to implement as there is no standard definition of disabled. Many agencies have different definitions. If the disability provisions are adopted, a Federal permit would be required to demonstrate to law enforcement in the field that a person is eligible to hunt during the early season.

A five week "head start" may provide too much of an advantage at the expense of Federally qualified subsistence hunters. A one week "head start" should provide adequate opportunity to fulfill the stated purpose of harvesting less wary deer for oneself. Also, a season start date in July would require only one set of deer harvest tickets and harvest would easily be attributed to the proper regulatory year.

The stated purpose of this proposal is for Federally qualified users 60 to have the satisfaction of harvesting a deer for themselves. Allowing designated hunting during this special season is not consistent with this purpose. The Board has previously rejected a proposal requesting allowance of designated hunting during the 60 and over sheep hunts in Units 11 and 12, as allowance of designated hunting during an extended season for elders defeated the purpose of the hunts.

LITERATURE CITED

ADF&G. 2000. Alaska Department of Fish and Game. Wolf management report of survey-inventory activities. Federal Aid in Wildlife Restoration, 1 July 1996 – 30 June 1999. M. Hicks, editor. Juneau, Alaska.

Department of Labor and Workforce Development. 2012. Alaska Population Overview 2010 Census and 2011 Estimates. Research and Analysis Section, Juneau, AK.

STATE OF ALASKA
DEPARTMENT OF FISH AND GAME

APPLICATION
for
METHODS AND MEANS EXEMPTION

Part 1. Applicant Information and Statements

First Name M.I Last Name Daytime Phone Number

Mailing Address Email Address

Hunting License Type:

City State Zip Code ☐ Resident ☐ Non-Resident

1. Please identify the exemption you are requesting. Applicants requesting to use a motorized vehicle must include the specific hunt number, location, and dates they wish to hunt.

2. Please explain how your physical condition limits your ability to participate in the hunt without receiving an exemption.

3. I certify that all statements entered on this application are true and that I will abide by all conditions and restrictions of an exemption if issued.

Signature Date

Part 2. Physician's Statement

4. Please describe the nature and extent of the applicant's condition or disability.

5. Is this a permanent disability? ☐ Yes ☐ No

6. I certify that the applicant's condition or disability substantially limits his or her ability to comply with the methods and means restriction identified in Part 1 above.

Physician's Name (Print) Telephone Number

Signature Date Physician's License Number/State

Completed applications should be mailed at least 30 days prior to the start of your hunt to the Alaska Department of Fish and Game, Division of Wildlife Conservation, Permits Section, P.O. Box 115526, Juneau, AK 99811-5526.

Instructions for Completing the Methods and Means Exemption Application Form

Important: This application should be submitted at least 30 days prior to the start of your hunt.

Part 1. To be completed by the Applicant

- Enter your name and contact information
- Check one of the boxes to indicate whether you have a resident or non-resident hunting license

1. Please identify the exemption you are requesting. The most common exemptions include
   - To use a crossbow or draw-lock in an archery-only hunt
   - To use an ATV in a controlled use area (you **must** specify the hunt number, location, and hunt dates for your application to be considered).
   - To use a laser sight to take game
2. Please explain how your disability limits your ability to comply with the methods and means restriction at issue, in other words, how your disability limits your ability to participate in the hunt without receiving an exemption.
3. Please sign and date the application certifying that the information contained within it is true.

Part 2. To be completed by the Physician

4. Please describe the nature and extent of the applicant's condition or disability. **It is important to understand that you are not being asked to provide a medical diagnosis on this form.**
   - To qualify for a methods and means exemption the hunter must have a disability that substantially limits his or her ability to comply with existing methods and means restrictions **Please address this issue when describing the nature and extent of the applicant's condition or disability or the exemption may not be granted due to lack of information.**

   Examples of qualifying disabilities include:
   - Loss, loss of use, or substantial impairment of one or both upper or lower extremities.
   - Inability to walk over natural terrain without the assistance of another person, prosthetic device, crutches, brace, or other mechanical, assistive device.
   - Requiring a wheelchair for mobility.
   - Blind or visually impaired.
   - Inability to walk for long distances (comparable to that of an average person in the general population) without assistance or a rest due to cardiac or lung disease where:
     - Forced (respiratory) expiratory volume for one (1) second when measured by spirometry is less than one (1) liter or his arterial oxygen tension (po) is less than 60 mm/Hg on room air at rest.
     - **Or** functional limitations due to cardiac disease are classified in severity as class III or class IV according to standards accepted by the American Heart Association
5. Check "yes" if the condition or disability is not expected to improve, check "no" if improvement is possible or likely.
6. Your signature indicates that the applicant's condition or disability substantially limits his or her ability to comply with the methods and means restriction identified in Part 1 of the form

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP14-04. The Council's justification to oppose:

- There is no conservation concern with the present deer regulations in Unit 2 that is addressed by this proposal or the Office of Subsistence Management's proposed modification.
- Determining disability has been shown to be complex and problematic, and add an additional administrative barrier to participants because this provision would require a separate Federal subsistence hunting permit.
- Establishing a hunting season that spans two regulatory years creates complexity by requiring hunters maintain two sets of harvest tickets, and harvest reporting would be delayed by almost half a year.
- The proposal is unnecessary to provide additional opportunity as the current season provides for ample chances for residents, of any age or physical condition to either hunt for themselves or to designate others to hunt for them.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-05 Executive Summary	
General Description	Proposal WP14-05 requests that the deer harvest season within the Lindenberg Peninsula portion of Unit 3 (Kupreanof Island, east of the Portage Bay – Duncan Canal Portage) be reduced from the current 4-month season to a 2-week season and the harvest limit be reduced from two male deer to 1 male deer. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*.
Proposed Regulation	**Unit 3 — Deer** *Mitkof, Woewodski, and Butterworth Islands — 1 antlered deer* — *Oct. 15 – 31* ***Kupreanof Island, that portion east of the Portage Bay-Duncan Canal Portage — 1 antlered deer*** — ***Oct. 15 – 31*** *Remainder — 2 antlered deer.* — *Aug. 1 – Nov. 30 Dec. 1 – 31, season to be announced*
OSM Conclusion	**Support** Proposal WP14-05 **with modification** to maintain the current harvest season but change the harvest limit to one antlered deer on the Lindenberg Peninsula of Kupreanof Island in Unit 3.
Southeast Regional Advisory Council Recommendation	**Support**
Interagency Staff Committee Comments	**Support.** 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS

WP14-05

ISSUES

Proposal WP14-05, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the deer harvest season within the Lindenberg Peninsula portion of Unit 3 (Kupreanof Island, east of the Portage Bay – Duncan Canal Portage) be reduced from the current 4-month season to a 2-week season and the harvest limit be reduced from two male deer to 1 male deer.

DISCUSSION

The proponent states that the combined effects of habitat loss, three consecutive deep snow winters (2006/07 through 2008/09), and predation by black bears and wolves has reduced the deer population in the area to low levels. The change is intended to allow the deer population to recover to more desirable levels. This change would mirror a State regulation change in January 2013.

Existing Federal Regulation

Unit 3 — Deer

Mitkof, Woewodski, and Butterworth Islands — 1 antlered deer	*Oct. 15 – 31*
Remainder — 2 antlered deer.	*Aug. 1 – Nov. 30* *Dec. 1 – 31, season to be announced*

Proposed Federal Regulation

Unit 3 — Deer

Mitkof, Woewodski, and Butterworth Islands — 1 antlered deer	*Oct. 15 – 31*
Kupreanof Island, that portion east of the Portage Bay-Duncan Canal Portage — 1 antlered deer	***Oct. 15 – 31***
Remainder — 2 antlered deer.	*Aug. 1 – Nov. 30* *Dec. 1 – 31, season to be announced*

Existing State Regulation

Unit 3 — Deer

Mitkof Island, Petersburg Management Area—2 bucks, by bow and arrow only	*Oct. 15 – Dec. 15*
Remainder of Mitkof, Woewodski, Butterworth Islands —1 buck	*Oct. 15 – Oct. 31*
That portion of Kupreanof Island on the Lindenberg Peninsula east of the Portage Bay –Duncan Canal portage. — 1 buck	*Residents: Oct. 15 – Oct. 31* *Non-residents: No open season*
Remainder – 2 bucks	*Aug. 1 – Nov. 30*

Extent of Federal Public Lands

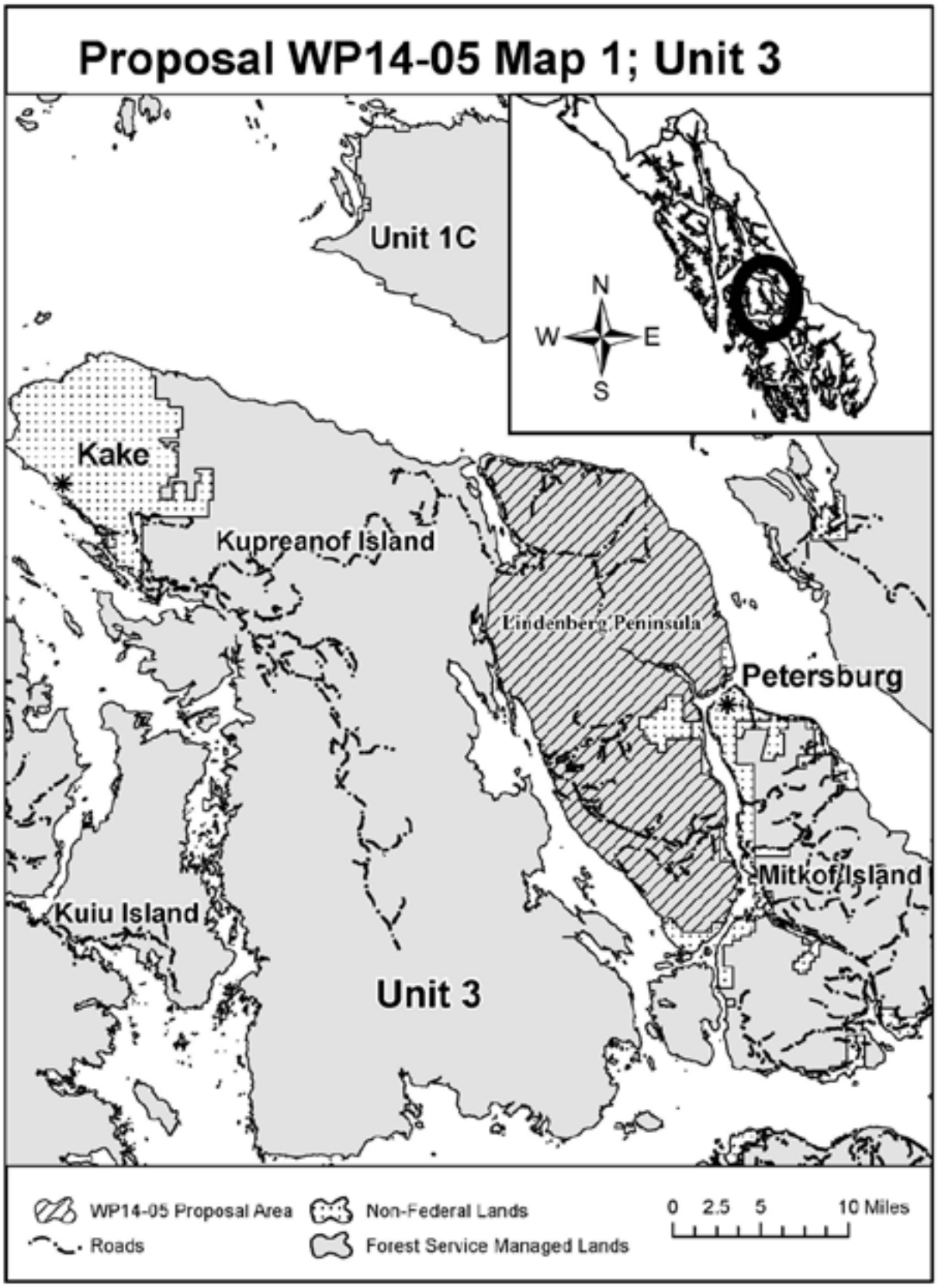
Federal public lands comprise approximately 91% of Unit 3 and are managed by the U.S. Forest Service (USFS) as part of the Tongass National Forest. The Lindenberg Peninsula portion of Unit 3 is comprised of approximately 95% Federal public lands managed by the USFS (see **Map 1**).

Customary and Traditional Use Determinations

Rural residents of Units 1B, 3, Meyers Chuck, Port Alexander, Port Protection, and Point Baker have a positive customary and traditional use determination for deer in Unit 3.

Regulatory History

From the mid-1950s through the early 1970s Unit 3 had relatively liberal deer seasons up to 4.5 months long and harvest limits of up to 4 deer including an antlerless deer harvest (**Table 1**). During the late 1960s and early 1970s a series of severe winters led to high mortality in the deer population, and resulted in shortened seasons and reduced harvest limits in the early 1970s. Unit 3 was closed to deer hunting between 1975 and 1979. In 1980 the deer season was reopened in the southern portion of Unit 3 with an August 1 – December 31 season and one buck harvest limit. However, the deer season on the Lindenberg Peninsula did not reopen until 1993 when an October 15–31 season was established, with a one antlered deer harvest limit. Beginning with the 2003 season, the Lindenberg Peninsula was included with the majority of Unit 3, extending the season to August 1 – November 30, and increasing the harvest limit to 2 antlered deer. Beginning with the 2008 season, the Petersburg District Ranger of the USFS was authorized to extend the season in the remainder of Unit 3 (including the Lindenberg Peninsula) to


Proposal WP14-05 Map 1; Unit 3
Unit 1C
N
W
E
S
Kake
Kupreanof Island
Lindenberg Peninsula
Petersburg
Mitkof Island
Kuiu Island
Unit 3
WP14-05 Proposal Area
Roads
Non-Federal Lands
Forest Service Managed Lands
0 2.5 5 10 Miles

December 31 in consultation with Alaska Department of Fish and Game (ADF&G) and the chair of the Council. The season has never been extended due to indications of a declining population and lower than average deer harvest.

Table 1. Regulatory history for Unit 3 deer since 1925.

Year	Season Type	Season	Limit	Conditions and Limitations
1925	Open	Sep. 16–Dec. 15	3	Bucks, 3 inch antlers or longer
1926–1929	Open	Sep. 1–Nov. 30	3	Bucks, 3 inch antlers or longer
1930–1941	Open	Aug. 20–Nov. 15	3	Bucks, 3 inch antlers or longer
1942–1943	Resident	Sep. 16–Nov. 15	2	Bucks, 3 inch antlers or longer
1942–1943	Nonresident	Sep. 16–Nov. 15	1	Bucks, 3 inch antlers or longer
1944–1948	Resident	Sep. 1–Nov. 15	2	Bucks, 3 inch antlers or longer
1944–1948	Nonresident	Sep. 1–Nov. 15	1	Bucks, 3 inch antlers or longer
1949	Resident	Sep. 1–Nov. 7	2	Bucks, 3 inch antlers or longer
1949	Nonresident	Sep. 1–Nov. 7	1	Bucks, 3 inch antlers or longer
1950–1951	Resident	Sep. 1–Nov. 15	2	Bucks, 3 inch antlers or longer
1950–1951	Nonresident	Sep. 1–Nov. 15	1	Bucks, 3 inch antlers or longer
1952	Open	Aug. 20–Nov. 15	2	Bucks, 3 inch antlers or longer
1953–1954	Open	Aug. 20–Nov. 22	2	Bucks, 3 inch antlers or longer
1955	Open	Aug. 20–Nov. 22	3	3 bucks or 2 bucks and 1 antlerless deer, bucks 3 inch antlers or longer, antlerless deer may be taken Nov. 15–Nov. 22
1956	Open	Aug. 20–Nov. 26	3	3 bucks or 2 bucks and 1 antlerless deer, bucks 3 inch antlers or longer, antlerless deer may be taken Nov. 15–Nov. 26
1957–1959	Open	Aug. 20–Nov. 30	4	4 deer, does may be taken Oct. 15–Nov. 30
1960	Open	Aug. 20–Dec. 15	4	4 deer, does may be taken Oct. 1–Dec. 15
1961	Open	Aug. 1–Nov. 30	4	4 deer, antlerless deer may be taken Sep. 15–Nov. 30
1962	Open	Aug. 1–Dec. 15	4	4 deer, antlerless deer may be taken Sep. 15–Dec. 15
1963–1966	Open	Aug. 1–Dec. 31	4	4 deer, antlerless deer may be taken Sep. 15–Dec. 31
1967	Open	Aug. 1–Dec. 31	4	4 deer, antlerless deer may be taken Oct. 1–Dec. 31
1968	Open	Aug. 1–Dec. 15	4	4 deer, antlerless deer may be taken Sep. 15–Dec. 15
1969–1970	Open	Aug. 1–Dec. 31	4	4 deer, antlerless deer may be taken Oct. 1–Dec. 31

Table 1. Regulatory history for Unit 3 deer since 1925.

Year	Season Type	Season	Limit	Conditions and Limitations
1969–1970	Open	Aug. 1–Nov. 30	2	Mitkof Island; 2 antlered deer
1969–1970	Open	Aug. 1–Dec. 15	4	Remainder of Unit 3; antlerless deer may be taken Nov. 1–Nov. 31
1971	Open	Aug. 1–Nov. 30	2	Mitkof, Wrangell, Etolin & Woronkofski Islands; 2 antlered deer
1971	Open	Aug. 1–Nov. 30	3	Remainder of Unit 3; antlerless deer may be taken Oct. 1–Oct. 31
1972	Open	Aug. 1–Nov. 30	2	2 antlered deer
1973–1974	Open	Sep. 1–Nov. 30	1	1 antlered deer
1975–1979		No open season		
1980	Open	Aug. 1–Dec. 31	1	South of Sumner Strait and Eastern Passage, including Level, Vank, Sokolof, Rynda, and Kadin islands; 1 buck
1980	Open	No open season		Remainder of Unit 3
1981–1984	Open	Aug. 1–Nov. 30	1	South of Sumner Strait and Eastern Passage, including Level, Vank, Sokolof, Rynda, and Kadin islands; 1 antlered deer
1981–1984	Open	No open season		Remainder of Unit 3
1985–1987	State Subsistence/General	Aug. 1–Nov. 30	1	South of Sumner Strait and Eastern Passage, including Level, Vank, Sokolof, Rynda, Conclusion, and Kadin islands; 1 antlered deer
1985–1987	State Subsistence/General	No open season		Remainder of Unit 3
1988–1990	State Subsistence/General	Aug. 1–Nov. 30	2	South of Sumner Strait and Decision Point, including Level, Vank Island group but not Level, Conclusion, or Channel islands; 2 antlered deer
1988–1990	State Subsistence/General	No open season		Remainder of Unit 3
1991–1992	State Subsistence/General, Federal Subsistence	Aug. 1–Nov. 30	2	South of Sumner Strait and Decision Point, including Level, Vank Is. group but not Level, Conclusion, or Channel islands; 2 antlered deer.
1991–1992	State Subsistence/General, Federal Subsistence	Oct. 15–Oct. 31	1	Mitkof Island south of the Petersburg city limits, Woedwodski and Butterworth islands; 1 antlered deer by registration permit
1991–1992	State Subsistence/General, Federal Subsistence	No open season		Remainder of Unit 3
1993–1994	State Subsistence/General, Federal Subsistence	Oct. 15–Oct. 31	1	Mitkof Island south of the Petersburg city limits, Kupreanof Island on **Lindenberg Peninsula** east of Portage Bay/Duncan Canal Portage, Woedwodski and Butterworth islands; 1 antlered deer by registration permit

Table 1. Regulatory history for Unit 3 deer since 1925.

Year	Season Type	Season	Limit	Conditions and Limitations
1993–1994	State Subsistence/General, Federal Subsistence	No open season		Mitkof Island within Petersburg city limits, Kupreanof Island within Kupreanof city limits
1993–1994	State Subsistence/General, Federal Subsistence	Aug. 1–Nov. 30	2	Remainder of Unit 3, 2 antlered deer
1995–2002	State Subsistence/General	Oct. 15–Oct. 31	1	Mitkof Island south of Petersburg city limits, Kupreanof Island on **Lindenberg Peninsula** east of Portage Bay-Duncan Canal portage outside the Kupreanof city limits, and Woewodski and Butterworth Islands; 1 buck by harvest permit only
1995–2002	State Subsistence/General	No open season		Mitkof Island within the Petersburg city limits and that portion of Kupreanof Island within Kupreanof city limits
1995–2013	State Subsistence/General	Aug. 1–Nov. 30	2	Remainder of Unit 3; 2 bucks by harvest permit only
1995–1997	Federal Subsistence	Oct. 15–Oct. 31	1	Mitkof, Woewodski, Butterworth Islands, and that portion of Kupreanof Island which includes the **Lindenburg Peninsula** east of the Portage Bay/Duncan Canal Portage; 1 antlered deer by State registration permit only; Petersburg and Kupreanof are closed to hunting
1995–1997	Federal Subsistence	Aug. 1–Nov. 30	2	Remainder of Unit 3; 2 antlered deer
1997–2003	Federal Subsistence	Oct. 15–Oct. 31	1	Mitkof, Woewodski, Butterworth Islands, and that portion of Kupreanof Island which includes the **Lindenburg Peninsula** east of the Portage Bay/Duncan Canal Portage; 1 antlered deer by State registration permit only; Petersburg and Kupreanof are closed to hunting
1997–2003	Federal Subsistence	Aug. 1–Nov. 30	2	Remainder of Unit 3; 2 antlered deer
2001–2002	State Subsistence/General	Oct. 15–Oct. 31	1	Mitkof Island, Kupreanof Island on the **Lindenberg Peninsula** east of Portage Bay-Duncan canal portage, and Woewodski and Butterworth Islands; 1 buck by harvest permit only
2003–2006	State Subsistence/General	Oct. 15–Nov. 15	1	Mitkof Island, the Petersburg Management Area; 1 buck by bow and arrow only with harvest permit
2003–2013	State Subsistence/General	Oct. 15–Oct. 31	1	Remainder of Mitkof Island, Woewodski, and Butterworth Islands; 1 buck by harvest permit only
2003–2013	Federal Subsistence	Oct. 15–Oct. 31	1	Mitkof, Woewodski, and Butterworth Islands; 1 antlered deer
2003–2008	Federal Subsistence	Aug. 1–Nov. 30	2	Remainder of Unit 3; 2 antlered deer

Table 1. Regulatory history for Unit 3 deer since 1925.

Year	Season Type	Season	Limit	Conditions and Limitations
2007–2013	State Subsistence/General	Oct. 15–Dec. 15	2	Mitkof Island, the Petersburg Management Area; 2 bucks by bow and arrow only with harvest permit
2008–2013	Federal Subsistence	Aug. 1–Nov. 30	2	Remainder of Unit 3; 2 antlered deer; Dec. 1–Dec 31 season to be announced.
2013	State Subsistence/General, residents	Oct. 15–Oct. 31	1	That portion of Kupreanof Island on the **Lindenberg Peninsula** east of the Portage Bay-Duncan Canal Portage; 1 buck by harvest ticket
2013	State General, nonresidents	No open season		That portion of Kupreanof Island on the **Lindenberg Peninsula** east of the Portage Bay-Duncan Canal Portage

Current Events

At its January 2013 meeting, the Alaska Board of Game (BOG) adopted a regulation to reduce the harvest limit on the Lindenberg Peninsula to 1 buck shorten the season to October 15 – October 31, and close the area to harvest by nonresidents. Additionally, the BOG authorized a wolf predator control program in a portion of Unit 3, including the Lindenberg Peninsula.

In June 2013, the ADF&G submitted a special action request (WSA13-BD-05-13) that would implement the regulatory changes in this proposal (WP14-05), via special action, for the 2013 season. A public hearing was held in Petersburg on July 1, 2013. The meeting was also available to Wrangell residents through video teleconference. Seven members of the public participated in the meeting. Participants generally agreed that the deer population is low, but there was less consensus about whether the proposal is the best solution, and various alternatives were proposed. For further details see meeting summary notes in **Appendix A**. On July 9, 2013, the USFS in-season manager approved the special action request.

Biological Background

Sitka black-tailed deer spend the winter and early spring at low elevation where there is less snow accumulation and forests provide increased foraging opportunities. Fawning occurs in late May and early June as vegetation greens-up, providing abundant forage to meet the caloric needs of the lactating doe. Some deer are migratory and follow the greening vegetation up to alpine for the summer while others remain at lower elevations. The breeding season, or rut, generally occurs during October and November and peaks in late November (ADF&G 2009). Winter snow depths are the primary influence on deer population levels in southeast Alaska (Olson 1979). Wolves and black bears are the primary predators of deer in Unit 3. There is little information on predator populations in Unit 3 but ADF&G considers that wolf predation is the most likely cause of continued low deer populations in combination with severe

winter weather events (Division of Wildlife Conservation 2012). See the biological background discussion for proposal WP14-03 for additional information on deer biology.

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. Timber harvest on the Lindenberg Peninsula has reduced the amount of productive old-growth (POG) forest by approximately 7% since large-scale commercial timber operations started in 1954 (**Table 2**). In addition, the roads built to access the timber improve access for hunters. There are approximately 117 miles of roads on Federally managed lands on the Lindenberg Peninsula. Another 9.3 miles are scheduled to be built for recently planned timber sales. In the environmental analysis for the recent Tonka timber sale on the southern portion of the Lindenberg Peninsula, the USFS determined that loss of habitat was not likely to restrict subsistence uses of deer in the short-term, but there was a small possibility of a restriction in the long-term as regenerating forests enter the stem exclusion stage (USFS 2012). The ADF&G believes that current winter habitat conditions are suitable to sustain the low deer population but that maintaining adequate reserves of old-growth forest is important for maintaining deer numbers at higher levels once the deer population has recovered (Division of Wildlife Conservation 2012).

Table 2. Deer winter habitat and timber harvest on the Lindenberg Peninsula. Data from USFS geographic information system database and USFS (2012).

	POG in 1954 (Acres)	POG Harvested (Acres)	POG in 2013 (Acres)	POG Remaining 2013 (%)	Additional Harvest Planned (Acres)
Total POG [1]	93,111	5,938	87,173	93.6	989
POG Below 800'	51,684	3,692	47,992	92.9	712

[1] POG is Productive Old-Growth forest. POG below 800-feet elevation is considered high value winter range.

Recent population indices

There are no methods to directly count deer in southeast Alaska, so 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 2011). Brinkman et al. (2013) questioned the value of pellet-group surveys for monitoring population trends due to the variability in the data compared to DNA based counts. Although pellet-group surveys remain the only widely available deer population data, the results should be interpreted with caution. **Figure 1** shows pellet-group survey results for all of Unit 3. **Figures 2** and **3** show pellet-group survey results for two transects within the proposal area. These data suggest a declining population following the deep snow winters starting in 2006–07. Based on the pellet-group data for Unit 3, the deer population does not appear to have rebounded substantially in recent years as it has in other areas of southeast Alaska such as Units 2 and 4. ADF&G considers the deer population in Unit 3 to be well below carrying capacity (Lowell 2011, Division of Wildlife Conservation 2012).

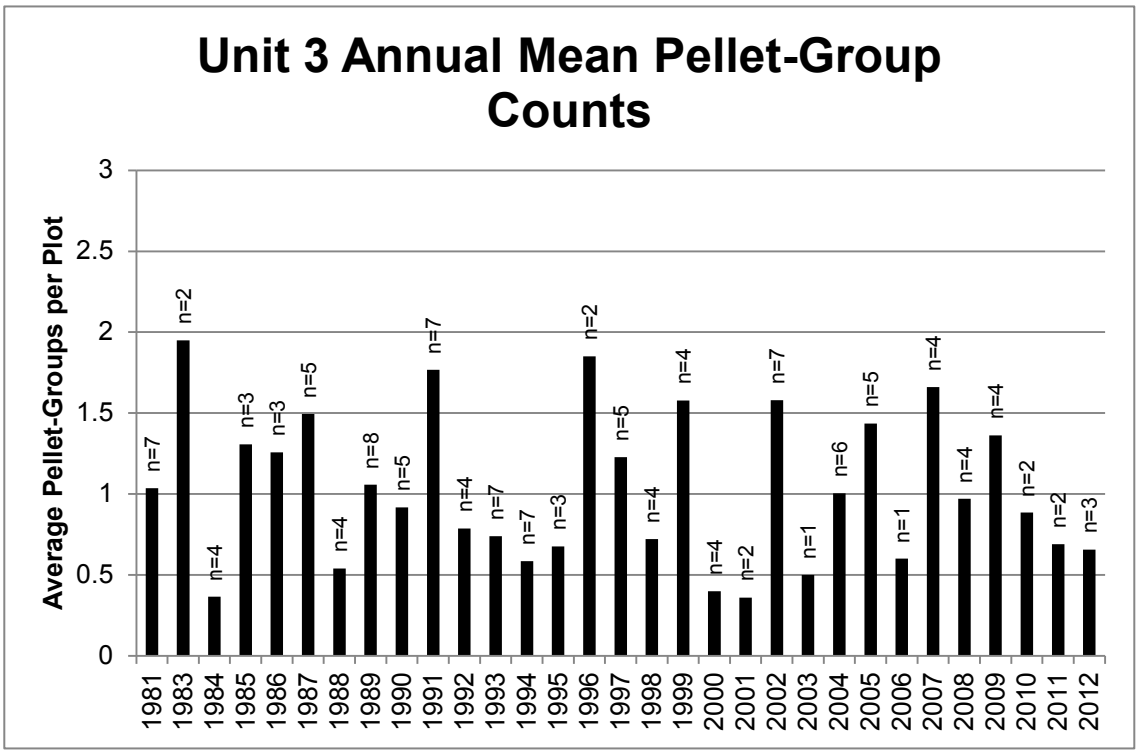


Figure 1. Results of annual pellet-group surveys conducted in Unit 3, 1981–2012.

Harvest History

Harvest data reported below were provided by ADF&G (McCoy 2013, pers. comm.) and were gathered by the Region 1 deer survey and the State-wide deer report. The Region 1 deer survey covers the years 1997–2010, and is 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

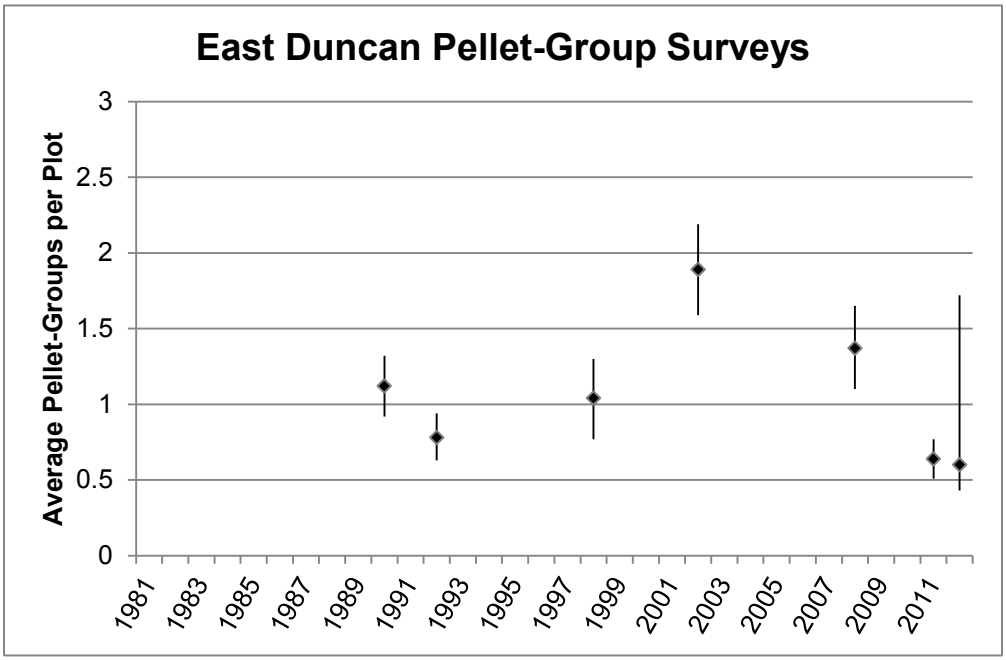


Figure 2. Results of annual pellet-group surveys conducted in the East Duncan transect in Unit 3, 1981–2012.

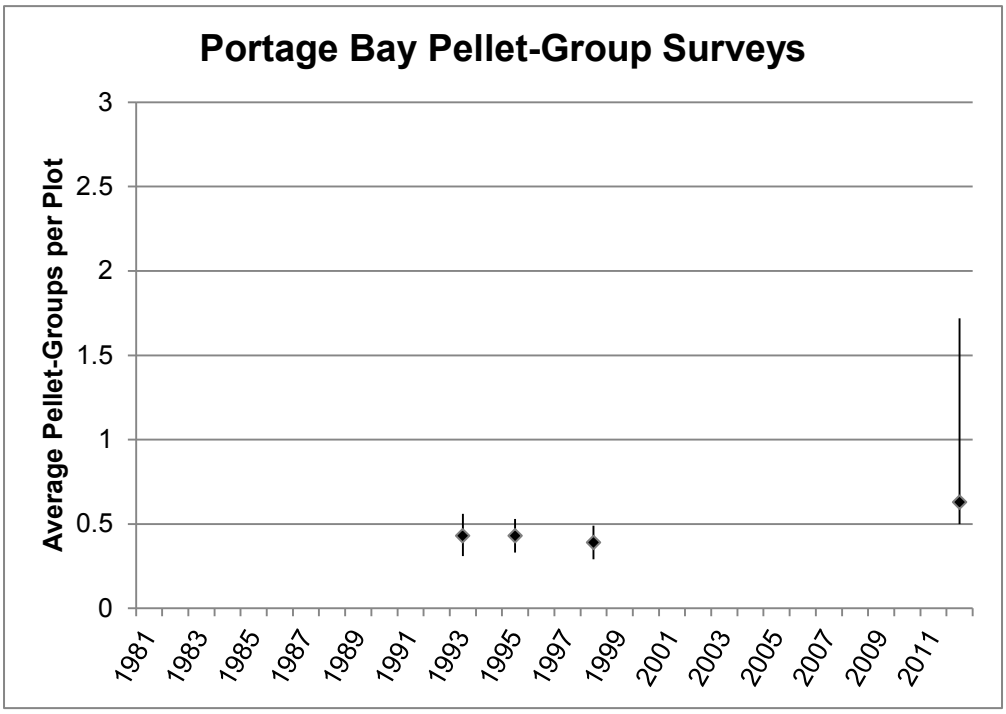


Figure 3. Results of annual pellet-group surveys conducted in the Portage Bay transect in Unit 3, 1981–2012.

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. Data for smaller areas, such as the Lindenberg Peninsula, are more variable and less accurate. The State-wide deer report was instituted in 2011 and requires reporting of harvest by all deer hunters. Since the State-wide harvest report response rate is less than 100 percent, an expansion factor is used so that total harvest estimates between years are comparable (McCoy 2013, pers. comm.).

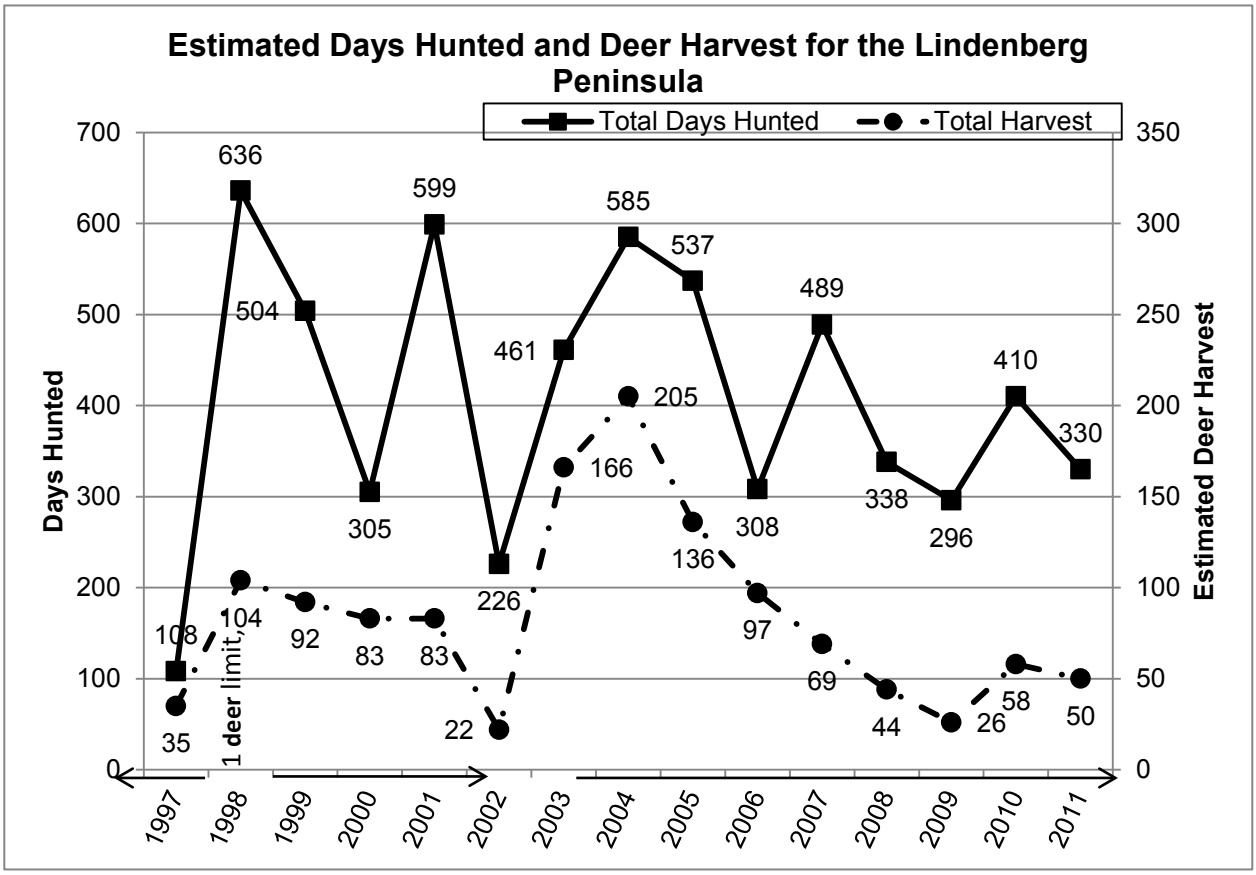


Figure 4. Estimated days hunted and deer harvest for the Lindenberg Peninsula, 1997–2011.

Deer harvest on the Lindenberg Peninsula spiked for a three year period following the liberalization of the harvest season and limit in 2003 (**Figure 4**). This may reflect relatively high deer populations during a period of low snow winters. Harvest has declined from a high of 205 in 2004 to around 26 in 2009, but appears to have risen slightly since. This is consistent with a decline in the population following the deep

snow winters starting in 2006. Overall, effort and harvest data in recent years appear similar, but slightly lower, compared to the years prior to liberalization of the season and harvest limits in 2003. **Figure 5** shows the same information for all of Unit 3. Unit 3 shows a general decline in harvest and effort during the 1997–2011 period.

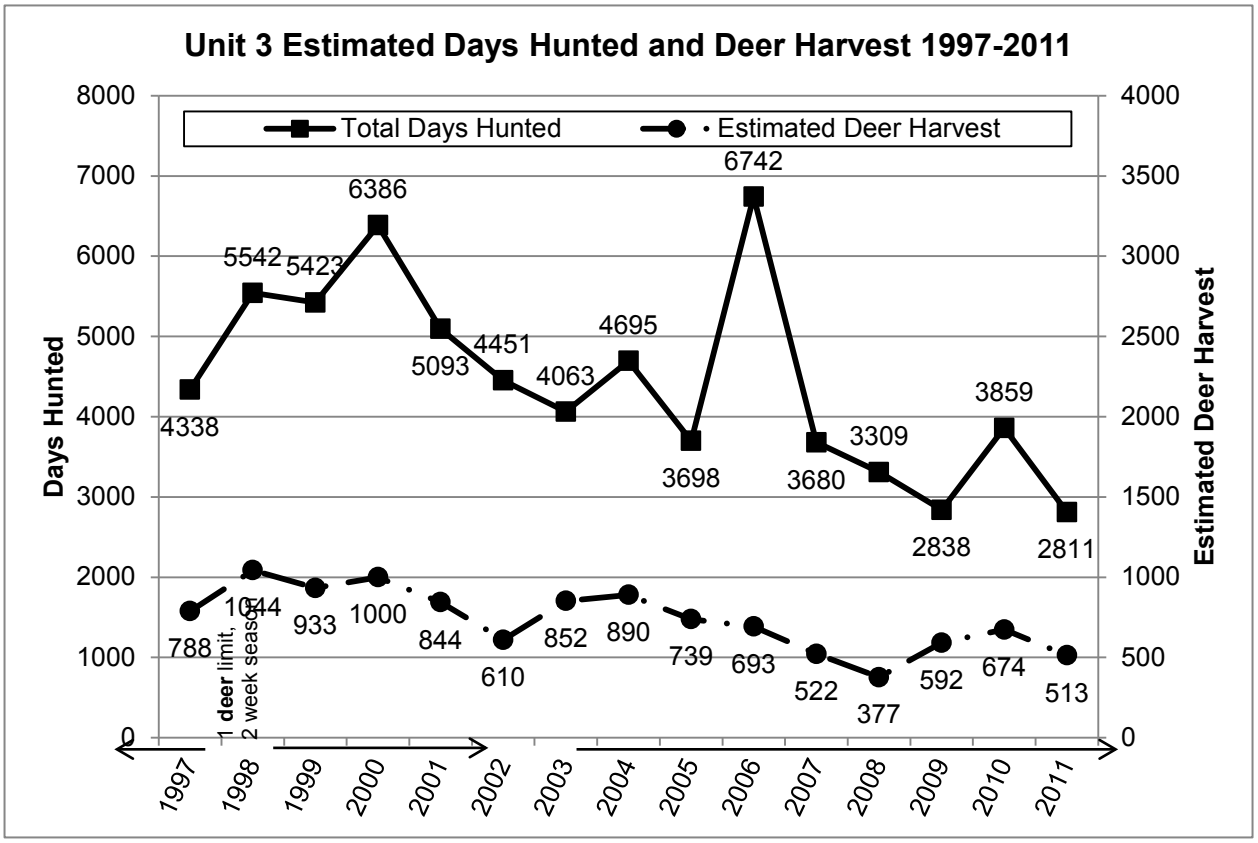


Figure 5. Estimated days hunted and deer harvested in Unit 3, 1997 – 2011.

The average number of deer harvested per hunter on the Lindenberg Peninsula has increased since a low in 2008 back to levels seen prior to 2003 (**Figure 6**). The effort per deer harvested has generally increased since the severe winters starting in 2006, but appears to have decreased in 2011. **Figure 7** shows the same information for all of Unit 3. The effort per deer harvested appears to have increased since 2006, but the deer harvested per hunter has remained steady. The vast majority of harvest and effort on the Lindenberg Peninsula is by residents of Petersburg, and hunters with a positive customary and traditional use determination account for an estimated 91% of the harvest and an estimated 87% of the days hunted since 1997 (**Table 3**).

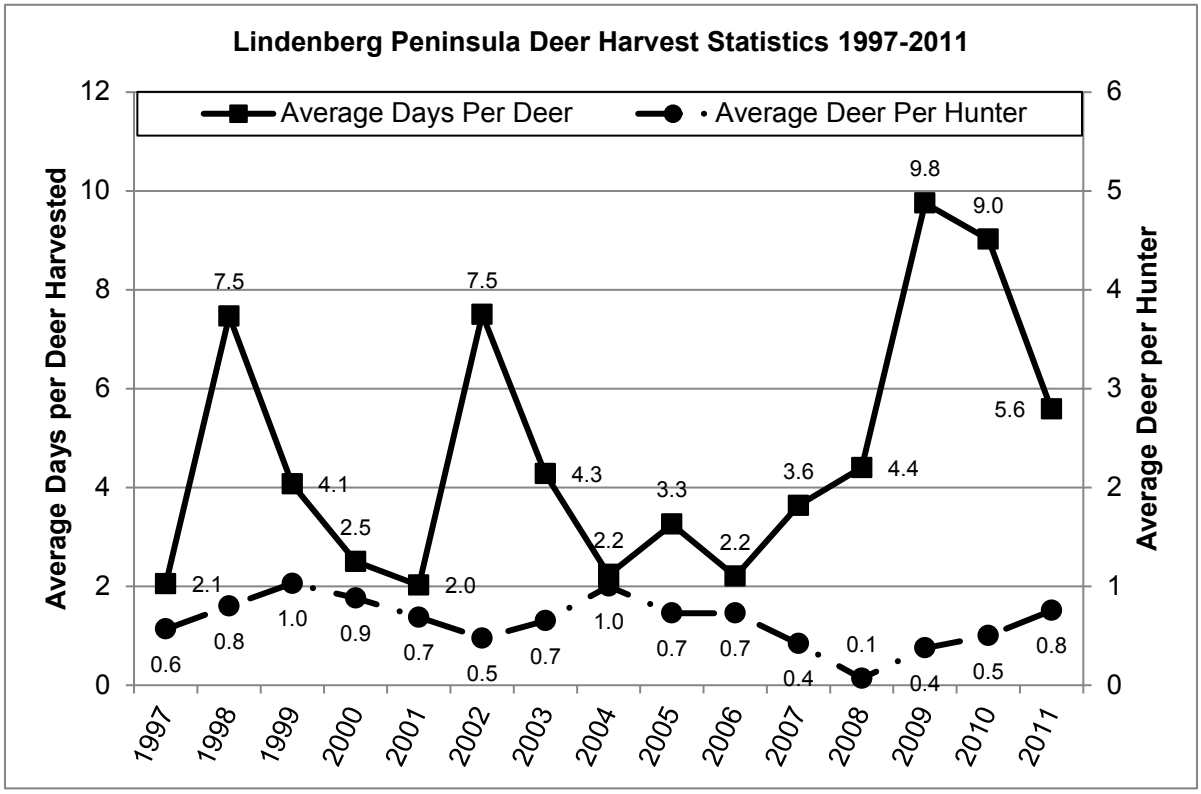


Figure 6. Deer harvest statistics from the Lindenberg Peninsula, 1997–2011.

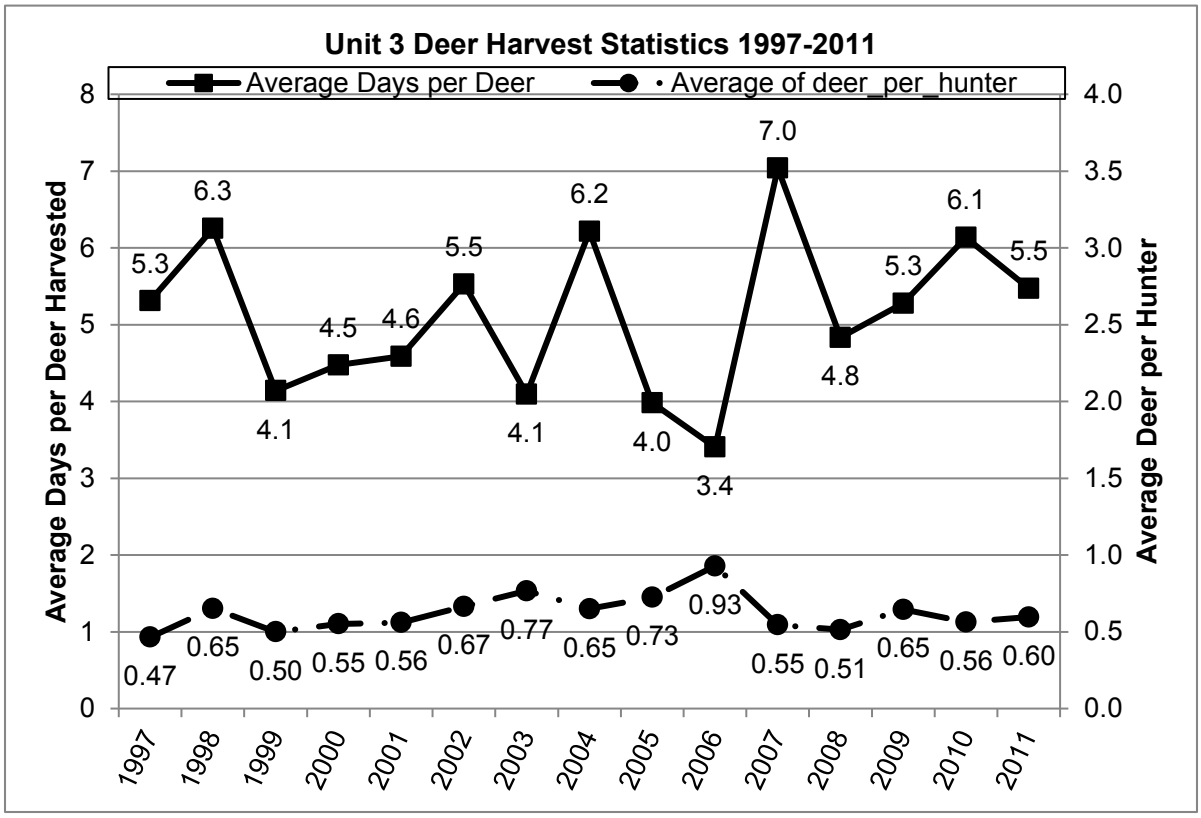


Table 3. Deer harvest and effort by month for the Lindenberg Peninsula (Wildlife Analysis Areas 5136, 5137, 5138) from 2007 through 2011. Data provided by ADF&G (McCoy 2013, pers. comm.). All numbers are estimates based on deer harvest surveys.

Month	Total Deer Harvest	Deer Harvested per Year	Days Hunted per Year	Number of Hunters per Year	% Successful Hunters	Deer Harvested per Hunter	Days Hunted per Deer Harvested
August	44	9	43	22	38	0.4	4.9
September	30	6	62	21	21	0.3	10.3
October	65	13	132	27	27	0.3	10.2
November	88	18	125	37	36	0.4	7.1
Unknown/ Other	19	4	11	5	67	0.7	3.0
Total	246	49	373	108	33	0.5	7.6

Note: The Total average "Number of hunters per year" is not the same as adding the monthly averages for "Number of hunters per year" because some hunters hunted in more than one month.

Other Alternatives Considered

Several alternatives were considered. Reducing season length but leaving the harvest limit the same could reduce harvest by limiting the time available for harvest. This alternative would also limit opportunity and some subsistence users would likely be unable to participate in the season. The ADF&G does not expect that shortening seasons and reducing harvest limits is likely to result in increased deer numbers because Unit 3 harvest regulations are already restrictive and wolf predation and winter weather likely have greater impacts on the deer population (Division of Wildlife Conservation 2012).

Reducing the harvest limit to one, and leaving the season from August 1 through November 30 would likely reduce harvest but would maintain the existing opportunity for subsistence users to participate. The Lindenberg Peninsula deer harvest data from 1997–2011 (McCoy 2013 pers. comm.) indicates that annually, an estimated 35% of hunters take two deer. These second deer account for an estimated 26% of the total harvest.

Reducing the harvest limit to one, and shortening the season is a related alternative. For example, reducing the season length to August 1 through October 31 would close the season during the peak of the rut. This would maintain more opportunity than the original proposal, and would protect deer when they are most vulnerable. **Table 3** shows harvest statistics by month for the Lindenberg Peninsula from 1997–2011, suggesting the level of impact to subsistence users associated with shortening the season. Most of the effort and harvest takes place in October and November, but hunting in August seems to be the most efficient.

Limiting the harvest to Federally qualified subsistence users only would not likely have much effect because few non-Federally qualified users participate (**Table 4**).

Table 4. Estimated harvest and effort by community of residence for the Lindenberg Peninsula (Wildlife Analysis Areas 5136, 5137, 5138), 1997-2011. Data provided by ADF&G (McCoy 2013, pers. comm.). Shaded communities have a positive customary and traditional use determination for Unit 3.

Row Labels	Estimated Harvest	Estimated Days Hunted
Coffman Cove	0	3
Craig	6	6
Haines	0	15
Hoonah	2	7
Juneau	30	294
Kake	43	501
Klawock	11	6
Other Alaska	44	243
Outside Alaska [1]	19	222
Petersburg	1103	4798
Residency Unknown	0	3
Sitka	0	12
Wasilla	3	8
Willow	2	7
Wrangell	7	7
Total	1270	6132

[1] The Alaska Board of Game adopted a regulation to close the Lindenberg Peninsula to deer harvest by non-Alaska residents starting with the 2013 season.

Effects of the Proposal

If this proposal is adopted it would shorten the deer season from about 17 weeks to two weeks. The shorter season would make it more difficult for subsistence users to participate due to factors such as weather conditions and other obligations.

If adopted, this proposal could reduce deer harvest and improve recruitment, allowing the deer population to increase. The deer population is believed to be below carrying capacity so harvest mortality would likely be additive (i.e., deer that are harvested would likely have survived otherwise).

If this proposal is adopted it would align Federal and State deer hunting regulations for this portion of Unit 3. This would reduce confusion among user groups and make enforcement easier.

OSM CONCLUSION

Support Proposal WP14-05 **with modification** to maintain the current harvest season but change the harvest limit to one antlered deer on the Lindenberg Peninsula of Kupreanof Island in Unit 3.

The modified regulation should read:

Unit 3 — Deer	
Mitkof, Woewodski, and Butterworth Islands — 1 antlered deer	*Oct. 15 – 31*
Kupreanof Island, that portion east of the Portage Bay-Duncan Canal Portage — 1 antlered deer	***Aug. 1 – Nov. 30***
Remainder — 2 antlered deer.	*Aug. 1 – Nov. 30* *Dec. 1 – 31, season to be announced*

Justification

The deer population on the Lindenberg Peninsula has declined since 2006 and has not shown indications that it is rebounding as other areas in southeast Alaska have. Thus, it seems reasonable to restrict harvest in response. The proposed modification should maintain existing opportunity for subsistence users, while limiting harvest pressure by about 26%. In addition, the information in **Figure 4** suggests that since about 2008, effort and harvest may be equal to or less than it was prior to liberalizing the season and harvest limit in 2003. This suggests that subsistence users have reduced their effort in response to low deer numbers. The low deer population may be a more important factor in determining effort and harvest at this time. The ADF&G suggests that currently, the most important factors controlling the deer population are winter weather and wolf predation.

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PUBLIC HEARING FOR SPECIAL ACTION REQUEST TO RESTRICT THE FEDERAL SUBSISTENCE DEER SEASON AND HARVEST LIMIT ON LINDENBERG PENINSULA IN UNIT 3

July 1, 2013 - Information Summary

LOCATION: Forest Service District offices in Wrangell and Petersburg; 6:00-7:15 pm July 1, 2013.

SPECIAL ACTION REQUEST: The Alaska Department of Fish & Game has proposed the Federal subsistence program reduce the subsistence hunting season on Lindenberg Peninsula (a portion of Kupreanof Island) from the current four-month, August through November season to a two-week October 15 through October 31 season and to reduce the subsistence harvest limit from two bucks to one buck deer; effective for the 2013 season. This request is identical to changes the State Board of Game made to the State managed deer hunt for the Lindenberg Peninsula in January 2013, and is identical to a proposal before the Federal Subsistence Board. The Federal Subsistence Board will consider this proposal in January 2014.

ATTENDEES:

Joe Viechnicki	KFSK radio
Jeff Miller	USFS Petersburg District Ranger (acting)
Jason Anderson	USFS Deputy Forest Supervisory (acting)
Robert Larson	USFS Subsistence Regional Council Coordinator
Dennis Chester	USFS Wildlife Biologist
Robert Dahlrymple	USFS Wrangell District Ranger
Joe Delebrue	USFS Wildlife Biologist
Randy Griffith	USFS Natural Resources
Terry Suminski	USFS Tongass Forest Subsistence Program
Rich Lowell	ADF&G Area Biologist – Wildlife Conservation
Neil Barton	ADF&G Management Coordinator – Wildlife Conservation
Mike Bell	Public - Petersburg
Dave Randrup	Public- Petersburg
Dave Beebe	Public- Petersburg

Rebecca Knight	Public- Petersburg
Austin O'Brien	Public – Wrangell
Bob Lippert	Public – Wrangell
Nathan Stearns	Public – Wrangell
George Doyle	Public – Petersburg (provided comments after the meeting)

SUMMARY OF COMMENTS:

Dave Beebe is a 30 year resident of Petersburg and works as a commercial fishermen. The proposed action is a direct result of mismanagement of the forest and a consequence of removing (logging) deer winter range. The Petersburg Ranger District overharvests deer winter range In the Tonka management area without any regard to the effects on subsistence use of deer by local residents. Alaska Department of Fish and Game comments on timber sales are modified or changed by the State's "One Voice Policy" which does not allow comments too critical to the timber industry. The USFS needs to change its policy and protect critical deer winter range. Mr. Beebe supports the proposed action.

Rebecca Knight is a long-term resident of Petersburg and submitted her comments and supporting documentation in written form as well as providing oral testimony. She feels the proposed action is a result of excessive prior timber harvest. She suggested that a focused restriction for only the Tonka Road system may be a more appropriate response but is generally in favor of the proposed action because it would provide for conservation and align the Federal and State regulations. Commenting on the ongoing timber sale program is difficult because the use of "Change Analysis" system does not allow public comment. She suggests it would be appropriate for the Federal Subsistence Board to request the Forest Service stop the Tonka Timber sale. The intent of ANILCA is to provide deer to local users and the negative effects of the timber sale program will continue for decades.

Bob Lippert, a resident of Wrangell, believes deer are being overharvested because the designated hunter program is being abused. If deer are at low numbers, closing the road system should be considered as an alternative. If the proposed action is approved, Petersburg residents will be displaced to Zarembo Island, to the detriment of Wrangell hunters. He is not if favor of the proposed action.

Nathan Stearns, a resident of Wrangell, is not in favor of adopting the proposed action. If the problem that has been identified is associated with the Tonka Road System; make the solution specific to the road system.

Austin O'Brien, a resident of Wrangell, does not support the proposed action. He does not believe that loss of deer winter range is the cause of the decline in deer abundance. There are many levels of habitat protection. If residents of Petersburg are forced to change their hunting areas, there will be negative impacts to residents of Wrangell.

Mike Bell, a resident of Petersburg, does not support the proposal. He has observed more deer on the Tonka Road System this year than in the previous several years. He has observed fewer wolves in the area. He enjoys hunting in August and suggests the opportunity to hunt could be maintained if the season was closed during the rut in November and eliminating the designated hunter system.

Dave Randrup, a resident of Petersburg, is in favor of the proposed action if it is necessary to preserve the health of the deer population on Lindenberg Peninsula. The hillside above his cabin on Lindenberg has been designated and identified as critical deer winter range and it is scheduled to be clear-cut this year. South Mitkof used to be a prime hunting location for both Wrangell and Petersburg residents prior to harvest of the deer winter range. Additional effort needs to be made to determine how wolves, winter and timber harvest effect deer abundance.

George Doyle, a resident of Petersburg, believes that we have a poor understanding of the factors that influence deer abundance on Kupreanof Island and additional studies are required. He is in favor of reducing the harvest limit but believes reducing the season to 2-weeks is unnecessary. The in-season manager should be ready to close the season in November if there is snow. A bow hunting season will provide opportunity but with no chance of over-harvesting deer.

Rich Lowell, the ADF&G Wildlife Area Biologist, reported that there is a declining deer population on the Lindenberg Peninsula as evidenced by the declining harvest trend and a declining trend in deer pellet-group surveys. Five of the last seven winters have had above average snow levels. The area also has a high wolf population. Loss of deer winter habitat due to logging and excessive harvest by the Federal designated hunters has contributed to the decline. The deep snow winters started the deer population on a downward slide and predation by wolves and bears have not allowed the population to recover. The Fish and Gave Advisory Committee voted in favor of this proposal last fall.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Support Proposal WP14-05. The Council's justification to support:

- There is a conservation concern for deer in this area and deer harvest must be significantly reduced to improve recruitment and shorten the time for the deer population to increase.
- Adopting this proposal would align Federal and State deer hunting regulations for this portion of Unit 3.
- The OSM proposed modification does not provide adequate protection to deer in this area.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-07 Executive Summary		
General Description	Proposal WP14-07 requests a positive customary and traditional use determination for residents of Cooper Landing for moose in Unit 15C. *Submitted by Robert Gibson of Cooper Landing.*	
Proposed Regulation	**Unit 15—Moose**	**Customary and Traditional Use Determination**
	Units 15A and 15B	*Residents of Cooper Landing, Nanwalek, Ninilchik, Port Graham, and Seldovia.*
	Unit 15C	*Residents of* ***Cooper Landing****, Ninilchik, Nanwalek, Port Graham, and Seldovia.*
OSM Conclusion	**Support**	
Southcentral Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Neutral**	
Written Public Comments	**None**	

STAFF ANALYSIS
WP14-07

ISSUES

Proposal WP14-07, submitted by Mr. Robert Gibson of Cooper Landing, requests a positive customary and traditional use determination for residents of Cooper Landing for moose in Unit 15C.

DISCUSSION

The proponent is requesting a positive customary and traditional use determination for rural residents of Cooper Landing to hunt moose in Unit 15C. The proponent states that it would be consistent with their traditional hunting and harvest patterns. Eighteen residents of Cooper Landing signed the proposal in support of the request.

Existing Federal Regulations

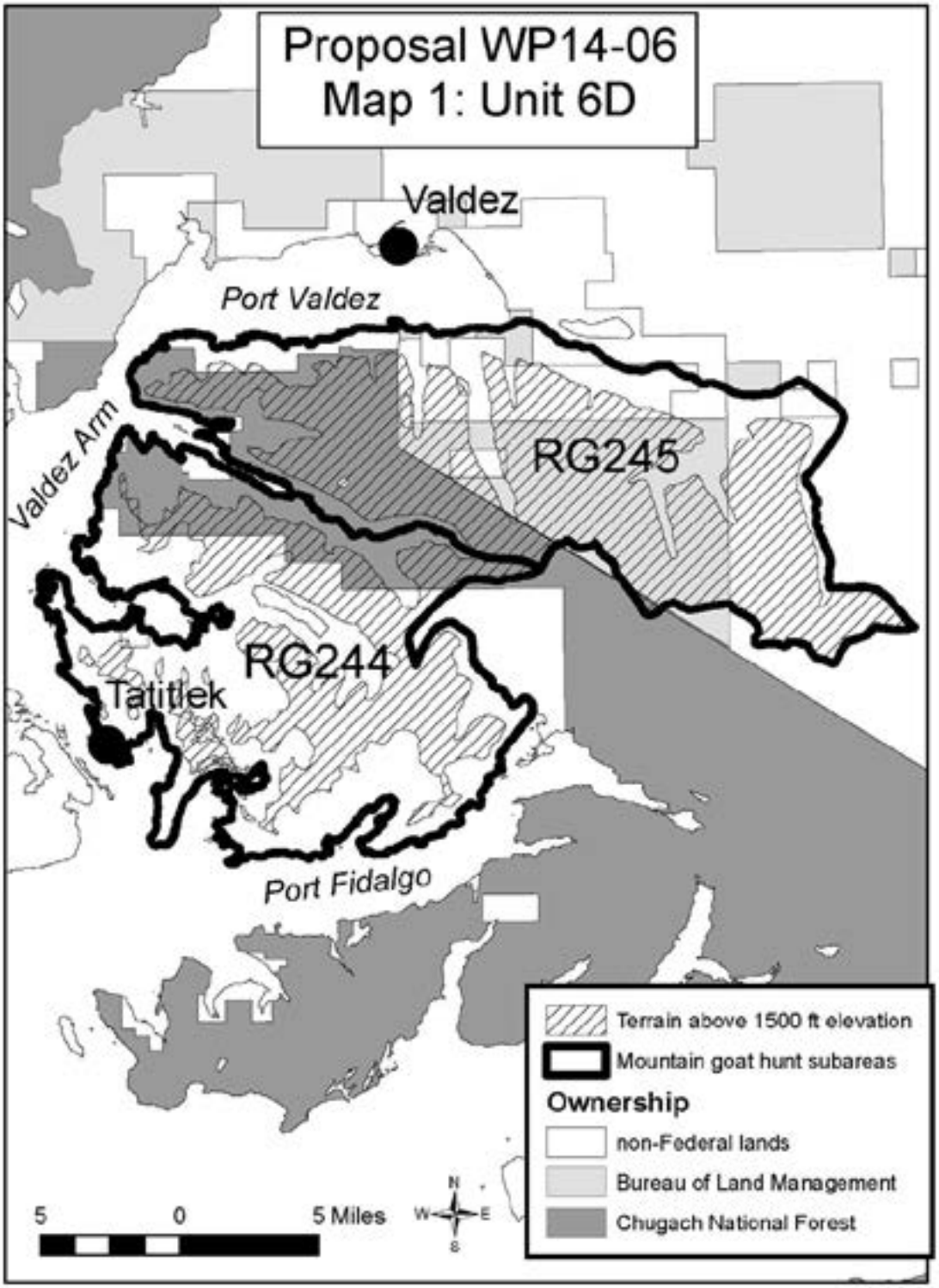
Unit 15—Moose	Customary and Traditional Use Determination
Units 15A and 15B	*Residents of Cooper Landing, Nanwalek, Ninilchik, Port Graham, and Seldovia.*
Unit 15C	*Residents of Nanwalek, Ninilchik, Port Graham, and Seldovia.*

Proposed Federal Regulations

Unit 15—Moose	Customary and Traditional Use Determination
Units 15A and 15B	*Residents of Cooper Landing, Nanwalek, Ninilchik, Port Graham, and Seldovia.*
Unit 15C	*Residents of* ***Cooper Landing****, Ninilchik, Nanwalek, Port Graham, and Seldovia.*

Extent of Federal Public Lands

Federal public lands in Unit 15C comprise approximately 28% of the total lands, consisting of 99% managed by the Kenai National Wildlife Refuge and 1% managed by the National Park Service (**Map 1**). The National Park Service lands are managed by the Kenai Fjords National Park, which is closed to subsistence uses.



Regulatory History

When the Federal Subsistence Management Program was established in 1990, the State's customary and traditional use determinations were adopted. At the time, the 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 non-subsistence area. As a result, Units 7, 15A and 15B had "no subsistence" determinations for moose.

In April 1994, the Federal Subsistence Board (Board) discussed customary and traditional use determinations for all large mammals on the Kenai Peninsula. The Board deferred these proposals at that time because there was no agreed upon timeline and process set in place for making customary and traditional use determinations in the State of Alaska (FSB 1994). In July 1995, the Board again deferred customary and traditional use determinations for Hope and Cooper Landing.

After an extensive Federal process involving data gathering, public hearings, and court decisions, on May 3, 1996, the Board made positive customary and traditional use determinations for Unit 15 moose for residents of 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).

The Board addressed customary and traditional use determinations for moose in Unit 15 again in 2003. Again, the Board 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 a review of rural determinations as required by regulation every 10 years (FSB 2003:102). The Board revised its rural determinations in 2007, but it did not make any new customary and traditional use determinations for the Kenai Peninsula at that time.

In April 2008, the Board adopted Proposal WP08-22a, which recognized a positive customary and traditional use determination for the community of Cooper Landing for moose in Units 7, 15A, and 15B (FSB 2008:314).

Community Characteristics

Cooper Landing is a small, unincorporated community within the Kenai Peninsula Borough with an estimated permanent year-round population of 289 in 2010 (ADLWD 2011). It is located in the northern part of the Kenai Peninsula on the Kenai River and Kenai Lake along the Sterling Highway about 101 miles by road from Anchorage and about 57 road miles from the City of Kenai. The community is near the western edge of the Chugach National Forest (ADCRA 2008).

The Dena'ina inhabited the Cooper Landing area long before Russian explorers arrived. They would move to the area to hunt sheep and then spend the winter hunting and trapping before moving to coastal areas in the spring (Holmes 1985).

Between the late 1830s and 1918, the Dena'ina living in the Cooper Landing area were struck by a series of introduced diseases including influenza, measles, and syphilis. The Dena'ina also were affected by declining fur prices, forest fires, and reduced salmon runs due to cannery operated fish traps at the mouth of the Kenai River. By 1919, the remaining Dena'ina families had left the Cooper Landing area (Seitz et al. 1992).

Around 1850, Russian explorers from the Russian-American Company in search of gold were the first nonindigenous people in what today is known as the Cooper Landing area. In the 1880s, Joseph Cooper, along with others, came to the area from Ninilchik seeking gold. He established a trading post and worked some mining claims. The area was eventually named for him (Barry 1973).

Big game guiding, fox farming, and trapping eventually replaced gold mining as the primary economic activities in the area (Painter 1983). It was not until the 1920s that the general area became known as Cooper Landing. It became connected by road to Seward in 1938 and to Kenai in 1948, and the road to Anchorage officially opened in 1951. By 1962, the community had commercially-supplied electricity (Painter 1983).

The road system has greatly enhanced the opportunity for tourists and part-time residents to enjoy the wildlife, scenery, and sport fishing (including guiding, boat rentals, campgrounds, lodging, and restaurants) available in the Cooper Landing area and has been a major factor in the area's development. Today, more than 50% of the total housing units in Cooper Landing are for seasonal, recreational, or occasional use (ADLWD 2011). Only permanent residents in Cooper Landing would be Federally-qualified subsistence users for moose hunting in Unit 15C.

Eight Factors for Determining Customary and Traditional

A community or area's customary and traditional use is generally exemplified through a framework that consists of 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 Federal Subsistence Board makes customary and traditional use determinations based on a holistic application of these eight factors (50 CFR 100.16(b); 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Subsistence Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR 100.16(b); 36 CFR 242.16(b)). If there are conservation concerns, the Board would address them through regulatory changes to the seasons, harvest limits, methods and means of the harvest. Conservation concerns are not directly considered to be a factor in making a customary and traditional use determination.

In the most recent household survey that examined subsistence moose hunting, long-time residents of Cooper Landing stated that their families utilized moose at least as far back as 1920 (Seitz et al. 1992) and

that they often went hunting for moose. Moose were among the most sought after wildlife by the early settlers on the Kenai Peninsula (Barry 1973).

Hanging meat in a storage shed in the winter was an efficient way to preserve meat prior to the availability of gas or electric freezers (Seitz et al. 1992). With the introduction of electricity, meat is frozen in freezers rather than outdoors. In a study conducted in 1990–1991, most residents of Cooper ate moose meat fresh or preserved it by freezing, while some residents smoked or dried moose meat (Fall and Seitz 1991:112).

Little information is available concerning the specific seasons that early residents of the Kenai Peninsula harvested moose, but generally moose were harvested when needed and according to seasonal conditions (O'Brien 2003, pers. comm.). The primary month to harvest moose is September, with some hunting also occurring in August (Seitz et al. 1992). Moose have been hunted with rifles on the Kenai Peninsula since the end of the 19th century.

Intergenerational transmission of knowledge, skills, and values are passed down from hunter to hunter in the Kenai Peninsula: "hunters learned to hunt from family members or friends, either in Alaska or in other states before moving to a Kenai Peninsula community" (Fall and Seitz 1991:112).

Residents of Cooper Landing depend on a wide diversity of fish and wildlife resources, harvesting an average of eight different types of wild resources, similar to other road-connected communities on the Kenai Peninsula (Fall et al. 2000:240–245). From August 1990 through July 1991, all households in Cooper Landing were estimated to have used at least one wild resource, and 94% harvested some kind of wild resource (Seitz et al. 1992). The average number of wild resources used in other communities and areas in the Kenai Peninsula ranged from eight (North Fork Road) to 22 (Nanwalek), with Ninilchik, Voznesenka, Hope, and Nikolaevsk harvesting about nine different types of wild resources (Fall et al. 2000:240–245).

In Cooper Landing, the per capita harvest of wild resources, measured in pounds of useable weight, was 91.5 pounds while the mean household harvest was 238 pounds. Salmon comprised 43% of the total wild resources harvested. The next most frequently taken resources were land mammals in the form of game (31%), other fish (16%), and wild plants, eggs, and marine invertebrates (10%) (Seitz et al. 1992).

In 1990, the most commonly used wild resource by residents of Cooper Landing was sockeye salmon (77% of households). Berries were used by 71% of the households, followed by halibut (65%), Dolly Varden (57%), coho salmon (53%), moose (43%), other plants (35%), grouse (33%), Chinook salmon (30%), and lake trout (25%) (Seitz et al. 1992).

In 1990, the population of Cooper Landing was estimated to be 243. In a household survey conducted in Cooper Landing from August 1990 through July 1991, Seitz et al. (1992) found that moose were the most widely used land mammal. In 1990, an estimated 10 moose were harvested by residents of Cooper Landing, providing about 4,823 pounds of usable meat. This was an average of 49 pounds per household or 19 pounds per capita (Seitz et al. 1992). Twenty-eight percent of the sampled households in this study hunted moose, and 10% of the households harvested moose.

Table 1. State permits issued and used by residents of Cooper Landing to hunt moose in Unit 15A since 1983 (FWS 2013).

Year	Permits issued	Permits used by hunter	Harvest	Days hunted
2010	1	1	0	3
2009	2	2	0	4
2008	1	1	0	2
2007	5	5	0	34
2006	1	1	0	6
2005	2	2	0	9
2004	2	2	1	7
2003	2	2	0	8
2002	1	1	0	2
2001	2	2	1	4
2000	1	1	0	3
1999	3	3	0	33
1998	7	7	1	27
1997	3	3	0	12
1996	1	1	1	5
1995	3	3	0	10
1994	1	1	0	2
1993	4	4	0	40
1992	1	1	0	1
1991	2	2	0	16
1990	2	2	1	9
1989	5	5	1	22
1988	2	2	0	6
1987	2	2	0	8
1986	4	4	0	23
1985	7	7	2	31
1984	13	13	3	76
1983	14	14	5	119
Total	**94**	**94**	**16**	**522**

Sharing wild foods is a common practice. In Cooper Landing, wild foods were shared with those in need and those who were unable to fish and hunt for themselves (Seitz et al. 1992). Seitz et al. (1992) reported that most households in Cooper Landing in 1990 were involved in giving or receiving wild resources. About 81% of the households received at least one kind of wild resource from another household. Seventy-two percent of the households gave away wild resources to other people. Cooper Landing residents received an average of three different types of wild resources and gave away an average of two types of wild resources. The most commonly shared resource was fish (53%). Moose was given by about 11% of households, and 39% of the households sampled reported receiving moose meat (Seitz et al. 1992, ADF&G 2001).

Currently, moose hunters on the Kenai Peninsula, including Cooper Landing residents, use a variety of transportation methods. Some households use automobiles and boats for access to the general area of their hunt and proceed by foot. A few households have reported using an aircraft for reconnaissance, followed by actual hunting on foot (O'Brien 2003, pers. comm.). Planes were used 8 to 11% of the time (ADF&G 1991a). Horses were also used during hunting trips in the past (Seitz et al. 1992).

Over the years, some residents of Cooper Landing have participated in state-regulated moose hunts in Unit 15. For Unit 15A, the State of Alaska issued 94 permits for moose to Cooper Landing residents during the years 1983 through 2010 (**Table 1**). For this 28-year period, 94 residents of Cooper Landing hunted for moose in Unit 15A, harvesting a total of 16 moose and hunting a total of 522 days (FWS 2013).

During 1983 through 2010, the state issued 56 moose permits to Cooper Landing for the hunts in Unit 15B (**Table 2**). During this period, 56 residents hunted for moose in Unit 15B, harvesting 12 moose and expending 399 days of effort (FWS 2013).

Some residents of Cooper Landing hunt moose under the state system in Unit 15C but with a substantially lower level of participation (**Table 3**). From 1987 through 2009, the state issued 13 permits to Cooper Landing for Unit 15C, and 13 residents of Cooper Landing hunted for moose in Unit 15C during this period, harvesting one moose and expending 67 total days of effort (FWS 2013). Lower participation rates for Unit 15C as compared to units 15A and 15B may be related to the greater travel distance from Cooper Landing to Unit 15C. The community is located substantially closer to units 15A and 15B than it is to Unit 15C.

For Unit 15, residents of Cooper Landing appear to have relatively low rates of harvest success for moose under the State system, which may be related to restrictions associated with moose hunting regulations during past seasons. Under prior state regulations, hunters in Unit 15 were only allowed to harvest one bull with 50-inch antlers or antlers with four or more brow tines on at least one side, with one exception in a portion of Unit 15B where hunters were restricted to one bull with 50-inch antlers or antlers with three brow tines on at least one side by permit.

Table 2. State permits issued and used by residents of Cooper Landing to hunt moose in Unit 15B since 1983 (FWS 2013).

Year	Permits issued	Permits used by hunter	Harvest	Days hunted
2010	4	4	0	31
2009	6	6	0	10
2008	1	1	0	12
2006	3	3	0	18
2005	2	2	2	11
2004	2	2	0	5
2003	1	1	0	4
2002	2	2	0	16
2001	1	1	0	15
2000	1	1	0	20
1999	6	6	1	59
1998	2	2	0	20
1996	1	1	0	12
1995	1	1	0	14
1992	3	3	2	32
1990	2	2	1	20
1989	2	2	0	10
1988	2	2	1	7
1987	4	4	0	35
1986	2	2	0	9
1985	3	3	0	16
1984	2	2	2	8
1983	3	3	3	15
Total	**56**	**56**	**12**	**399**

In March 2013, the State Board of Game discussed Proposal 143 in which the proponent requested that in Units 7 and 15 a legal bull moose be changed from one which has antlers 50 inches or larger or with four or more brow tines on at least one side to one which has antlers 50 inches or larger or with three or more brow tines on at least one side. The Board of Game adopted an amended Proposal 143B, which retained the requirement of four or more brow tines on at least one side and added one bull with a spike. The addition of a spike to the State regulations during the fall 2013 moose hunt in Units 7 and 15 will provide rural residents of Cooper Landing more opportunity to harvest a moose under the State system.

Under Federal regulations, residents of Cooper Landing hunt for moose in subunits 15A and 15B. In 2009, the Federal subsistence program issued 3 permits for moose to Cooper Landing for subunit 15A, and 3 residents hunted for 11 days without harvesting a moose (FWS 2013). For the years 2009 through 2011, the Federal system issued 12 permits for moose in Unit 15B to Cooper Landing residents. During this period, 11 of those residents hunted for moose during 56 days, harvesting 1 moose (FWS 2013).

Table 3. State permits issued and used by residents of Cooper Landing to hunt moose in Unit 15C since 1987 (FWS 2013).

Year	Permits issued	Permits used by hunter	Harvest	Days hunted
2009	1	1	0	20
2007	1	1	0	6
2004	2	2	0	11
2003	1	1	0	4
2002	1	1	0	1
2000	1	1	0	5
1997	1	1	0	3
1992	2	2	0	10
1989	1	1	0	3
1987	2	2	1	4
Total	**13**	**13**	**1**	**67**

Data from the Seitz et al. (1992) survey of permanent households (n = 61 randomly selected households out of 99 total) was used to produce a map that depicts the total area used by residents of Cooper Landing for moose hunting. **Map 1** shows the total area used for moose hunting by the residents of Cooper Landing (i.e., those living there in 1991) over the period in which they had been permanent year-round residents of Cooper Landing (Seitz et al. 1992). As shown in **Map 1**, residents of Cooper Landing have generally hunted moose on the Kenai Peninsula from the southwest shore of Tustemena Lake north to Turnagain Arm (ADF&G 1991b). This moose hunting area includes substantial portions of units 15A and 15B and a relatively smaller portion of Unit 15C adjacent to Tustemena Lake in Kenai National Wildlife Refuge (**Map 1**). Residents of Cooper Landing also use a large portion of Unit 7 along the Seward Highway to the town of Portage and up Twenty Mile River for moose hunting (FWS 1993:VIII-21; ADF&G 1991b).

Effects of the Proposal

If this proposal is adopted, the residents of Cooper Landing would be added to the customary and traditional use determination for moose in Unit 15C, allowing them to harvest moose under Federal subsistence regulations in that unit. If this proposal is adopted, it is probable that more people would hunt moose in Unit 15C, which could displace some non-subsistence hunters due to increased competition. It is also probable that more moose would be harvested in Unit 15C and competition for moose may increase between subsistence hunters.

If the proposal is rejected, Cooper Landing residents would continue to be allowed to hunt moose under State regulations in all of Unit 15 and under Federal regulations in Units 15A and 15B.

OSM CONCLUSION

Support Proposal WP14-07

Justification

Cooper Landing residents' patterns of moose hunting and harvest generally exhibit the characteristics of customary and traditional use for moose in Unit 15C. The harvest ticket database demonstrates that residents of Cooper Landing have hunted for moose in Unit 15C. From 1987 through 2009, the State of Alaska issued 13 permits to Cooper Landing residents for Unit 15C. Thirteen residents of Cooper Landing hunted for moose in Unit 15C during this period, harvesting one moose and expending 67 total days of effort (FWS 2013). Although this harvest is low, the residents of Cooper Landing have demonstrated some use of Unit 15C for moose hunting. **Map 1** indicates that Cooper Landing residents have hunted for moose in a portion of Unit 15C around the southwestern shore of Tustemena Lake in the Kenai National Wildlife Refuge (ADF&G 1991b; Seitz et al. 1992).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP14-07. The council felt information was lacking, and proponents from the community had the opportunity to provide oral and written testimony at the meeting to provide additional information to support adding Cooper Landing to the C&T for moose.

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 recommendation and Federal Subsistence Board action on the proposal.

The Southcentral Alaska Regional Advisory Council (RAC) recommends opposing WP14-07 which would provide a customary and traditional use determination for the community of Cooper Landing for moose in Unit 15C. The preliminary OSM recommendation was to support the proposal.

The RAC in their recommendation to oppose states, "the council voted not to support, the council felt information was lacking, and proponents from the community had the opportunity to provide oral and written testimony at the meeting to provide additional information to support adding Cooper Landing to the C&T for moose."

The ISC would like the Board to be aware that, although the proposal was submitted by a single person, 18 additional residents of Cooper Landing signed the proposal submittal, signifying their support for the proposal. It is not clear that the RAC was aware of the support of 19 residents of Cooper Landing. As a result, the Board could choose to defer this proposal and have the Council reconsider their recommendation based on this additional information. If the Board were to defer, staff could contact Cooper Landing residents to let them know of the opportunity to provide oral and written testimony before the RAC at their next meeting.

WP14-10 Executive Summary	
General Description	Proposal WP14-10 requests to include residents of Tatitlek and Chenega Bay in the customary and traditional use determination for moose in Unit 7 remainder. *Submitted by Andy McLaughlin of Chenega Bay.*
Proposed Regulation	**Customary and Traditional Use Determinations—Moose** *Unit 7, ~~that portion draining into Kings Bay~~* — *Residents of Chenega Bay, Cooper Landing, Hope, and Tatitlek.* *~~Unit 7, remainder~~* — *~~Residents of Cooper Landing and Hope.~~*
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-10

ISSUES

Proposal WP14-10, submitted by Andy McLaughlin of Chenega Bay, requests to include residents of Tatitlek and Chenega Bay in the customary and traditional use determination for moose in Unit 7 remainder.

DISCUSSION

The proponent explains the proposal will not significantly change the number of moose harvested in Unit 7 because the number of moose hunters this proposal will add is low. The proponent continues that personal supplies of moose meat will increase when residents of Chenega Bay and Tatitlek expand their focus to Unit 7 for subsistence moose hunting. Further, during times of scarce resources, residents of the communities were known to hunt far into the Kenai Peninsula and Copper River drainage. He explains that, currently, residents take most of their moose from the Copper River delta.

Existing Federal Regulation

Customary and Traditional Use Determinations—Moose

Unit 7, that portion draining into Kings Bay	*Residents of Chenega Bay, Cooper Landing, Hope, and Tatitlek.*
Unit 7, remainder	*Residents of Cooper Landing and Hope*.

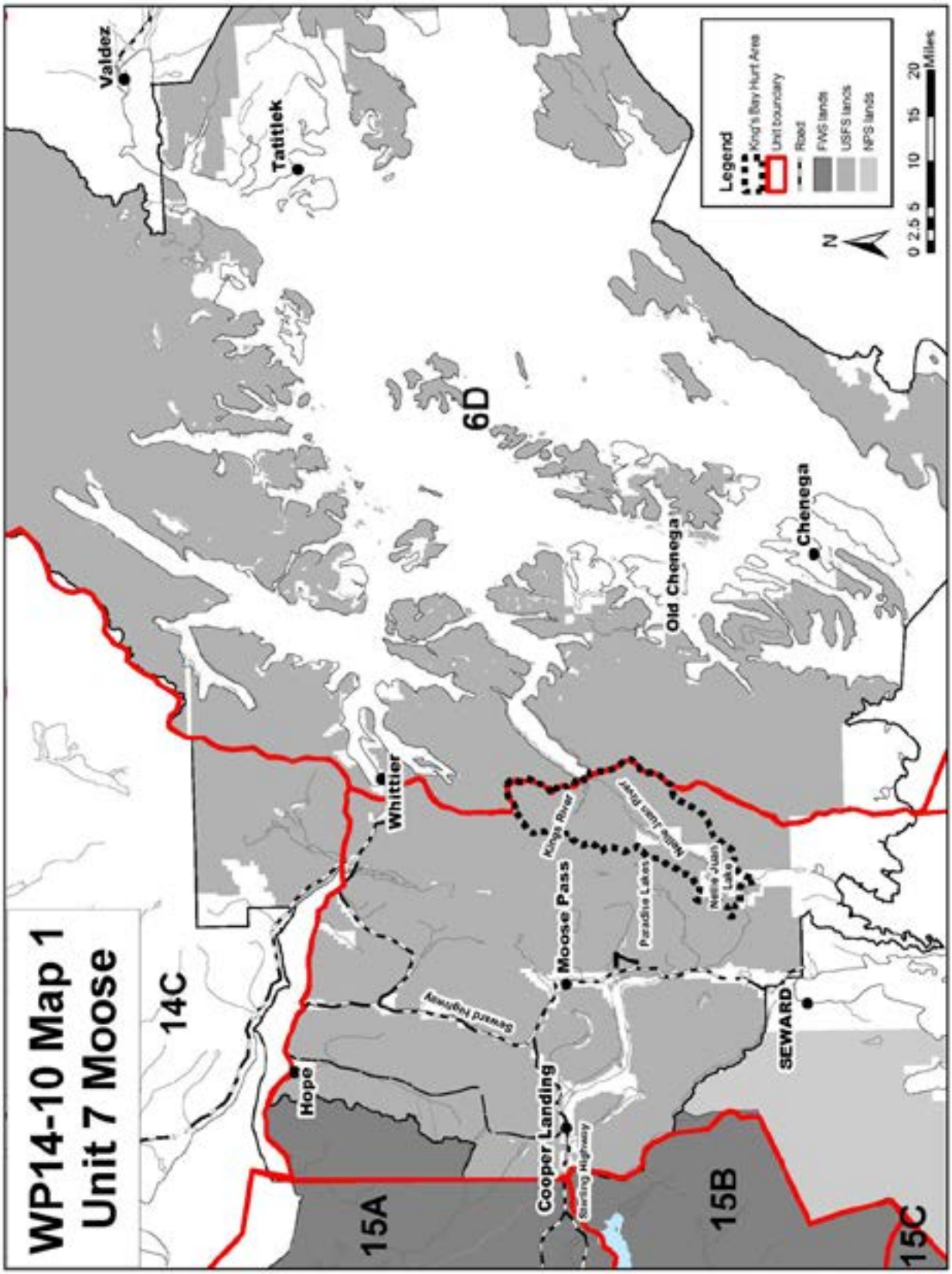
Proposed Federal Regulation

Customary and Traditional Use Determinations—Moose

Unit 7, ~~that portion draining into Kings Bay~~	*Residents of Chenega Bay, Cooper Landing, Hope, and Tatitlek.*
~~Unit 7, remainder~~	*~~Residents of Cooper Landing and Hope.~~*

Extent of Federal Public Lands

Federal public lands comprise 79% of Unit 7 and consist of 54% U.S. Forest Service lands, 23% National Park Service lands, 2% U.S. Fish and Wildlife Service lands, and less than 1% Bureau of Land Management lands (see **Map 1**). The National Park Service lands are within the Kenai Fjords National Park. The lands are closed to subsistence.


WP14-10 Map 1
Unit 7 Moose
14C
15A
15B
15C
6D
7
Valdez
Tatitlek
Whittier
Hope
Cooper Landing
Moose Pass
Seward Highway
Sterling Highway
Kenai River
Paradise Lakes
Nellie Juan Lake
Nellie Juan River
Old Chenega
Chenega
SEWARD
Legend
King's Bay Hunt Area
Unit boundary
Road
FWS lands
USFS lands
NPS lands
N
0 2.5 5 10 15 20
Miles

Regulatory History

When the customary and traditional use determinations were adopted from State regulations in 1992, in Unit 7 the Board adopted a no Federal subsistence priority ("no subsistence") for moose (72 FR 22959; May 29, 1992).

In 1997, the Chenega Bay Tribal Council submitted Proposal WP97-18B. They requested that the Board recognize the customary and traditional uses of moose by residents of Chenega Bay and Tatitlek in two areas: (1) the portion of Unit 7 draining into Kings Bay, and (2) the portion of Unit 7 draining into Day Harbor. The Board adopted the Southcentral Council's recommendation to support the proposal with modification. The modification removed the Day Harbor portion of the proposal. The Southcentral Council's justification for its recommendation was that Federal public lands are at least 9 miles from the Day Harbor shoreline, while the hunting by residents of Chenega Bay and Tatitlek occurs very near the beach. The Southcentral Council's justification for supporting the Kings Bay portion of the request was the descriptions of historic and contemporary uses by the communities that were presented to the Southcentral Council (SCSRAC 1997:12–19).

In 2001, the Kenaitze Indian Tribe submitted Proposal WP01-49. The proposal had many components concerning customary and traditional use determinations for caribou and moose in southcentral and southwestern Alaska for residents of Units 7 and 15. Among other things, it requested the Board to recognize the customary and traditional uses of moose, by rural residents of Unit 15, in all of Unit 7. The Board deferred the proposal pending the outcome of the Board's review of its rural determinations.

In 2008, Karl Romig submitted proposal WP08-22. Among other things, he requested that the Board recognize the customary and traditional uses of moose by residents of Cooper Land in Unit 7. The Board followed the Southcentral Council's recommendation and adopted the proposal.

In 2010, Paul Genne and Dennis Ressler submitted proposal WP10-33. They requested that the Board recognize the customary and traditional uses of moose by residents of Hope and Sunrise in Unit 7. The Board followed the Southcentral Council's recommendation and adopted the proposal.

According to the ADF&G management report, moose populations in most of Unit 6 were originally relocated from other areas of Alaska in about 1949 (Crowley 2010). They were released on the Copper River delta in Unit 6C and the population expanded eastward in subsequent years (see **Unit 6 Map)**. The only moose endemic to Unit 6 are a small population in the Lowe River drainage in Unit 6D, numbering about 40 animals in 2009. The harvest of moose in Unit 6D occurs outside of Federal public lands in the Lowe River drainage (FWS 2013). The mouth of the Lowe River is adjacent to the community of Valdez.

In 1998, Donald Kompkoff Sr. of Valdez submitted Proposal WP98-19. He requested the Board recognize the customary and traditional uses of moose by residents of Chenega Bay and Tatitlek in Units 6A, 6B, and 6C. The Board followed the Southcentral Council's recommendation and deferred the proposal in 1998 and 1999 (now titled WP99–03) while more information was gathered supporting the request, and rejected the proposal (now titled WP00-16) in 2000. It appeared that their uses of moose in Units 6A, 6B, and 6C occurred while they were living in Cordova (SERAC 1998:46–52; 2000:145, 226, 227).

The Kings Bay drainage of Unit 7 is the only customary and traditional use determination for moose that includes residents of Chenega Bay and Tatitlek.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through 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 customary and traditional uses of moose by residents of Chenega Bay and Tatitlek have already been recognized by the Board. The analysis concerns use of Unit 7 remainder to harvest moose.

Community Characteristics

The proposal seeks to include the residents of Chenega Bay and Tatitlek in a customary and traditional use determination. The two communities are both predominantly Chugach Alutiiq villages. The old village of Chenega on Chenega Island, near Port Nellie Juan and relatively close to Kings Bay, was destroyed in the 1964 earthquake. The survivors were evacuated to Cordova and relocated in Tatitlek. Later some moved to Cordova and Anchorage. Under the Alaska Native Claims Settlement Act nearly all the original Chenega residents enrolled in their original village. A new village of Chenega Bay was established on Evans Island,

to the south of the old village, in 1982 (Davis 1984). For the purposes of this analysis, residents of Chenega Bay are the residents of the Chenega Bay Census Designated Place; residents of Tatitlek are residents of the Tatitlek Census Designated Place. In the 2010 U.S. Census, the Chenega Bay Census Designated Place represented the entire Evans Island, including a small group of residents at Sawmill Bay. The Tatitlek Designated Place represents the village of Tatitlek and the small group of residents at Ellamar (U.S. Census 2013). The human populations of the communities are described in **Table 1**.

Table 1. The human population of Chenega Bay and Tatitlek.

US Census Population								
Unit of residence	Community	1960	1970	1980	1990	2000	2010	
		Number of people						Number of households
6D	Chenega Bay CDP[a]				94	86	76	31
6D	Tatitlek CDP[a]	96	111	68	119	107	88	36

Source: ADCCED 2013, Simeone 2006.
[a] CDP=Census Designated Place.

Chenega Bay and Tatitlek are situated in Unit 6D. Other communities in Unit 6D are Valdez and Whittier. Valdez is a nonrural community. Whittier was established in the 1940s as a military complex and is a hub for tourist activities today.

Background

The Alutiiq people share the Alutiiq language. They reside in four distinct geographic areas, the Alaska Peninsula, the Kenai Peninsula, Prince William Sound, and Kodiak Island (Davis 1984). Prince William Sound Alutiiq reside in two villages, Chenega Bay and Tatitlek. Others consider Cordova or Valdez home.

At the beginning of the historical era in the late 1700s, settlement was by and large along the deeply embayed coast or a few miles inland along salmon-bearing streams characterized by ice-free winters. This was a maritime culture known for hunting marine mammals and saltwater fishing. Alutiiq are noted for their development of the two-hatch kayak. Land animals were also pursued (Clark 1984). Caribou and moose were found only on the Alaska Peninsula and Kenai Peninsula. Mountain goats and black bear were found only on Prince William Sound and the Kenai Peninsula (Fall et al. 2001). Deer were not present in Prince William Sound until 1916 when they were transplanted there (Fall 2006). The Russians arrived in the late 1700s. The Russians diverted Alutiiq subsistence activities and trade to the Russian fur trade, often through coercion. The Russians altered the natural annual cycle of economic activities followed by Alutiiq (Clark 1984). Many were held at Nuchek, a trading post established by Russians on Hinchinbrook Island, and dispersed after the sale of Alaska to the United States (Fall et al. 2001). In the late 1800s, there were two Alutiiq settlements in western Prince William Sound, Chenega and Kiniklik; and two in eastern Prince

William Sound, Tatitlek and Nuchek. Some participated in fur farming, mining, and fishing industries

Table 2. The harvest of moose, based on household surveys, by residents of Chenega Bay and Tatitlek.

while pursuing a subsistence way of life.

In 1964, another substantial disruption in the lives of Alutiiq occurred with the earthquake and tsunami that, among other things, destroyed the village of Chenega and killed many members of the small community. Former community members moved primarily to Tatitlek, Cordova, and Anchorage until 1982 when Chenega was rebuilt on Evans Island at its present location and many Chenegans chose to move there (Davis 1984).

Not surprisingly, the basis of the cash economy in many Alutiiq communities has been commercial fishing; however, participation in commercial fishing has declined in recent years. In 1989, the Exxon Valdez oil spill occurred in marine waters adjacent to Tatitlek. The spill disrupted the lives of people in most Alutiiq villages. The 1990s were a time of questioning the safety and health of wild resources (Fall 2006). The subsistence economies in Chenega Bay and Tatitlek appeared to rebound when in 2003, subsistence harvests in the villages were found to be substantial. In 2003, the harvest by Chenega Bay residents was estimated to be 470 lb per person. The average number of wild resources used per household was 24; compared to an estimated per capita harvest of 176 lb and mean household use of 12 resources in Cordova (ADF&G 2013, Simeone 2006). The comparable values for Tatitlek residents were an estimated harvest of 290 lb per capita and mean household use of 21 different wild resources.

Household Harvest Surveys

In 1986 Stratton and Chisum (1986) reported that in the past, moose were occasionally taken by Chenega and Tatitlek residents while they were hunting for goat; the usual times for goat hunting were in fall and winter. In the 1960s, hunters from the old village of Chenega took moose in the fall, which was the traditional season to hunt large land mammals. Moose hunting by Tatitlek residents in the 1980s took place in September and October (Stratton 1990). Residents of Chenega Bay or Tatitlek participated in household harvest surveys in the 1980s, 1990s, and 2000s. The results are presented in **Table 2**. Moose were taken at low levels and the meat was shared with other households.

ADF&G/FWS Harvest Reporting Database

Another source of information is the Alaska Department of Fish and Game/U.S. Fish and Wildlife Service (ADF&G/FWS) harvest reporting database (FWS 2013). However, complete records were not kept until the mid-1980s. **Table 3** displays the harvest of moose reported by residents of Chenega Bay and Tatitlek from 1985 to 2010, cumulative. Members of each community reported harvesting or trying to harvest moose in a range of management units (see **Table 3**). Two residents of Chenega Bay reported trying to harvest moose in Unit 7, and one moose was harvested from the Juneau Creek area that is situated in the remainder are of Unit 7 outside of the Kings Bay drainage.

Community	Year	Using moose	Hunting moose	Harvesting moose	Giving moose	Receiving moose	Estimated Harvest	Lower Estimate	Higher Estimate	Per Person
		(%)	(%)	(%)	(%)	(%)	(number)	(number)	(number)	(lb)
Chenega Bay	2003	44	6	6	13	44	1	1	2	12
	1997	47	13	13	20	40	3	1	5	26
	1993	4	0	0	4	4	0	0	0	0
	1992	22	0	0	0	22	0	0	0	0
	1991	17	0	0	0	17	0	0	0	0
	1990	6	0	0	0	6	0	0	0	0
	1989	17	6	0	0	17	0	0	0	0
	1985	44	6	6	6	38	1	1	2	9
	1984	38	19	6	19	31	1	1	1	9
Tatitlek	2003	0	0	0	0	0	0	0	0	0
	1997	25	6	0	6	25	0	0	0	0
	1993	5	0	0	5	5	0	0	0	0
	1991	0	0	0	0	0	0	0	0	0
	1990	6	0	0	0	6	0	0	0	0
	1989	14	0	0	0	14	0	0	0	0
	1988	43	0	0	5	43	0	0	0	0
	1987	58	5	5	16	53	2	1	4	7

Source: ADF&G 2013.

Table 3. The harvest of moose, based on the ADF&G/FWS reporting system, reported by residents of Chenega Bay and Tatitlek, 1985-2010 cumulative. ("Z" indicates the hunter did not report the subunit.)

Moose 1985–2010 cumulative			
Unit	**Number of permits issued**	**Number of people who hunted**	**Number of moose killed**
Chenega Bay			
7	2	2	1
14Z	1	1	0
15A	9	9	4
16A	1	1	1
20A	1	1	0
20B	1	1	1
20D	4	4	4
20E	9	9	4
20Z	3	0	0
21D	2	2	1
24	1	1	1
Unknown	41	0	0
Total	75	31	17
Tatitlek			
6A	1	1	0
6C	1	1	1
6D	2	2	0
6Z	9	0	0
13A	1	1	0
13B	1	1	0
13D	2	2	1
14A	1	1	1
14C	1	1	0
20D	1	1	1
Unknown	26	0	0
Total	46	11	4

Source: FWS 2013.

Effects of the Proposal

If the proposal is adopted, those eligible to hunt moose under Federal regulations in Unit 7 remainder will include residents of Chenega Bay and Tatitlek.

If this proposal is not adopted, residents of Chenega Bay and Tatitlek will not be eligible to hunt moose under Federal regulations in the remainder area of Unit 7. This will have no effect on people's eligibility to hunt moose under State regulations. People can continue to hunt moose under State regulations.

OSM CONCLUSION

Support Proposal WP14-10.

Justification

The Board should recognize the customary and traditional uses of moose by residents of Chenega Bay and Tatitlek in Unit 7 remainder based on their use of moose, traditional use of the area, lack of subsistence priority for moose in other areas, and the close proximity of the communities to Unit 7.

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WP14-12 Executive Summary	
General Description	Proposal WP14-12 requests changes to the unit-specific regulation that allows residents of Chenega Bay to harvest up to 5 deer per year from Unit 6D to be used at the annual Old Chenega Memorial event. The proponent requests that the allowable uses of the deer harvested for this event in Federal regulations be expanded to include any memorial potlatch. *Submitted by Andy McLaughlin of Chenega Bay.*
Proposed Regulation	**Unit 6—Unit specific regulations** *§__.26(n)(6)(ii)(G) Up to five permits will be issued by the Cordova District Ranger to the Native Village of Chenega annually to harvest up to five deer total from Federal public lands in Unit 6D for their annual Old Chenega Memorial* ***and other traditional memorial potlatch ceremonies****. Permits will have effective dates of July 1-June 30.*
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	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-12

ISSUES

Proposal WP14-12, submitted by Andy McLaughlin of Chenega Bay, requests changes to the unit-specific regulation that allows residents of Chenega Bay to harvest up to 5 deer per year from Unit 6D to be used at the annual Old Chenega Memorial event. The proponent requests that the allowable uses of the deer harvested for this event in Federal regulations be expanded to include any memorial potlatch.

DISCUSSION

The Old Chenega Memorial event is held annually to remember the victims of the 1964 earthquake and tsunami that destroyed the old village of Chenega on Chenega Island. Residents of the new village, Chenega Bay on Evans Island established in 1984, and former Chenega residents from around the state return to the old village site around Memorial Day and participate in memorial and cultural activities (see Miraglia 1999). One significant ceremony is the memorial event conducted by the Russian Orthodox priest. People gather on the remains of the foundation of the Church destroyed by the tsunami. A memorial plaque is placed on what is left of the altar, and the Priest conducts a service. During the day traditional foods are prepared in barbecue fires on the beach, traditional dances are performed, and people relate their memories of the old village and tell stories (Miraglia 1999; Smelcer 2006).

The regulatory deer season in Unit 6D is August through December in State and Federal hunting regulations and is closed the rest of the year including the period preceding the Old Chenega Memorial event. The Federal regulation, adopted in 2008, allows hunters to take deer and provide fresh meat for the event.

The proponent explains that other potlatches are held throughout the year, often on short notice, when someone dies for example. Residents want the flexibility to use deer taken under the regulation at other traditional ceremonies in the village as well as the Old Chenega Memorial event.

Existing Federal Regulation

Unit 6—Unit specific regulations

§__.26(n)(6)(ii)(G) Up to five permits will be issued by the Cordova District Ranger to the Native Village of Chenega annually to harvest up to five deer total from Federal public lands in Unit 6D for their annual Old Chenega Memorial. Permits will have effective dates of July 1-June 30.

Proposed Federal Regulation

Unit 6—Unit specific regulations

§__.26(n)(6)(ii)(G) Up to five permits will be issued by the Cordova District Ranger to the Native Village of Chenega annually to harvest up to five deer total from Federal public lands in Unit 6D for their annual Old Chenega Memorial ***and other traditional memorial potlatch ceremonies****. Permits will have effective dates of July 1-June 30.*

Relevant Federal Regulations

Federal Subsistence Board—Powers and duties

§__.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.

(iv) The fish and wildlife is taken by representatives of a community permitted to do so in a manner consistent with the community's customary and traditional practices.

Existing State Regulation

5 AAC 92.034. Permit to take game for cultural purposes

The commissioner may issue a permit for the taking, and use within this state, 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.

Extent of Federal Public Lands

Federal public lands comprise 67% of Unit 6D and consist of 65% U.S. Forest Service lands and 2% Bureau of Land Management lands (see **Unit 6 Map**). The U.S. Forest Service lands are within the Chugach National Forest.

Customary and Traditional Use Determination

The Federal Subsistence Board (Board) has not made a customary and traditional use determination for deer in Unit 6D. All rural residents are eligible to harvest deer under Federal regulations.

Background

There are 76 people living at Chenega Bay, in 31 households, according to the 2010 U.S. Census (2013). Chenega Bay is a predominantly Chugach Alutiiq village. The old village of Chenega on Chenega Island was destroyed in the 1964 earthquake. The survivors were evacuated to Cordova and relocated in Tatitlek. Later some moved to Cordova and Anchorage. Under the Alaska Native Claims Settlement Act nearly all the original Chenega residents enrolled in their original village. A new village of Chenega Bay was established on Evans Island, to the south of the old village, in 1982 (Davis 1984).

Regulatory History

The organized communal consumption of "wild" or "Native" foods is a central feature of Alaska Native cultural gatherings. The serving of fish and wildlife reaffirms ethnic identity and ties to the land and resources. Additionally, participation in such feasting serves to transmit, sustain, and reinforce cultural values, beliefs, practices, traditions, social order, and group solidarity. Westerners observing and documenting these feasts, in the nineteenth and twentieth centuries, frequently referred to them as potlatches, an attempt to Anglicize *patshatl*, a Nootka term for giving[1] (Damas 1984, Helm 1981, and Suttles 1990).

Since adopting the first "*Final Rule for Subsistence Management Regulations for Public Lands in Alaska*" in 1992 (72 FR 22940–22964; May 29, 1992) the Board has broadened the scope of what constitutes a "communal," "cultural" or "ceremonial" harvest. This initial set of regulations included the general provision for the harvest and use of wildlife for ceremonies and potlatches, which is described above in Relevant Federal Regulations (§__.10(d)(5)). It received a great deal of attention during the public comment process where reviewers "described instances where . . . a community-based harvest is important for cultural and ceremonial purposes such as funerals, memorials, and potlatches" (72 FR 22943; May 29, 1992).

Subsequent Board actions have provided for the following.

[1] Collins English Dictionary - Complete & Unabridged 10th Edition. HarperCollins Publishers. http://dictionary.reference.com/browse/potlatch (accessed: July 19, 2013).

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1992—The Board adopted Proposals WP92-113 and WP92-114A that specifically recognized Nuchalawoyya and the Kaltag/Nulato Stickdance as annually occurring ceremonies for which the harvest of moose was authorized. Nevertheless, no specific harvest provisions were adopted.

1994—Provisions for the harvest of moose for the Nuchalawoyya Potlatch and the Kaltag/Nulato Stickdance were incorporated in unit-specific regulations (59 FR 29034, June 3, 1994) (**Appendix A**).

1994—The Board authorized residents of the Unit 9 village of Nondalton to harvest up to 6 moose for "ceremonial potlatches" not restricted to gatherings commemorating the deaths of community members (Proposal WP94-37).

1995—The Board expanded this Unit 9 "special provision" to include all communities of Unit 9B (Proposal WP95-27) (**Appendix A**).

1996—Board actions on proposals WP96-05 and WP96-13 enabled the taking of wildlife for "traditional religious ceremonies which are part of a funerary or mortuary cycle, including memorial potlatches," in Units 1 through 5 (61 FR 39718, July 30, 1996).

1999—Approval of Proposal WP99-061 allowed residents of a part of Unit 25D to take moose for "memorial potlatches and traditional cultural events" annually (**Appendix A**).

2000—Adoption of Proposal WP00-018 provided the Native Village of Eyak with an annual permit to take one bull moose for a memorial celebration (**Appendix A**).

2000—Adoption of Proposal WP00-04 with modification providing for brown bear harvests through 5 educational permits issued by the Hoonah or Sitka District Ranger (**Appendix A**)

2002—Adoption of Proposal WP02-30 allowing individuals with customary and traditional use determinations for Units 21 and 24 to harvest resources for food in "traditional religious ceremonies that are part of a funerary or mortuary cycle, including memorial potlatches" (FR 67, 43749; June 28, 2002).

2002—Batzulnetas Cultural Camp moose from Unit 11 or 12 by Chistochina or Mentasta (Proposal WP02-19) (**Appendix A**).

2002—Kingikmiut Dance Festival, one bull moose and one muskox by the community of Wales (Proposal WP02-36) (**Appendix A**).

2003—Adoption of statewide provision enabling the taking of wildlife for traditional religious ceremonies that are part of a funerary or mortuary cycle, including memorial potlatches" (Proposal WP03-01) (**Appendix A**).

2004—Ahtna Cultural Camp moose and caribou from Unit 13 (Proposal WP04-26) (**Appendix A**).

2008—Adoption of Proposal WP08-09 allows the harvest of up to 5 deer for Tatitlek's annual Cultural Heritage Week (**Appendix A**).

In 2006, the Chenega Tribal Council submitted a proposal (WP06-18) requesting a special provision in Unit 6 regulations that would allow the harvest of one moose per year for the Old Chenega Memorial event. However, Chenega's customary and traditional uses of moose in Unit 6 were not recognized by the Federal program, and it was rejected by the Board (FR 71, 37643–37644; June 30, 2006).

In 2008, the Southcentral Subsistence Regional Advisory Council supported and the Board adopted a regulation submitted by the Chenega Tribal Council to take up to 5 deer annually for the annual Old Chenega Memorial event (WP08-08).

Effects of the Proposal

If the proposal is adopted, up to 5 deer could be harvested annually by residents of Chenega Bay for memorial potlatch ceremonies. Deer populations would not be affected. Other users would not be affected.

If this proposal is not adopted, up to 5 deer could be harvested annually for the Old Chenega Memorial event. The deer could not be used in other memorial potlatch ceremonies. Deer populations would not be affected. Other users would not be affected.

OSM CONCLUSION

Support Proposal WP14-12.

Justification

The proponent, on behalf of the village, has requested to modify an existing regulation because it has not met all of the needs of village residents. Village residents desire to use the deer harvested through the regulation at any memorial ceremony. Adopting the regulation would have no effect on deer populations or other users.

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APPENDIX A

Unit Specific Regulations—Ceremonies and Potlatches

Unit 4

(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.

Unit 6

(C) One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one moose from Federal lands in Units 6B or C for their annual Memorial/Sobriety Day potlatch.

(G) Up to five permits will be issued by the Cordova District Ranger to the Native Village of Chenega annually to harvest up to five deer total from Federal public lands in Unit 6D for their annual Old Chenega Memorial. Permits will have effective dates of July 1-June 30.

(H) Up to five permits will be issued by the Cordova District Ranger to the Tatitlek IRA Council annually to harvest up to five deer total from Federal public lands in Unit 6D for their annual Cultural Heritage Week. Permits will have effective dates of July 1-June 30.

Unit 9

(D) Residents of Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth may take up to a total of 10 bull moose in Unit 9B for ceremonial purposes, under the terms of a Federal registration permit from July 1-June 30. Permits will be issued to individuals only at the request of a local organization. This 10-moose limit is not cumulative with that permitted for potlatches by the State.

(G) The communities of False Pass, King Cove, Cold Bay, Sand Point, and Nelson Lagoon annually may each take, from October 1-December 31 or May 10-25, one brown bear for ceremonial purposes, under the terms of a Federal registration permit. A permit will be issued to an individual only at the request of a local organization. The brown bear may be taken from either Unit 9D or Unit 10 (Unimak Island) only.

Unit 11 and Unit 12

(B) One moose without calf may be taken from June 20-July 31 in the Wrangell-St. Elias National Park and Preserve in Unit 11 or 12 for the Batzulnetas Culture Camp. Two hunters from either Chistochina or

Mentasta Village may be designated by the Mt. Sanford Tribal Consortium to receive the Federal subsistence harvest permit. The permit may be obtained from a Wrangell-St. Elias National Park and Preserve office.

Unit 20 and Unit 21

(C) Residents of Units 20 and 21 may take up to three moose per regulatory year for the celebration known as the Nuchalawoyya Potlatch, under the terms of a Federal registration permit. Permits will be issued to individuals at the request of the Native Village of Tanana only. This three-moose limit is not cumulative with that permitted by the State.

Unit 21

(D) The residents of Unit 21 may take up to three moose per regulatory year for the celebration known as the Kaltag/Nulato Stickdance, under the terms of a Federal registration permit. Permits will be issued to individuals only at the request of the Native Village of Kaltag or Nulato. This three-moose limit is not cumulative with that permitted by the State.

Unit 22

(D) The taking of one bull moose and up to three musk oxen by the community of Wales is allowed for the celebration of the Kingikmuit 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. The harvest will count against any established quota for the area.

Unit 25

(C) The taking of bull moose outside the seasons provided in this part for food in memorial potlatches and traditional cultural events is authorized in Unit 25D west provided that:

> *(1) The person organizing the religious ceremony or cultural event contacts the Refuge Manager, Yukon Flats National Wildlife Refuge prior to taking or attempting to take bull moose and provides to the Refuge Manager the name of the decedent, the nature of the ceremony or cultural event, number to be taken, and the general area in which the taking will occur;*
>
> *(2) Each person who takes a bull moose under this section must submit a written report to the Refuge Manager, Yukon Flats National Wildlife Refuge not more than 15 days after the harvest specifying the harvester's name and address, and the date(s) and location(s) of the taking(s);*
>
> *(3) No permit or harvest ticket is required for taking under this section; however, the harvester must be an Alaska rural resident with customary and traditional use in Unit 25D west;*
>
> *(4) Any moose taken under this provision counts against the annual quota of 60 bulls.*

General Regulations—Subsistence Taking of Wildlife

§__.26(m) You may take wildlife, outside of established season or harvest limits, for food in traditional religious ceremonies, which are part of a funerary or mortuary cycle, including memorial potlatches, under the following provisions:

(1) The harvest does not violate recognized principles of wildlife conservation and uses the methods and means allowable for the particular species published in the applicable Federal regulations. The appropriate Federal land manager will establish the number, species, sex, or location of harvest, if necessary, for conservation purposes. Other regulations relating to ceremonial harvest may be found in the unit-specific regulations in paragraph (n) of this section.

(2) No permit or harvest ticket is required for harvesting under this section; however, the harvester must be a Federally qualified subsistence user with customary and traditional use in the area where the harvesting will occur.

(3) In Units 1-26 (except for Koyukon/Gwich'in potlatch ceremonies in Units 20F, 21, 24, or 25):

> *(i) A tribal chief, village or tribal council president, or the chief's or president's designee for the village in which the religious/cultural ceremony will be held, or a Federally qualified subsistence user outside of a village or tribal-organized ceremony, must notify the nearest Federal land manager that a wildlife harvest will take place. The notification must include the species, harvest location, and number of animals expected to be taken.*
>
> *(ii) Immediately after the wildlife is taken, the tribal chief, village or tribal council president or designee, or other Federally qualified subsistence user must create a list of the successful hunters and maintain these records, including the name of the decedent for whom the ceremony will be held. If requested, this information must be available to an authorized representative of the Federal land manager.*
>
> *(iii) The tribal chief, village or tribal council president or designee, or other Federally qualified subsistence user outside of the village in which the religious/cultural ceremony will be held must report to the Federal land manager the harvest location, species, sex, and number of animals taken as soon as practicable, but not more than 15 days after the wildlife is taken.*

(4) In Units 20F, 21, 24, and 25 (for Koyukon/Gwich'in potlatch ceremonies only):

> *(i) Taking wildlife outside of established season and harvest limits is authorized if it is for food for the traditional Koyukon/Gwich'in Potlatch Funerary or Mortuary ceremony and if it is consistent with conservation of healthy populations.*

(ii) Immediately after the wildlife is taken, the tribal chief, village or tribal council president, or the chief's or president's designee for the village in which the religious ceremony will be held must create a list of the successful hunters and maintain these records. The list must be made available, after the harvest is completed, to a Federal land manager upon request.

(iii) As soon as practical, but not more than 15 days after the harvest, the tribal chief, village council president, or designee must notify the Federal land manager about the harvest location, species, sex, and number of animals taken.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-12. No conservation concerns exist and the proposal would be beneficial to subsistence users allowing harvests to be used for memorial ceremonies.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-14 Executive Summary	
General Description	Proposal WP14-14 requests a positive customary and traditional use determination for goat in Unit 11 for the residents of Kenny Lake. *Submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission.*
Proposed Regulation	**Customary and Traditional Use Determination Unit 11—Goat** *Residents of Unit 11, and Chitina, Chistochina, Copper Center, Dot Lake, Gakona, Glennallen, Gulkana,* ***Kenny Lake,*** *Mentasta Lake, Slana, Tazlina, Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46) and Tonsina.*
OSM Conclusion	**Support**
Southcentral Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral**
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP14-14

ISSUES

Proposal WP14-14, submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission, requests a positive customary and traditional use determination for goat in Unit 11 for the residents of Kenny Lake.

DISCUSSION

The proponent states that residents of Kenny Lake have subsistence use patterns that closely resemble those of other communities that have positive customary and traditional use determinations for goat in Unit 11 and therefore should be added to the customary and traditional use determination. Further, the proponent states that the residents of Kenny Lake may have been inadvertently omitted from the current customary and traditional use determinations. Under current Federal subsistence regulations, the customary and traditional uses of the residents of the proposal area also have been recognized by the Federal Subsistence Board for moose, caribou, black and brown bear, sheep, and wolf in Unit 11. The proposed regulation change would more closely align the customary and traditional use determination for goat with these other species.

Existing Federal Regulation

Customary and Traditional Use Determinations Unit 11—Goat

Residents of Unit 11, Chitina, Chistochina, Copper Center, Dot Lake, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46) and Tonsina.

Proposed Federal Regulation

Customary and Traditional Use Determination Unit 11—Goat

Residents of Unit 11, and Chitina, Chistochina, Copper Center, Dot Lake, Gakona, Glennallen, Gulkana, ***Kenny Lake,*** *Mentasta Lake, Slana, Tazlina, Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46) and Tonsina.*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and include lands managed by Wrangell St. Elias National Park and Preserve (79%), Chugach National Forest (2%) and Bureau of Land Management (0.1%) **(Unit 11 Map)**.

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. In 1990, in Unit 11, there was a "no subsistence" determination for goat under State regulations, and therefore a "no subsistence" determination was adopted into Federal regulation.

In 1997, the Board adopted Proposal 22, which addressed customary and traditional uses of goat in Unit 11. The Board recognized customary and traditional use of goat for the residents of Unit 11 and the residents of Chistochina, Chitina, Copper Center, Gakona, Gulkana, Mentasta Lake, the Native Village of Dot Lake, Tonsina, and Tazlina. Most of these communities are in Unit 13 situated on or near the border of Unit 11.

In 1997, the State submitted a Request for Reconsideration (RFR) opposing the new regulation; however, the RFR was rejected by the Board. In 1998, further amendments were made to the customary and traditional use determination for goat in Unit 11. Glennallen was added to the list of communities with a positive customary and traditional use determination for goat in Unit 11. Also in 1998, Proposal 25 was submitted to request individual customary and traditional use determinations for several individual families who were not part of the communities with positive customary and traditional use determinations to have their uses recognized for goat in Unit 11. Proposal WP98-70 was deferred until the following year. In 1999, Proposal WP98-25 was adopted with modification to recognize the customary and traditional uses of the Grangaard and Entsminger families. In 2000, the Board supported adding members of the Entsminger family, who had been left out of the positive customary and traditional use determination decision in 1997, because they reside in Unit 12.

In 2013, the Federal Subsistence Board adopted WP 12-27 which added Tok Cutoff Road (mileposts 79 – 110, Mentasta Pass), and Nabesna Road (mileposts 25–46) to the list of communities with positive customary and traditional use determination for goat in Unit 11.

Kenny Lake is physically located within Unit 13, but it is close to the border of Unit 11, and traditionally, people from there have hunted in Unit 11. Adding Kenny Lake to the list of positive customary and traditional use determinations was discussed at the Southcentral Federal Subsistence Regional Advisory Council meeting in October 2011. Barbara Cellarius pointed out at the meeting "…that Kenny Lake is not on the list is correct and best I have been able to figure out it's simply never been evaluated" (Cellarius 2011, pers. comm.).

Biological History

Mountain goats occur in the Wrangell and Chugach mountains of Unit 11. These areas of Southcentral Alaska, along with small populations in the Talkeetna Mountains in Unit 13A and the Chulitna Mountains near Cantwell in Unit 13E, represent the northernmost extent of the mountain goat range in Alaska (Coltrane 2008, Tobey 2008). Mountain goat habitat consists of alpine and subalpine areas, and access to cliffs or rocky ledges is important for goats to escape predators (Cote and Festa-Bianchet 2003). Good habitat is limited in Unit 11, although areas north of the Chitina River and west of the Lakina River have

suitable habitat (Tobey 2008). The largest numbers of mountain goats have been observed near the Kennicott, Hawkins, and Barnard glaciers, McCarthy Creek, and MacColl Ridge (Tobey 2008). Goats are primarily located in the southern part of Unit 11, from the Chitina River drainage and south (Cellarius 2011, pers. comm.).

Harvests

Wrangell-St. Elias National Park and Preserve, in cooperation with ADF&G, conducted subsistence harvest surveys in the winter of 2013 in Kenny Lake and Willow Creek and data is still being processed. Residents in these two communities were asked if they had ever hunted goat and if so where. Analysis of preliminary data showed that 10 households harvested 25 goats in a 43 year period. Three of the harvests took place in Unit 11 (Cellarius 2013, pers. comm.). The frequency of goat hunting is much lower than for species such as moose. Goats are harder to hunt due to their location which is often more difficult to reach than is the case for moose or caribou which can be hunted not far off the road system (Cellarius 2013, pers. comm). According to the Federal Subsistence Permit System, going back to 1999, there was one goat harvested in 2001. (**Note:** that it is difficult to determine harvest estimates based on the ADF&G harvest ticket data because there is no separate zip code for Kenny Lake, and Kenny Lake residents typically have a Copper Center mailing address. Consequently, their mailing address does not necessarily indicate where they actually live).

Community Characteristics

Kenny Lake is a small rural community. The Ahtna people have lived a subsistence lifestyle in the Copper River Region for millennia. They were the first inhabitants of the Kenny Lake area. White settlers and people from the U.S. military began traveling through the area in the late 1800s. Kenny Lake originated in 1910 when the Alaska Road Commission Roadhouse was built for the newly built Valdez – Fairbanks – Chitina Military Road. In the 1930s, Kenny Lake was a busy center of commerce and trade when the Kennecott Copper Mine was still operational (http://www.kennylake.com). When the mine closed in 1938 many people left the area and people who stayed settled in to a rural lifestyle, hunting and living off the land.

Kenny Lake area was one of the last places to be homesteaded in the U.S. in the 1950s and 60s (Kenny Lake Website 2013). Today some people in Kenny Lake continue to farm and hunt and fish. There continues to be outmigration as people leave the area for work or educational opportunities. The 2010 census showed a population of 355 people, dropping from 410 people in 2000. In 2010 there were 145 occupied houses (American Fact Finder 2013). Opportunities for subsistence continue to be important for the people in this area who depend on hunting and fishing.

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 residents of Kenny Lake have C & T for most other species of large mammals that are hunted in their area. Preliminary data analysis from surveys conducted in January of 2013 also shows that 10 Kenny Lake and Willow Creek households had harvested goat in the last 43 years (Cellarius 2013, pers. comm.).

The Board previously determined that residents of Unit 11, as well as residents of several communities in Unit13 generally exhibit the eight factors for goat and thus have made positive customary and traditional use determinations for these residents. The question for this analysis is whether or not the residents of the proposal area have a pattern of use of goat in Unit 11. It is a question of where the use occurs, not if the use occurs. A full analysis of the eight factors has been conducted previously in the analyses for Proposals in1997, 1998, 1999 and 2000. Customary and traditional uses were described at length for Upper Tanana communities and Copper River Basin communities (see FWS 1997a, Proposal 22). Thus the eight factors have been discussed in numerous analyses. Kenny Lake residents, who reside in Unit 13, have harvested goat in Unit 11.

The residents of Kenny Lake share similar subsistence patterns with the residents of Copper Center and Chitina, which are both in close proximity to the proposal area. 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. There are 23 resident zone communities for Wrangell-St. Elias National Park, including Kenny Lake. 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. Finally, because positive customary and traditional use determinations have been added for Kenny Lake for other species, it

follows that goat should also be included along the same rationale.

Effects of the Proposal

If this proposal is adopted - residents of Kenny Lake would be able to hunt goat in Unit 11, similar to the communities closest to their area of residence.

If this proposal is adopted, no effects on goat populations are anticipated as it is not expected that goat harvests would increase substantially. Preliminary data analysis from surveys conducted in January of 2013 shows that 10 Kenny Lake and Willow Creek households had harvested goat in the last 43 years (Cellarius 2013, pers. comm.).

If this proposal is not adopted, the residents of the proposal area would continue to be ineligible to harvest goat in Unit 11 under Federal subsistence management regulations. The residents of the proposal area would continue to be able to hunt on Preserve lands in Unit 11 under State hunting regulations.

OSM CONCLUSION

Support Proposal WP14-14.

Justification

The residents of Kenny Lake may have been inadvertently excluded during the previous customary and traditional use determinations for goat. Residents of the proposal area have subsistence use patterns similar to those which are in close proximity to the proposal area which have customary and traditional designation. Residents of Kenny Lake generally exhibit the eight factors for harvesting goat in Unit 11. Recent household harvest surveys by the NPS and ADF&G confirm harvests of goats in Unit 11 by some residents of the proposed area. The customary and traditional uses of the residents of Kenny Lake also have been recognized by the Federal Subsistence Board for moose, caribou, black and brown bear, sheep, and wolf in Unit 11. Recognizing the customary and traditional uses for goat in Unit 11 by the residents of Kenny Lake would make the customary and traditional use determinations for goat more consistent with customary and traditional determinations for other wildlife in Unit 11.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-14. The proposal recognizes the C&T use for the community Kenny Lake and would be beneficial for subsistence users. No conservation concerns exits for the goat population in Unit 11.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-14: We support Proposal WP14-14 to add Kenny Lake to the list of communities with a positive customary and traditional use determination for goat in Unit 11. Residents live close to the area where Unit 11 Goat are and have hunted for and harvested goat in this area. A few residents of Kenny Lake have harvested goat in Unit 11 and should have a positive C&T Determination for Goat.

Ahtna Inc. Customary and Traditional Use Committee

Support Proposal WP14- 14: I support this C&T proposal for goat, many communities harvest resources and don't document their use but that does not mean the resources are not being used. Often oral traditional use is all that exists. Many people use resources and pass that knowledge on to family members through oral tradition. I feel Kenny Lake was looked over when C&T determinations were done.

Donald Woodruff, Eagle

Wrangell-St. Elias National Park
Subsistence Resource Commission
P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

RECEIVED

November 1, 2013

Tim Towarak, Chair
Federal Subsistence Board
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage, AK 99503

Dear Chairman Towarak:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Chistochina on October 29 and 30, 2013. The SRC reviewed the federal subsistence wildlife proposals for the Wrangell-St. Elias area being considered for the 2014-2016 regulatory cycle and would like to provide comments for the following proposals:

WP14-01: Require trap marking, trap checks every 6 days, and harvest reports (statewide)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously opposes the proposal. A statewide proposal that would make federal trapping regulations more restrictive than state regulations is not needed. Additionally, enforcing the requirement that traps be checked every six days would be difficult. If there are local problems with trappers, those problems should be addressed locally, for example by talking to the protection officer for the area. The Alaska Department of Fish and Game's annual trapper survey already collects considerable information from trappers in Alaska, and an additional reporting requirement is not needed.

WP14-14: Revise customary and traditional use determination for goat in Unit 11 to include residents of Kenny Lake
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal. Kenny Lake is surrounded on all sides by other rural communities that have a positive customary and traditional use determination (C&T) for goat in Unit 11, and Kenny Lake residents already have C&T for most other large mammal species in Unit 11. The data presented in the analysis as well as common sense support recognizing Kenny Lake as having a positive C&T for goat in Unit 11.

WP14-15 & 45: Revise list of communities and areas eligible to hunt caribou in the SE portion of Unit 12 (Chisana herd)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports WP 14-15 as written. The SRC supported the inclusion of Nabesna during the initial ANILCA

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

Section 804 analysis and continues to support its inclusion in the list of communities most dependent on this resource. Adding residents of the hunt area outside of Chisana is common sense. They live in a remote area with limited access to other resources and should be able to harvest a resource in their own back yards. The commission took no action on WP14-45.

WP14-16: Establish a winter moose hunt in the southern portion of Unit 11

The Wrangell-St. Elias National Park Subsistence Resource Commission supports the proposal with modification to add to the delegation of authority the ability to limit the number of permits and to announce the reporting period. This season would provide additional subsistence opportunity on a moose population that is difficult to access during the existing fall season and consequently lightly harvested. The delegation of authority to the park superintendent to open the season; announce the harvest quota, number of permits to be issued and reporting period; and close the season would provide the tools needed to limit the harvest to a sustainable level and thereby address any conservation concerns. Educational material could be provided to the permittees about how to distinguish antlerless bulls from cows and such a handout could also remind hunters not to harass the animals with their snowmachines.

WP14-49: Revise the season dates for the caribou hunt in the SE portion of Unit 12 and add a meat-on-the-bone salvage requirement (Chisana herd)

The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with the following modifications: (a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted. Expanding the fall season would provide additional subsistence opportunity. Hunters who prefer to hunt during August, well before the rut, would be able to do so. And hunters for whom meat storage is easier later in the season when the weather is cooler could hunt in late September. Establishing a winter season is not supported at this time due to the small harvest quota and lack of good data about where the animals are during the winter. Regarding the meat-on-the-bone requirement, there is no evidence of a meat spoilage problem, and SRC members agree that individual hunters should be able to decide whether or not to keep the meat on the bone. Hunters who make use of the bones or otherwise prefer to keep the meat on the bone would have the option to do so, but hunters who harvest meat in locations that require long distance packing would have the option of leaving some of the bones behind.

Thank you for the opportunity to comment.

Sincerely,

Karen Linnell
Chair

cc: NPS Alaska Regional Director
Superintendent, Wrangell-St. Elias National Park and Preserve
Southeast, Southcentral and Eastern Interior Regional Advisory Councils
Governor of Alaska

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

WP14-15/45 Executive Summary	
General Description	Proposal **WP14-15** requests the Board to include in the pool of eligible users of the Chisana Caribou Herd, residents of Nabesna (defined as the Nabesna Road from mileposts 25 to 46) and residents of the hunt area (that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canada border). *Submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission* Proposal **WP14-45** requests the Board to include residents of Nabesna and residents of the hunt area not affiliated with a community in the pool of eligible subsistence users of the Chisana Caribou Herd. *Submitted by the Eastern Interior Subsistence Regional Advisory Council.*
Proposed Regulation	**Proposal WP14-15** **Unit 12—Caribou** *Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border* — *1 bull by Federal registration permit only. Sept. 1–30* *Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, ~~and~~ Tok,* ***Unit 12 along the Nabesna Road (mileposts 25–46), and that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail****.* Proposal WP14-45 **Unit 12—Caribou** *Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border* — *1 bull by Federal registration permit only. Sept. 1–30* *Federal public lands are closed to the harvest of caribou except by* ***residents of the area and*** *residents of Chisana, Chistochina, Mentasta Lake,* ***Nabesna****, Northway, Tetlin, and Tok.*
OSM Conclusion	**Support** WP14-15 / **Take No Action** on WP14-45
Eastern Interior Regional Council Recommendation	**Support**

WP14-15/45 Executive Summary	
Southcentral Regional Council Recommendation	**Support** WP14-15 / **Take No Action** on WP14-45
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** WP14-15 / **Neutral** on WP14-45
Written Public Comments	**2 Support**

STAFF ANALYSIS
WP14-15/45

ISSUES

Proposals WP14-15 and 45 request changes to the pool of Federally eligible users of the Chisana Caribou Herd. In 2012, a determination based on Section 804 of the Alaska National Interest Lands Conservation Act (ANILCA) was adopted by the Federal Subsistence Board (Board) in response to conservation concerns for the Chisana Caribou Herd. The Management Plan (CCHWG 2012) indicates a harvestable surplus of 14 bulls, 7 of which can be taken on the U.S. side of the border.

Proposal WP14-15, submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission, requests the Board to include in the pool of eligible users of the Chisana Caribou Herd, residents of Nabesna (defined as the Nabesna Road from mileposts 25 to 46) and residents of the hunt area (that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canada border).

Proposal WP14-45, submitted by the Eastern Interior Subsistence Regional Advisory Council, requests the Board to include residents of Nabesna and residents of the hunt area not affiliated with a community in the pool of eligible subsistence users of the Chisana Caribou Herd. The two proposals are essentially the same.

Another proposal (WP14-49) requests to lengthen the hunting season for the Chisana Caribou Herd.

DISCUSSION

The Chisana Caribou Herd hunt area was established by the Board in 2012. The Board also adopted a Section 804 determination to include residents of only Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok in the pool of eligible users of Chisana caribou under Federal regulations. Both proponents recommend that Nabesna residents and residents of the hunt area (in addition to Chisana residents) be eligible to hunt Chisana caribou because of their close proximity to the herd and reliance on the herd, adding that they live in remote locations near or within the hunt area and depend on nearby wild resources.

Concerning Nabesna, it should be noted that the Board has adopted other customary and traditional use determinations that include residents of "mileposts 25–46 of the Nabesna Road." It is helpful to know that mileposts 25–46 fall within Unit 12. Mileposts 1–25 of the Nabesna Road are in Unit 11.

Since the initial Section 804 analysis was written (FWS 2012a), staff have accessed additional information describing the uses of the Chisana Caribou Herd by residents of Nabesna (LaVine 2013, pers. comm.).

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border	*1 bull by Federal registration permit only. Sept. 1–30.*
Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok.	

Proposed Federal Regulation WP14-15

Unit 12—Caribou

Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border	*1 bull by Federal registration permit only. Sept. 1–30*
Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, ~~and~~ Tok, ***Unit 12 along the Nabesna Road (mileposts 25–46), and that portion of Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail****.*	

Proposed Federal Regulation WP14-45

Unit 12—Caribou

Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border	*1 bull by Federal registration permit only. Sept. 1–30*
Federal public lands are closed to the harvest of caribou except by ***residents of the area and*** *residents of Chisana, Chistochina, Mentasta Lake,*	

Existing State Regulation

Unit 12—Caribou

Unit 12 remainder	*No open season*

Extent of Federal Public Land

The focus of the proposals (Unit 12 east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border) is approximately 99% Federal public lands, all of which are managed by the Wrangell-St. Elias National Park and Preserve (see **Map 1**).

Customary and Traditional Use Determination

For Unit 12 caribou, the Board has recognized the customary and traditional uses of Unit 12 residents (including Tanacross, Tok, Tetlin, Northway, and Nabesna) and residents of Chistochina, Dot Lake, Healy Lake, and Mentasta Lake.

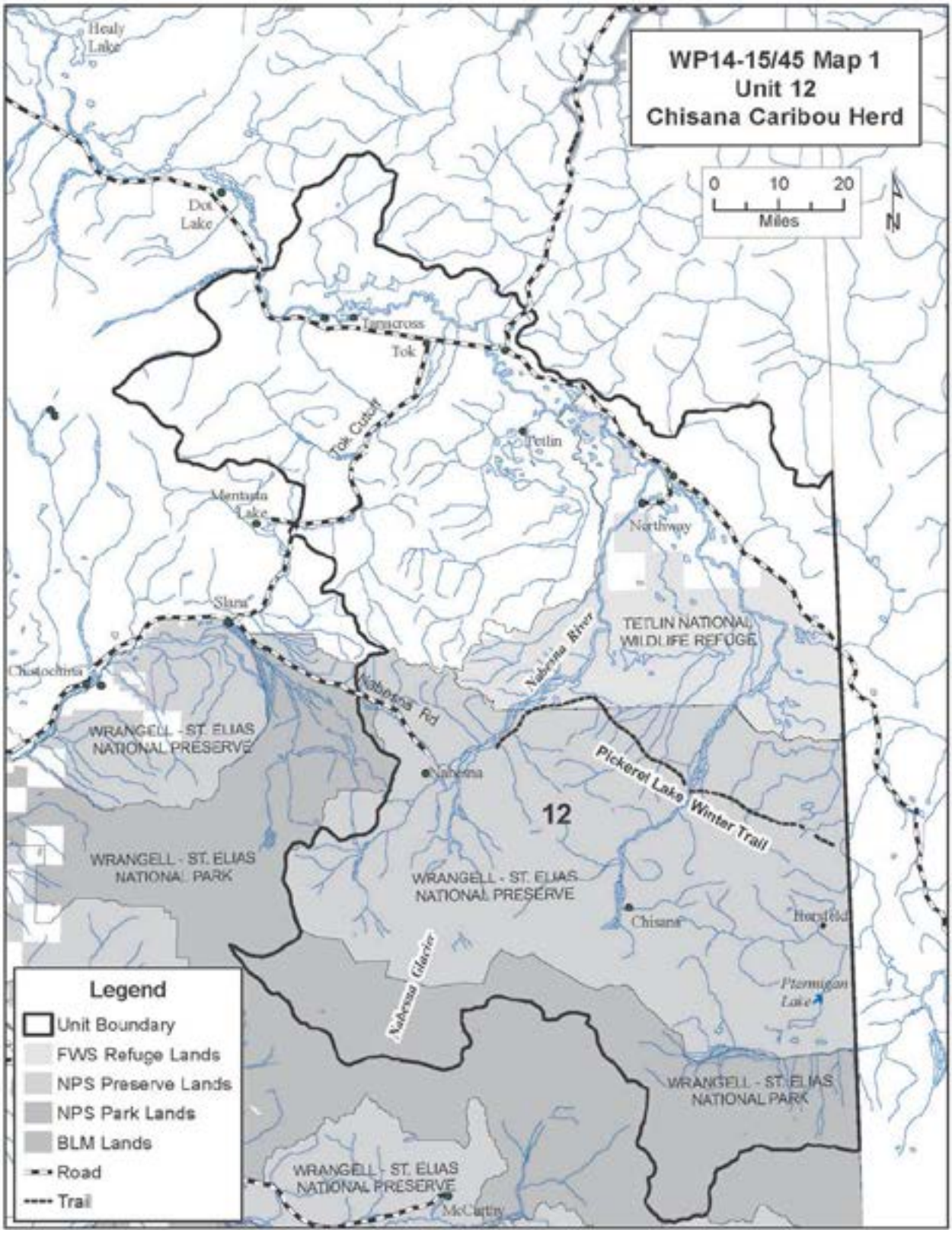
Regulatory History

From 1994 to 2011 the State and Federal hunts for Chisana caribou were closed. In 2010, the Board deferred Proposal WP10-104 that requested the Board open a Federal hunting season. In 2012, Proposals WP12-65 and 66 were submitted to open a Federal hunting season. As recommended by the Southcentral Regional Advisory Council and the Eastern Interior Regional Advisory Council, the Board took no action on Proposals WP10-104 and WP12-65.

The Southcentral Council recommended adopting WP12-66 with modification recommended by OSM staff after performing a Section 804 analysis to determine the eligible hunters, and contingent on the formation of a subcommittee to consist of representatives from the Southcentral Council, the Eastern Interior Council, representatives from the communities of Chistochina, Mentasta Lake, Northway, and Tetlin, plus three or four additional interested members of the public from the other villages considered or areas between to determine allocation. The OSM recommendation to the Board was that residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok should be in the pool of eligible subsistence users of Chisana caribou.

The Eastern Interior Council also recommended adopting WP12-66 with modification to include residents of Nabesna and Tanacross as well as Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok in the pool of eligible users of Chisana caribou. The Board adopted the OSM recommendation to include only the residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok in the pool of eligible users (FWS 2012a). At the time, information was not available to describe the caribou use patterns of Nabesna, and at its meeting in January 2012, the Board indicated it would consider further research and analysis presented to the Board in the future (FSB 2012a:148).

The authority to manage the Federal hunt was granted to the Wrangell-St. Elias National Park and Preserve Superintendent by letter of delegation from the Board.


WP14-15/45 Map 1
Unit 12
Chisana Caribou Herd
0 10 20
Miles
N
Healy Lake
Dot Lake
Tanacross
Tok
Tok Cutoff
Tetlin
Mentasta Lake
Northway
Slana
Chistochina
Nabesna Rd
Nabesna River
TETLIN NATIONAL WILDLIFE REFUGE
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Nabesna
Pickerel Lake Winter Trail
12
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Chisana
Northway
Nabesna Glacier
Ptarmigan Lake
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
Legend
Unit Boundary
FWS Refuge Lands
NPS Preserve Lands
NPS Park Lands
BLM Lands
Road
Trail

Community Characteristics

Nabesna

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 2013, pers. comm.). Nabesna residents share a zip code with Gakona. For the purposes of the Federal program, the Nabesna area has been described as the area of milepost 25–46 of the Nabesna Road. The area of milepost 25–46 falls within Unit 12 while mileposts 1–24 of the Nabesna Road are in Unit 11.

This area is primarily comprised of home sites 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. 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 2013, pers. comm.; Reckord 1983a: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 (1983a:269–270).

According to the Division of Subsistence, Alaska Department of Fish and Game (ADF&G), the population along the entire Nabesna Road in 1983 was approximately 44 people living in 10 households (Stratton and Georgette 1984). The population from milepost 7–46 was 37 people living in 13 households in 1988 (McMillan and Cuccarese 1988). In 2010, 5 people in 3 households were living in the Nabesna census designated area (approximately milepost 25–46 of the Nabesna Road, the area called "Nabesna" in the analysis) according to the U.S. Census. In 2011, the National Park Service and ADF&G conducted a community harvest survey that included the Nabesna Road. They identified 9 households making their permanent residence on the Unit 12 portion of the road, and estimated that approximately 18 people lived in the area (LaVine 2013, pers. comm.).

Residents of the Hunt Area

The people living in the hunt area outside the community of Chisana number probably less than 5 people residing at Horsfeld and at Ptarmigan Lake (see **Map 1**); however, an enumeration has not been done. It is likely that some are employed seasonally as guide/outfitters (Cellarius 2013, pers. comm.).

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for harvest of a subsistence resource among rural residents having customary and traditional use of that resource. In 2012, the Board opened a hunting season for the Chisana Caribou Herd. Because of the small harvestable surplus of animals, only 14 permits were available to distribute, a Section 804 analysis was necessary to determine who would be eligible to receive a permit. The customary and traditional use determination for caribou in Unit 12 includes 10 communities: Chisana, Nabesna, Northway, Tanacross, Tetlin, and Tok in Unit 12; Dot Lake and Healy Lake in Unit 20; and Chistochina and Mentasta Lake in Unit 13. In 2012, the 804 analysis determined which residents of the 10 communities, as well as which rural residents not living in a community but residing in Unit 12, would be eligible to harvest caribou from the Chisana Herd during the September 2012 hunting season. The Section 804 determination concluded that residents of only Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok should be in the pool of eligible users of the Chisana Herd under Federal regulations. The conclusion was adopted by the Board.

Both proponents of the proposals, WP14-15/45, recommend that Nabesna residents and residents of the hunt area not affiliated with a community be eligible to hunt Chisana caribou.

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority will be implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood, 2) local residency, and 3) the availability of alternative resources.

<u>1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood</u>

If "customary and direct dependence" is narrowly interpreted to mean that Chisana caribou provide necessary nutritional elements for "a mainstay of livelihood," then none of the residents of Unit 12 or of the communities outside of Unit 12 with a customary and traditional use determination for caribou in Unit 12 meet this criterion: before the 2012 Federal season was opened by the Board, the hunt for Chisana caribou had been closed since 1994; presumably, all rural residents with customary and traditional use determinations for caribou in Unit 12 managed without using Chisana caribou for food between 1994 and 2011.

If "customary and direct dependence" on Chisana caribou for "a mainstay of livelihood" is more broadly interpreted to mean that Chisana caribou provide necessary cultural and social elements to local peoples' existence, then there are rural residents for whom this criterion applies. Based on evidence presented in the analysis for Proposal WP12-68 (FWS 2012b), which relied on Haynes and Simeone's (2007) conclusion that the ancestors of residents of Northway, Mentasta, and Chistochina were part of the Upper Chisana-Upper Nabesna band, and on Guédon's (1974) ethnographic description of Tetlin, it appears that

Northway, Mentasta, Chistochina and Tetlin are the communities in Unit 12 and adjacent units whose residents exhibit customary and direct dependence on Chisana caribou.

Based on available ADF&G harvest data, between 1977 and 1993 residents of Northway, Tok and Chisana hunted Chisana caribou and thereby exhibit a "customary and direct dependence" on Chisana caribou.

In 2012 when the Board reviewed the Section 804 analysis, there was little evidence available to suggest that residents of Nabesna, Tanacross, Dot Lake and Healy Lake have a customary and direct dependence on Chisana caribou. Research uncovered neither documentary evidence relating to any cultural or social ties between residents of these communities and the Chisana Caribou Herd nor any harvest data to indicate that residents of these communities hunted the Chisana Caribou Herd.

In 2012, based on the available evidence, it appeared that residents of 6 of 10 communities exhibited a customary and direct dependence on Chisana caribou, including Tok, Northway, Chistochina, Chisana, Mentasta, and Tetlin. The available evidence did not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "customary and direct dependence" criterion.

In 2011, residents of Nabesna participated in research with the Division of Subsistence, ADF&G (LaVine 2013, pers. comm.). New information was documented concerning caribou use patterns. Some of the families living at Nabesna first moved to the area in the 1950s. Transportation for most of the year was by sleds pulled by dogs and by small airplanes. Some were guiding hunters for seasonal employment, not just in Unit 12, but in other areas of the state as well. Up to 5 caribou and 5 moose were needed each year to support a family. Sheep meat was obtained from guided hunters. All meat was hung to freeze in a meat house. A generator supplied some electricity, but could not run a freezer for wild meat. Other wild resources, such as salmon, trout, grayling, and ptarmigan, were harvested. People also maintained trap lines from which many of their outer clothes were made and cash obtained from selling furs. Food was preserved by canning. Caribou was eaten fresh or fresh frozen. Caribou were harvested in August and September. Food shortages occurred sometimes in March. People would try to find caribou if this happened. When a family purchased a snow machine they could search in a larger area than had been possible with dogs. The larger more dependable snow machines were first used in the early 1970s.

During an interviews with LaVine (2013, pers. comm.), one family said that the Nelchina Caribou Herd was their primary source of caribou. Nelchina caribou migrated through the Nabesna area through winter. Chisana caribou migrated over Cooper Pass and came down to the Nabesna River across from Nabesna from where they were harvested. The herd then turned and migrated back over Cooper Pass. Both herds could be present in the area at the same time, but by the early 1990s, the Chisana Caribou Herd had shrunk, and its migration no longer took it as far as the Nabesna River.

Interviewees described that an influx of people arrived in the mid-1970s. The reduced opportunity to harvest caribou (and moose) since Slana was established in the early 1980s was noted during interviews at Nabesna. A steady lowering in the local populations of all game species was also noted. In 2011, some were getting most of their wild meat from the hunters they guided. It was mentioned that people who live

in the village of Chisana find they must leave in winter because there are not enough wild resources locally for them to make it through winter, according to respondents from Nabesna (LaVine 2013, pers. comm.).

The current proposals suggest residents of Nabesna and residents of the hunt area not affiliated with a community are eligible for consideration under this criterion. Since the Board adopted the Section 804 determination in 2012, new information from recent research (LaVine 2013, pers. comm.), noted above, has become available indicating that Nabesna residents hunted Chisana caribou and thereby exhibit a "customary and direct dependence" on Chisana caribou. Additionally, residents of the hunt area not affiliated with a community should be eligible to receive a permit to hunt Chisana caribou because of their remoteness and dependence on wild resources in the area.

2. Local Residency

Chisana, Nabesna, Tanacross, Tetlin, and Tok are within Unit 12, Chistochina is on the border between Unit 11 and Unit 13, but falls in Unit 13, Dot Lake and Healy Lake are in Unit 20, and Mentasta Lake is within Unit 13 (Unit 12, 13 and 20 Maps). From the point of view of customary and traditional use determinations for caribou, all of these communities may be considered to have local residency.[1]

From the point of view of geographic proximity, Chisana is closest to the herd area. If geographic proximity is the only measure of local residency, then only Chisana residents clearly qualify as local residents. Residents of Dot Lake and Healy Lake, by contrast, are at the greatest distance from the herd area and could be excluded from local residency. Based on the available evidence, it appears that residents of 8 communities exhibit "local residency" if the criteria is geographic proximity. These communities include Chisana, Nabesna, Northway, Tanacross, Tetlin, Tok, Mentasta Lake and Chistochina. In 2012 when the Board adopted the Section 804 determination, the available evidence did not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "local residency" criterion.

Concerning the residents of *only the hunt area* not affiliated with a community, because of their direct proximity to the hunt area, it is reasonable they are eligible for consideration under the "local residency" criterion.

3. Availability of Alternative Resources

If availability of alternative resources refers to the availability of harvestable caribou in other areas, then all of the residents of the communities in the customary and traditional use determination have alternative resources. Residents of Chistochina and Mentasta, who reside in Unit 13, have a customary and traditional use determination for caribou in Unit 13, which includes the opportunity to subsistence hunt

[1] A customary and traditional use determination is based on a holistic assessment of eight factors. Factor 4 refers to "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." "Near or reasonably accessible" may be interpreted to indicate local residency.

caribou from the Nelchina Caribou Herd. Residents of Dot Lake and Healy Lake, who reside in Unit 20D, have a customary and traditional use determination for caribou, which includes the opportunity to subsistence hunt caribou from the Fortymile Caribou Herd; along with other residents of Unit 20D, they also have a customary and traditional use determination for caribou in Unit 13B. Rural residents in Unit 12 north of Wrangell-St. Elias National Preserve (Northway, Tetlin, Tanacross), in addition to having a customary and traditional use determination for that unit, have a customary and traditional use determination for caribou in Unit 20D and Unit 20E. Rural residents in Unit 12 along the Nabesna Road, in addition to a customary and traditional use determination for that unit, have a customary and traditional use determination for caribou in Units 13A, 13C, 13D, and 13E; rural residents in Unit 12 along the Nabesna Road and Tok Cutoff Road have a customary and traditional use determination for caribou in Unit 13B.

Because harvest opportunities exist for caribou other than Chisana caribou, it appears that residents of these communities have alternatives if the availability of alternative resources is based solely on food considerations.

The Section 804(3) question could also be interpreted to ask whether local peoples perceive any alternative to Chisana caribou, or whether there are no alternatives. The existing literature, including oral histories of people who traditionally hunted Chisana caribou, is suggestive (cf. FWS 2012b) (Ahtna 1988; Case 1986; de Laguna and McKennan 1981; Grinev 1992; Guédon 1974; Haynes and Simeone 2007; Kari 1986, 1990; Ketz 1983; Joe 2011, pers. comm.; McKennan 1959; Reckord 1983b; Rohn 1900; SCRSAC 2010:340–341; Simeone 2006; Skoog 1968; Wrangell [1839] 1980). Based on the literature, Chisana caribou appear to be unique and occupy a particularly special status for descendants of the Upper Chisana-Upper Nabesna band. The descendants of the Upper Chisana- Upper Nabesna band live today in Chistochina, Northway, Mentasta and Tetlin. For residents of these communities, other caribou may not provide an alternative to the Chisana caribou when viewed from the perspective of its cultural importance to these residents.

The caribou may also be unique from the perspective of other local subsistence users. Local guides who used to hunt the herd indicate that Chisana caribou are particularly large with unusually large antlers and are therefore especially valued (D. Overly 2011, pers. comm.; T. Overly 2011, pers. comm.; Joe 2011, pers. comm.). Former guides of the Chisana Caribou Herd currently reside in Chisana, Chistochina, Mentasta and Tok. For these guides, the Chisana Caribou Herd has a particular importance other than providing food.

If the availability of alternative resources is solely based on considerations of calories, then all of the communities in the customary and traditional use determination have alternatives, even within the same species. If, however, the measure of an alternative resource includes cultural and social considerations, then it appears that for descendants of the Upper Chisana-Upper Nabesna band, there are no alternatives. For this reason, in 2012, the Board considered residents of Chistochina, Northway, Mentasta and Tetlin to have no alternatives to Chisana caribou, and under Section 804(3) should be given a subsistence priority for Chisana caribou over residents of Tok, Dot Lake, Healy Lake, Chisana, Nabesna and Tanacross. However, other cultural and social values are also prevalent and are associated with the history of guiding

in the area. For former guides who currently live in Mentasta, Tok and Chisana, there may be no alternatives to Chisana caribou. For this reason, in 2012 the Board considered residents of Tok and Chisana should be included with residents of Chistochina, Northway, Mentasta, and Tetlin under this criterion. The available evidence does not indicate which, if any, rural residents of Unit 12 not affiliated with a community are eligible for consideration under the "alternative resources" category.

The current proposals suggest residents of Nabesna are eligible for consideration under this criterion. Since the Board adopted the Section 804 determination, new information from recent research (LaVine 2013, pers. comm.), noted above, has become available indicating that for guides and their families who currently live in Nabesna, there may be no alternatives to Chisana caribou. Residents of Nabesna should be included with residents of Chistochina, Northway, Mentasta, Tetlin, Tok, and Chisana under this criterion.

Additionally, residents of the hunt area that are not affiliated with a community have very limited access to alternative caribou populations and should be considered eligible under this criterion.

Summary of Section 804 Analysis

The Section 804(1) analysis determines that residents of Chisana, Chistochina, Northway, Mentasta, Nabesna, Tetlin, Tok, and residents of the hunt area that are not affiliated with a community exhibit the greatest customary and direct dependency on the Chisana Caribou Herd. The Section 804(2) analysis makes the determination that Chisana, Chistochina, Nabesna, Northway, Tanacross, Tetlin, Tok, Mentasta Lake, and residents of the hunt area not associated with a community should be included based on local residency. The Section 804(3) analysis determines that there are no alternatives to Chisana caribou for residents of Chisana, Chistochina, Nabesna, Northway, Mentasta, Tetlin, Tok, and residents of the hunt area that are not affiliated with a community and that these residents should be granted a subsistence priority over residents of Dot Lake, Healy Lake, and Tanacross.

Additional Information from November 2013 Regional Advisory Council Meetings

The Eastern Interior Council discussed these proposals at its November 19 and 20, 2013, meeting in Fairbanks. One of the Council members is a resident of the hunt area a; however, weather prohibited him from travelling to the meeting. The residents of the hunt area live in a remote area. Some use satellite phones and some have email access, but no direct road access or regularly scheduled flights are available. Council members said that some residents of the hunt area are longtime residents while others have moved to the area "recently." Concerning fulltime residents of the hunt area, the Council identified 5 people living in 3 households. Fortymile Air was mentioned as the air taxi that most commonly flies people in and out of the area. One of the residents has used horses to transport visitors around the area.

Distribution of Permits

At its January 2012 meeting, the Board authorized a limited harvest of Chisana caribou consistent with the herd's management plan (CCHWG 2012). The Board delegated authority to the Wrangell-St. Elias National Park and Preserve superintendent to open the season, announce the harvest quota, the number of

permits to be issued and the reporting period, and to close the season. Based on the estimated population size and the guidance in the management plan, the harvest quota for the 2012 was set at 7 animals. The National Park Service met with participating communities and associated tribal governments to ask for their input regarding permit distribution. As a result, a decision was made to allocate 2 permits to each of Chistochina, Mentasta Lake, Northway, and Tetlin. Any remaining permits were be made available to Tok and Chisana residents on a first come-first served basis. In 2012, the number of permits was limited to 14 and the reporting period requirement was set at within 3 days of harvest. Nine permits were issued and 2 animals were harvested (Cellarius 2012).

Effects of the Proposal

If this proposal is adopted, residents of Nabesna and residents of the hunt area not affiliated with a community would be included in the pool of eligible hunters of the Chisana Caribou Herd. The National Park Service would have to adjust its permit distribution system to accommodate more users. The herd would not be affected.

If this proposal is not adopted, the pool of eligible users would remain the same, and permits would be distributed amongst the 6 communities of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, and Tok. People whose primary residence is within the boundaries of the hunt area (other than Chisana) would not have an opportunity to harvest caribou in the hunt area. Residents of Nabesna who live within a few miles of the hunt area boundary similarly would be excluded. The herd would not be affected. Other users would not be affected.

OSM PRELIMINARY CONCLUSION

Take no action on Proposal 45.

Support Proposal 15 with **modification** to add the residents of Unit 12 along the Nabesna Road (mileposts 25–46) to the Section 804 determination concerning the Chisana Caribou Herd. The modified regulation would read:

Unit 12—Caribou

Unit 12, that portion east of the Nabesna River and the Nabesna Glacier and south of the Winter Trail running southeast from Pickerel Lake to the Canadian border	*1 bull by Federal registration permit only. Sept. 1–30*
Federal public lands are closed to the harvest of caribou except by residents of Chisana, Chistochina, Mentasta Lake, Northway, Tetlin, ~~and~~ Tok, ***and Unit 12 along the Nabesna Road (mileposts 25–46).***	

Justification

In 2012, a season and harvest limit were established in Federal regulations for the Chisana Caribou Herd for the first time since 1994. The area remains closed to non-Federally qualified users. In addition, the pool of eligible users was reduced to residents of 6 communities. One of the communities, Chisana, is located in the hunt area. The Section 804 analysis, above, offers a rationale to provide residents of Chisana, Chistochina, Mentasta, Nabesna, Northway, Tetlin, and Tok a subsistence priority over residents of Chistochina, Dot Lake, Healy Lake, and Tanacross. The two proposals, WP14-15 and WP14-45, are essentially the same. The recommendation is to support Proposal WP14-15 with modification because no new information is available indicating that the residents of the hunt area not affiliated with a community are eligible for consideration under Criteria 1 and 3. New information is available however concerning the eligibility of Nabesna residents. Information from recent research (LaVine 2013, pers. comm.) indicates that residents of Nabesna hunted Chisana caribou and thereby exhibit a "customary and direct dependence" on Chisana caribou under Criterion 1, and some residents of Nabesna are guides and their families for whom there may be no alternatives to Chisana caribou. Thus, residents of Nabesna are eligible for consideration under Criterion 3. Nabesna is located just outside the boundary of the hunt area and is eligible for consideration under Criterion 2.

ANALYSIS ADDENDUM

OSM CONCLUSION

Take no action on Proposal 45.

Support Proposal 15.

Justification

In 2012, a season and harvest limit were established in Federal regulations for the Chisana Caribou Herd for the first time since 1994. The area remains closed to non-Federally qualified users. In addition, the pool of eligible users was reduced to residents of 6 communities. One of the communities, Chisana, is located in the hunt area. The Section 804 analysis, above, offers a rationale to provide residents of Chisana, Chistochina, Mentasta, Nabesna, Northway, Tetlin, Tok, and residents of the hunt area not affiliated with a community a subsistence priority over residents of Chistochina, Dot Lake, Healy Lake, and Tanacross. The two proposals, WP14-15 and WP14-45, are essentially the same. The recommendation is to support Proposal WP14-15 because new information is available concerning the eligibility of residents of Nabesna and residents of the hunt area. Information from recent research (LaVine 2013, pers. comm.) indicates that some residents of Nabesna hunted Chisana caribou and thereby exhibit a "customary and direct dependence" on Chisana caribou under Criterion 1, and some residents of Nabesna are guides and their families for whom there may be no alternatives to Chisana caribou. Thus, residents of Nabesna are eligible for consideration under Criterion 3. Nabesna is located just outside the boundary of the hunt area and is eligible for consideration under Criterion 2. Additionally, residents of the hunt area that are not affiliated with a community should be eligible to receive a permit to hunt Chisana caribou because of their remoteness and dependency on wild resources that are available

(Criterion 1), close proximity to the herd (Criterion 2), and very limited access to alternative caribou populations (Criterion 3).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP14-15 as written. **Take no action** on Proposal WP14-45. The Council submitted proposal WP14-45 to ensure residents of the hunt area are included in the Chisana caribou hunt but felt that on close review WP14-15 submitted by the Wrangell- St. Elias SRC had more clear and specific language that would better ensure all residents of the hunt area were indeed included.

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-15 as proposed. **Took no action** on WP14-45. Proposal WP14-15 would be beneficial for subsistence users by recognizing federal subsistence users in the area who were not included in the previous determination. There is no conservation concern and the opportunity to harvest caribou will benefit subsistence users.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-15: We support Proposal WP14-15 and WP14-45 to add residents along Nabesna Road (mileposts 25-46) and residents of this hunt area to "the list of communities eligible to participate in the Unit 12 Caribou hunt that takes place east of the Nabesna River and Glacier and south of the Winter Trail". Residents of Unit 12 along the Nebesna Road live close to the hunt area and have hunted for and harvested caribou in this area. Residents of the hunt area have harvested caribou in this area and should be eligible to hunt for Unit 12 caribou in this area.

Ahtna Inc. Customary and Traditional Use Committee

Support Proposal WP14-15: This proposal will give residents of the area a chance to hunt that were overlooked in past regulation. Often the process of establishing regulation on who can hunt, areas are overlooked. This is a housekeeping proposal.

Donald Woodruff, Eagle

Wrangell-St. Elias National Park
Subsistence Resource Commission
P.O. Box 439
Mile 106.8 Richardson Hwy.
Copper Center, AK 99573

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November 1, 2013

Tim Towarak, Chair
Federal Subsistence Board
U.S. Fish and Wildlife Service
Office of Subsistence Management
1011 E. Tudor Road, MS-121
Anchorage, AK 99503

Dear Chairman Towarak:

The Wrangell-St. Elias National Park Subsistence Resource Commission (SRC) met in Chistochina on October 29 and 30, 2013. The SRC reviewed the federal subsistence wildlife proposals for the Wrangell-St. Elias area being considered for the 2014-2016 regulatory cycle and would like to provide comments for the following proposals:

WP14-01: Require trap marking, trap checks every 6 days, and harvest reports (statewide)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously opposes the proposal. A statewide proposal that would make federal trapping regulations more restrictive than state regulations is not needed. Additionally, enforcing the requirement that traps be checked every six days would be difficult. If there are local problems with trappers, those problems should be addressed locally, for example by talking to the protection officer for the area. The Alaska Department of Fish and Game's annual trapper survey already collects considerable information from trappers in Alaska, and an additional reporting requirement is not needed.

WP14-14: Revise customary and traditional use determination for goat in Unit 11 to include residents of Kenny Lake
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal. Kenny Lake is surrounded on all sides by other rural communities that have a positive customary and traditional use determination (C&T) for goat in Unit 11, and Kenny Lake residents already have C&T for most other large mammal species in Unit 11. The data presented in the analysis as well as common sense support recognizing Kenny Lake as having a positive C&T for goat in Unit 11.

WP14-15 & 45: Revise list of communities and areas eligible to hunt caribou in the SE portion of Unit 12 (Chisana herd)
The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports WP 14-15 as written. The SRC supported the inclusion of Nabesna during the initial ANILCA

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

Section 804 analysis and continues to support its inclusion in the list of communities most dependent on this resource. Adding residents of the hunt area outside of Chisana is common sense. They live in a remote area with limited access to other resources and should be able to harvest a resource in their own back yards. The commission took no action on WP14-45.

WP14-16: Establish a winter moose hunt in the southern portion of Unit 11

The Wrangell-St. Elias National Park Subsistence Resource Commission supports the proposal with modification to add to the delegation of authority the ability to limit the number of permits and to announce the reporting period. This season would provide additional subsistence opportunity on a moose population that is difficult to access during the existing fall season and consequently lightly harvested. The delegation of authority to the park superintendent to open the season; announce the harvest quota, number of permits to be issued and reporting period; and close the season would provide the tools needed to limit the harvest to a sustainable level and thereby address any conservation concerns. Educational material could be provided to the permittees about how to distinguish antlerless bulls from cows and such a handout could also remind hunters not to harass the animals with their snowmachines.

WP14-49: Revise the season dates for the caribou hunt in the SE portion of Unit 12 and add a meat-on-the-bone salvage requirement (Chisana herd)

The Wrangell-St. Elias National Park Subsistence Resource Commission unanimously supports the proposal with the following modifications: (a) the fall season would open on August 10 and close on September 30, (b) the winter season would not be adopted, and (c) the meat-on-the-bone requirement would not be adopted. Expanding the fall season would provide additional subsistence opportunity. Hunters who prefer to hunt during August, well before the rut, would be able to do so. And hunters for whom meat storage is easier later in the season when the weather is cooler could hunt in late September. Establishing a winter season is not supported at this time due to the small harvest quota and lack of good data about where the animals are during the winter. Regarding the meat-on-the-bone requirement, there is no evidence of a meat spoilage problem, and SRC members agree that individual hunters should be able to decide whether or not to keep the meat on the bone. Hunters who make use of the bones or otherwise prefer to keep the meat on the bone would have the option to do so, but hunters who harvest meat in locations that require long distance packing would have the option of leaving some of the bones behind.

Thank you for the opportunity to comment.

Sincerely,

Karen Linnell
Chair

cc: NPS Alaska Regional Director
Superintendent, Wrangell-St. Elias National Park and Preserve
Southeast, Southcentral and Eastern Interior Regional Advisory Councils
Governor of Alaska

Chair: Karen Linnell; Members: Suzanne McCarthy, Dan Stevens, Don Horrell, Don Welty, Gloria Stickwan, Robert Fithian, Sue Entsminger, Bert Adams, Sr.

WP14-19 Executive Summary	
General Description	Proposal WP14-19 requests a cow harvest be established in Unit 15B and Unit 15C from Oct. 20 – Nov. 10. The proponent suggests a quota of 15 be established and the hunt be conducted under a Federal registration permit. *Submitted by Greg Encelewski, President of the Ninilchik Traditional Council.*
Proposed Regulation	**Unit 15A remainder, 15B, 15C—Moose** *Unit 15A—remainder, 15B, and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.* — *Aug 10–Sept 20* *Units 15B and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. The Kenai NWR Refuge Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council* — *Oct 20–Nov 10* ***Units 15B and 15C- 1 cow by Federal registration permit only. The Kenai NWR Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council. The quota for this hunt will not exceed 15 cows per season.*** — ***Oct 20–Nov 10***
OSM Conclusion	**Support** Proposal WP14-19 **with modification** to allow a limited cow harvest only in Unit 15C from Aug. 10 to Sept. 20 and to delegate authority to open, close the season, and determine annual quotas via the existing delegation of authority letter.

WP14-19 Executive Summary	
Southcentral Regional Advisory Council Recommendation	**Support** Proposal WP14-19 **with modification** to establish a cow season in Unit 15C from Aug. 10 – Sept. 20 by Federal registration permit.
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP14-19 **with modification** to allow a limited cow moose harvest in Unit 15C only with a Federal harvest quota.
Written Public Comments	**None**

STAFF ANALYSIS
WP14-19

ISSUES

Proposal WP14-19, submitted by Greg Encelewski, President of the Ninilchik Traditional Council, requests a cow harvest be established in Unit 15B and Unit 15C from Oct. 20 – Nov. 10. The proponent suggests a quota of 15 be established and the hunt be conducted under a Federal registration permit.

DISCUSSION

The proponent would like to establish a cow hunt in Units 15B and 15C because many subsistence users have not been able to harvest a moose due to the restrictions associated with the current bull moose hunting regulations. In addition, the proponent states that the lack of availability of moose meat has had an adverse impact on the conditional, social, and spiritual well-being of the community.

Existing Federal Regulation

Unit 15A remainder, 15B, 15C—Moose

Unit 15A—remainder, 15B, and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug 10–Sept 20*
Units 15B and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. The Kenai NWR Refuge Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council.	*Oct 20–Nov 10*

Proposed Federal Regulation

Unit 15A remainder, 15B, 15C—Moose

Unit 15A—remainder, 15B, and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug 10–Sept 20*
Units 15B and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration	*Oct 20–Nov 10*

permit only. The Kenai NWR Refuge Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council

Units 15B and 15C- 1 cow by Federal registration permit only. The Kenai NWR Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council. The quota for this hunt will not exceed 15 cows per season. ***Oct 20–Nov 10***

Existing State Regulation

Unit 15 – Moose

Unit 15A–remainder	*Resident: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one side by bow and arrow only.* ***OR***	*Harvest permit*	*Aug. 10–Aug.17*
	Resident: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Harvest permit*	*Aug. 20–Sept. 20*
	Nonresidents:		*No open season*
Unit 15B*-bounded by a line running from the mouth of the Shantatalik Creek on Tustumena Lake, northward to the headwaters of the west fork of Funny River to the Kenai National Wildlife Refuge boundary; then east along the refuge boundary to its junction with the Kenai River; then eastward*	*Residents and nonresidents: One bull with spike fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit*	*DM530/532/534/536/538*	*Sept.1–Sept. 20*

along the north side of Kenai River and Skilak Lake; then south along the western side of Skilak river, Skilak Glacier, and Harding Icefield; then west along the Unit 15B boundary to the mouth of Shantatalik Creek.			
Unit 15B–remainder	*Residents and nonresidents: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one side by bow and arrow only.* ***OR***	*Harvest permit*	*Aug. 10–Aug.17*
	Residents and nonrersidents: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Harvest permit*	*Aug. 20–Sept. 20*
	Nonresidents:		*No open season*
Unit 15C-*southwest of line from Point Pogibshi to the point of land between Rocky and Windy Bays*	*Resident: One bull by permit*	*TM549*	*Aug. 25–Sept.30*
	Nonresidents:		*No open season*
Unit 15C–*south of the south fork of the Anchor River (See ADF&G for detailed description)*	*Residents: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one.* ***OR***	*Harvest permit*	*Aug. 20–Sep.20*
	Residents and nonrersidents: One antlerless moose by permit; taking	*DM549*	*Aug. 20–Sept. 20*

	of calves or cows accompanied by calves is prohibited.		
	Nonresidents:		*No open season*
Unit 15C-remainder	*Resident: One bull with a spike on at least one side or 50-inch antlers or antlers with 4 or more brow tines on at least one.*	*Harvest permit*	*Aug. 20–Sept.20*
	Nonresidents:		*No open season*

Extent of Federal Public Lands

Unit 15 is approximately 47% Federal public land consisting of approximately 46% U.S. Fish and Wildlife managed lands, 0.4% U.S. Forest Service managed lands, and 0.1% National Park Service managed lands. Unit 15B is approximately 77% Federal public land consisting of approximately 77% U.S. Fish and Wildlife managed lands and 0.7% U.S. Forest Service managed lands. Unit 15C is approximately 28% Federal public land consisting of approximately 28% U.S. Fish and Wildlife managed lands and 0.3% U.S. National Park Service managed lands.

Customary and Traditional Use Determinations

Rural residents of Cooper Landing, Nanwalek, Ninilchik, Port Graham, and Seldovia have a positive customary and traditional use determination for moose in Units 15A and 15B.

Rural residents of Nanwalek, Ninilchik, Port Graham, and Seldovia have a positive customary and traditional use determination for moose in Unit 15C.

Regulatory History

In July 1995, the Federal Subsistence Board adopted a positive customary and traditional use determination for moose for Ninilchik, Nanwalek, Port Graham, and Seldovia in Units 15B and 15C. At the same time, the Board authorized an Aug. 10–Sept. 20 season with a spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction. This provided a ten-day opportunity for Federally qualified subsistence users prior to the State season opening. At the time it authorized the hunt, the Board deferred making a decision with regard to customary and traditional uses of moose in Unit 15A "because use of this subunit by residents of Ninilchik and Seldovia is extremely low" (60 Fed. Reg. 40462).

Following Board action in 1995, the Ninilchik Traditional Council submitted three proposals dealing with moose in Unit 15. In Proposal 23, the Traditional Council sought to expand the positive customary and traditional use determination for Ninilchik, Nanwalek, Port Graham and Seldovia for moose in Unit 15A. In

Proposal 24, the Traditional Council requested a September 11–30 moose season with a one cow harvest limit for all of Unit 15. In Proposal 25, the Traditional Council requested a September 11–30 moose season for all of Unit 15, with a harvest limit of one antlered bull.

The Southcentral Alaska Subsistence Regional Advisory Council (Council) supported Proposal 23—the positive customary and traditional use determination in Unit 15A for the four communities; opposed Proposal 24, allowing a cow season; and supported Proposal 25 with modification for an Aug. 15–Sept. 25 season and harvest limit of any bull from Aug. 15–19 and Sept. 21–25, with the spike-fork, 50-inch, or three or more brow tines on at least one antler regulation restriction in affect Aug. 20–Sept. 20. At its May 3, 1996 meeting, the Board rejected all three proposals (FSB 1996a).

In January 1996, the Ninilchik Traditional Council filed a complaint in the District Court for Alaska challenging the Board's decision to impose the spike-fork, 50-inch, or three or more brow tines on at least one antler rule on Federally qualified subsistence users, as well as the Board's deferral of a customary and traditional use determination in Unit 15A. On June 13, 1996, the District Court upheld the antler restriction, but remanded the customary and traditional use determination for Unit 15A back to the Board. The Court found that the Board had adequately explained its rationale for making positive customary and traditional use determinations for Units 15B and 15C, but not for Unit 15A.

In July 16, 1996, the Board took up the issue of the remand and was provided additional information on customary and traditional uses of moose in Unit 15A. The Board reversed its May 1996 decision and made a positive customary and traditional use determination for moose in Unit 15A for Nanwalek, Port Graham, Seldovia and Ninilchik. The Board also adopted a moose season in Unit 15A to run Aug. 18–Sept. 20 for one bull moose with the spike-fork, 50-inch, or with three or more brow tines on at least one antler restriction. The Board justified its action as follows:

> *The moose population in Unit 15A is stable at or near the carrying capacity of the habitat. The antler restrictions contained in this proposal should provide adequate protection from over harvest of breeding age bulls. The proposal is anticipated to have no significant impact on the total moose harvest in this unit, and is consistent with the conservation of a healthy moose population (FSB 1996b).*

The Board's decision to change the start of the 1995 season from August 10 to August 18 in Units 15B and 15C reduced the Federal subsistence hunt from 10 days to 2.

The Kenai Peninsula Outdoor Coalition submitted Request for Reconsideration (RFR) 96-01 on July 29, 1996, seeking a reversal of the Board's decision. Specifically, the coalition argued that the Board should abolish the Federal subsistence opportunity for moose in Unit 15A and eliminate the season. On August. 14, 1996, the Board rejected the RFR (FSB 1996c).

Subsequent to the Board's actions, the Ninilchik Tribal Council filed an amended complaint in October 1996, re-asserting its challenge to the antler size restriction and claiming that the Board had failed to properly provide for a subsistence priority as required by ANILCA. The District Court ultimately found in

favor of the Federal Subsistence Board. The Traditional Council then appealed to the Ninth Circuit Court of Appeals.

The Ninilchik -Council submitted a proposal to make permanent the regulations adopted for the 1996 season. This proposal (WP98-039) had the same season dates, Aug. 18–Sept. 20, and a harvest limit of one antlered bull with the spike-fork, 50-inch or three brow times on at least one antler restriction. This proposal was adopted by the Board at its May 1998 meeting.

The Ninth Circuit Court of Appeals rendered its decision on the Ninilchik Tribal Council lawsuit on July 31, 2000 (Ninilchik Traditional Council et al. v. U.S., 227 F.3d 1186 (9th Cir. 2000)). The Court held that the Board's interpretation of the term "priority" as defined by ANILCA was reasonable, and meant to balance the competing aims of subsistence use, conservation, and recreation; while at the same time provide subsistence users with a meaningful opportunity. However, the Court also found that the Board had failed to provide support in the record for its conclusion that the two days reserved for Federally qualified subsistence users in Unit 15A constituted a priority.

Consequently, in 2001 the Office of Subsistence Management submitted Proposal WP01-50, requesting that the dates of the subsistence moose season in Unit 15A be changed from Aug. 18–Sept. 20 to Aug. 10–Sept. 20. The Board adopted this change in May 2001, providing a total of ten days to Federally qualified subsistence users before the start of the State's general season.

In 2003, Proposal WP04-87 requested that the moose season for Unit 15A remainder be shortened by ten days from Aug. 10–Sept. 20 to Aug. 20–Sept. 20. The Board rejected this proposal at its May 2004 meeting.

Based on conservation concerns raised by the Council, at its May 3–4, 2005 meeting, the Federal Subsistence Board deferred Proposal WP05-07, and instead considered maintaining the existing Aug. 10–Sept. 20 season and providing more opportunity by the addition of a late season (Sept. 26–Oct. 15). Ultimately, the Board noted that the additional three week season was not requested by the proponent, and because it took place during the rut, it could have an adverse effect on the moose population. Finally, the Board stated that the public should have an opportunity to comment on the season recommended by the Council, as well as other alternatives that could potentially affect moose populations.

At its October 2005 meeting, the Council recommended a compromise solution: retain the original Aug. 10–Sept. 20 season dates, but add a different late season to run Oct. 20–Nov. 10 in Units 15B and 15C (but not in Unit 15A). The harvest limit would remain one antlered bull with the spike-fork, 50-inch, or three or more brow tines on at least one antler restriction. The late season addressed the issue of avoiding the moose rut while providing more opportunity for subsistence users to harvest moose closer to the time period when they customarily and traditionally hunted. Excluding Unit 15A from the compromise eliminated the road access issues and associated conservation concerns. At its May 2006 meeting, the Board adopted the late season hunt as recommended by the Council.

In 2006, the Kenai NWR Manager made two suggestions that were implemented to improve the permitting process for the Unit 15B and 15C Federal late fall moose hunt:

Use bold print on the permit, highlighting: "Successful hunters must report their harvest within 5 days of the kill to Kenai NWR in person or by phone at (262-7021). In addition, the completed harvest report must be returned within 15 days of the close of the season, whether the hunter was successful or not. Failure to report harvest or return the harvest report may result in permits not being issued the following year and/or a citation."

One permit should be issued, rather than two (good for both the early and late season), stating: "*Kenai NWR lands in Units 15A (except Skilak Wildlife Recreation Area), 15B, and 15C, August 10 – September 20; and Kenai NWR lands in Units 15B and 15C, October 20 – November 10; 1 bull moose with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler*."

In addition, permit applicants were required to sign an affidavit and provide evidence of their rural resident status.

In 2008 the Board adopted proposal WP08-22a, which added Cooper Landing to the customary and traditional use determination for moose in Units 7, 15A, and 15B (OSM 2008). Three proposals, WP08-19, WP08-20, and WP08-21 dealing with the destruction or disposal of antlers taken by subsistence in Unit 15 were rejected by the Board in 2008 The Board also rejected proposal WP08-17/18 in 2008 that requested that the late fall moose season (Oct. 20 – Nov. 10) be eliminated in Units 15B and 15C, because the Kenai NWR Manager is authorized to address any conservation concerns that may develop during the late season hunt.

In 2011, the Alaska Board of Game (BOG) closed nonresident hunting for the general season bull hunts in Units 15A and 15C for regulatory year 2011–2012. In addition, the BOG changed the antler restrictions from 3 to 4 brow tines and removed the spike-fork option to harvest a moose in Unit 15.

In April 2011, the Kenai NWR submitted a Special Action WSA11-02 to address conservation concerns over the low bull: cow ratio and to align with the State's regulatory modifications to change the antler restrictions from a 50-inch bull with 3 brow tines to 4 brow tines and to remove the spike-fork option to harvest moose in Units 7 and 15. The Board adopted the regulatory changes which were in effect through September 20, 2012 (OSM 2011a). In June 2011, the Kenai NWR submitted a similar Emergency Special Action (WSA11-03, OSM 2011b) request to revise the moose harvest limits in Units 15B and 15C from 1 antlered bull with spike-fork or 50-inch antlers or with 3or more brow tines on either antler to 1 antlered bull with 50-inch antlers or 4or more brow tines (no spike- fork) during the Oct. 20 – Nov. 10 season. In addition, the Kenai NWR requested the antlers of a harvested moose be taken to an authorized representative within 10 days of harvest to be inspected and sealed. The Board opposed Emergency Special Action WSA11-03 and thus in Units 15B and 15C it was legal to harvest an antlered bull with a spike-fork or with 3 or more brow tines on either antler during the Oct. 20 – Nov. 10 moose season (OSM 2011b)

Current Events Involving the Species

At its March 2013 Meeting the Board of Game discussed Proposal 143 which requested changes to the hunting seasons and bag limits for moose in Units 7 and 15. The proponent requested that in Units 7 and 15 a legal bull be changed from one which has antlers 50 inches or larger, or with four or more brow tines on

at least one side to one which has antlers 50 inches or larger, or with three or more brow tines on at least one side. The BOG adopted an amended proposal 143B which retained requirement of an adult bull with antlers 50 inches or larger or four or more brow tines on one side, or one bull with a spike. The addition of a spike to the State regulations during the 2013 fall moose hunt in Unit 7 and 15 will provide subsistence users additional opportunity to take a moose which was not available during 2012.

Biological Background

Moose densities in Unit 15 vary, with the lowest densities occurring in the northern Kenai Peninsula and the greatest densities in the southern portion of the Kenai Peninsula. The distribution and abundance of moose is primarily regulated by habitat quality and quantity, winters with high snowfall, vehicle collisions and hunting. However predation by black bears, brown bears and wolves are factors that also affect the population dynamics (Schwartz and Franzmann 1991, Selinger 2010).

Early seral forest habitat, following fires or disturbance, are the most productive areas for moose, because they support high densities forage species including paper birch (*Betula papyrifera*), aspen (*Populus tremuloides*), and willow (*Salix sp*.). Over 50% of spruce forest on the Kenai Peninsula forested land were killed due to infestations by the spruce bark beetle (*Dendroctonus rufipennis*) that began in 1970s and reached epidemic proportions in the 1990s (Alaska Division of Natural Resources, Division of Forestry 2013). Landscape level fire and spruce bark beetle outbreaks will continue to be major factors of the natural disturbance affecting the forest succession on the Kenai Peninsula and will continue to be a major influence affecting moose population dynamics.

Since 2005 the average yearly bull:cow ratio in Unit 15C has been close to 15, which is at the lower limit of the State's recommended objective for this unit. Low populations, when combined with the low bull:cow ratios could lead to low productivity and severe population declines in the future. Moose management throughout most of Alaska intentionally skews the ratio of adults toward females and the harvest strategy on the Kenai Peninsula focuses on selective harvest to facilitate recruitment into the prime breeding class and to increase bull:cow ratio (Bishop and Rausch 1974, Schwartz et al. 1992). While there is no defined bull:cow ratio that will be suitable for all populations, the ratio of males to females must be considered with moose density and distribution within the managed area. Widely distributed populations with very low densities may require higher ratios to ensure adequate reproduction whereas high density populations may not. The combination of antler size, form, and symmetry that cows recognize when selecting mates is not fully understood (Solberg and Saether 1993, Bowyer et al. 2001, Saether et al. 2003). However, prolonged harvests of large antlered bulls may reduce genetic variability over time and cause an irreversible loss of alleles (alternate forms of the same gene) specific to antler features (Hundertmark and Bowyer 1998, Bowyer et al. 2002).

Other significant sources of mortality for moose particularly cows and calves are vehicle collisions and predation. From 2004-2011, an average of 118 moose per year, most of which are cows and calves, were killed in vehicle collisions in Units 15B and 15C (Selinger 2010). A recent study in 2012 by Alaska Department of Fish and Game (ADF&G) in Unit 15C found that only 13% of the calves (N=54) survived

and that predation accounted for 61% of the calf mortality . From 1978 to 1988, Schwartz and Franzmann (1991) found that black bears accounted for approximately 81% of the moose predation.

Unit 15B

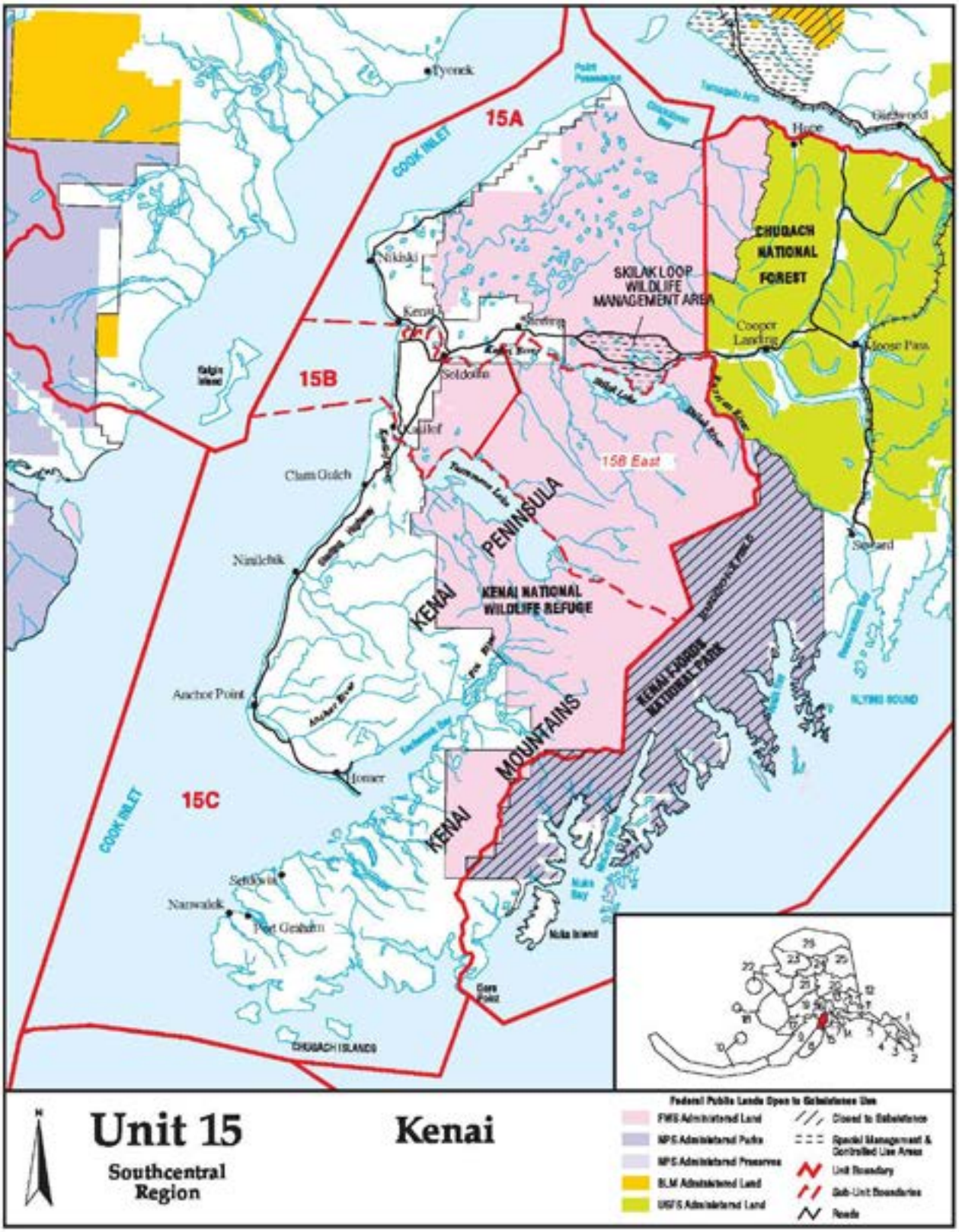
Kenai NWR has established a minimum post-hunting season sex ratio of 25-30 bulls:100 cows within the western portion of Unit 15B and 40-60 bulls:100 cows within the eastern portion of the unit (USFWS 1996). The State's management objectives for Unit 15B, in the central Kenai Peninsula, are to maintain a bull:cow ratio of 15:100 and for Unit 15B West and a bull:cow ratio of 40:100 for Unit 15B East (**Map 1**).

In 2001, an aerial survey of suitable moose habitat in Unit 15B estimated the population to be 958 (95% CI: 777-1,139) with an estimated density of 1.5 moose per mi^2. The percentage of calves during the 2001 survey was estimated to be 21% which was an increase of 11% from a previous survey conducted in 1990 (Selinger 2010). Composition counts in Unit 15B east conducted in 2010-2011 estimated a bull:cow ratio of 33:100 cows, which was a decline from 51:100 seen during 2009/2010 and below both the Federal and State management goals. The calf:cow ratios also declined from the 2009-2010 (11:100 cows) to nine calves per 100 cows in 2010-2011 (Herreman 2013, pers. comm). Both 2009-2010 and the 2010-2011 calf:cow ratios are below the 1990 estimate. Based on the low calf survival and low bull:cow ratio this population may be in decline. The State's overall assessment is that the population is declining.

Unit 15C

Kenai NWR has established a minimum post-hunting season sex ratio of 40-60 bulls:100 cows within the Caribou Hills portion of the unit and 25-30 bulls:100 cows within the remainder (USFWS 1996). The State's management objectives for Unit 15C are to maintain a minimum post-hunting season sex ratio of 15–20 bulls:100 cows (Selinger 2010). Aerial surveys were conducted in the lowland portions of Unit 15C using two different survey designs and estimation methods, during the winter of 1992-1993 and repeated again during the winter of 2001-2002. Population estimate from the random-stratified census (Gassaway et al. 1986) conducted in 1992-1993 was 2079 (95% CI: 1425-2734). During the winter of 2001-2002, based on a geospatial analysis in the same area (GSPE 2013, Ver Hoef 2001) the population estimate was 2981(95% CI: 2508-3454) (Selinger 2010). Results from the geospatial analysis (GSPE 2013, Ver Hoef 2001) conducted in 2010 was 2195 and from surveys conducted in 2013 was 3204 (Herreman 2013, pers. comm.) The State's assessment is that the moose population in 15C is stable.

Bull:cow and calf:cow ratios were lower in the 2007 - 2008 composition surveys (12-13 bulls:100cows; 18 calves:100 cows) than during the 2005 composition surveys (21 bulls:100 cows; 27 calves:100cows) (Selinger 2010). The bull:cow ratio from the 2010-2011 fall composition survey was 9:100 which was much lower than the long-term average from 1990 to 2010 of 29:100. Since 2001 the average number of bulls per 100 cows was 15. The average since 2001, including the recent bull:cow ratios from 2011/2012


Unit 15
Southcentral Region
Kenai
15A
15B
15C
15B East
COOK INLET
KENAI PENINSULA
KENAI MOUNTAINS
KENAI NATIONAL WILDLIFE REFUGE
KENAI FJORDS NATIONAL PARK
CHUGACH NATIONAL FOREST
SKILAK LOOP WILDLIFE MANAGEMENT AREA
Tyonek
Nikiski
Kenai
Sterling
Soldotna
Cohoe
Clam Gulch
Ninilchik
Anchor Point
Homer
Seldovia
Nanwalek
Port Graham
Hope
Cooper Landing
Moose Pass
Seward
Girdwood
Nuka Island
Gore Point
CHUGACH ISLANDS
ALTON 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

management goal of a post hunt bull:cow ratio of 15-20 bulls per 100 cows and is below the recommended guidelines in the Kenai NWR moose management plan (USFWS 1996). Minimum bull:cow ratios are required to ensure most cows conceive during their first estrous cycle and to minimize the length of rut (Schwartz et al. 1994).

Habitat

Moose densities vary throughout Unit 15 and are dependent upon the availability of suitable browse. The availability of suitable browse primarily results from fire creating a disturbance and providing conditions suitable for hardwood regeneration to occur. Following a significant disturbance such as a landslide or intense wildfire, various species of hardwood trees and shrubs will grow providing quality winter browse for moose and other species (USFWS 2001). The high moose populations in recent decades were indicative of high-quality habitat created by the historic burns on the Kenai Peninsula (Loranger et al. 1991). In more recent years, the hardwood browse has been replaced by spruce or has matured past suitable browse for moose (Berg et al. 2009). The major browse species for moose on the Kenai Peninsula are paper birch, aspen, willow, alder (*Alnus sp*.), and lowbush cranberry (*Vaccinium vitisidaea*) (Oldemeyer et al. 1977). In 2009, the hardwood vegetation type represented 5% of the Kenai National Wildlife Refuge (or 10% of the forests on the Refuge) of which 40% was in early successional and intermediate-stage hardwood (USFWS 2010).

Browse regeneration occurs after timber harvesting or other natural (e.g. spruce bark beetle outbreak) or man-made disturbances (e.g. hydroaxing). Dendrochronology studies have shown that bark beetles have been historically active on the Kenai Peninsula at low levels, however the outbreak from 1989-2003 was of unprecedented size and intensity and infested 800,000 acres on the Kenai Peninsula (USFWS 2010). Increasing temperatures and drought stress due to climate change likely increased the rate of spruce bark beetle outbreaks on the Kenai Peninsula (Berg et al. 2006). In addition, the invasion of wetlands on the Kenai Peninsula by woody shrubs and black spruce may lead to a reduced moose population in the long-term (Klein et al. 2005). Wetlands are an important component for moose for wintering forage and the trend for vegetation succession of these habitat types is increasing (Klein et al. 2005 and Stephenson et al. 2006).

There has been little change in the habitat conditions in Unit 15B since 1890, when a wildfire burned most of the Unit. Although approximately 34,000 acres have burned from 2004-2009 (Selinger 2010) there have been no major wildfires (USFWS 2010).

In Unit 15C, heavy snowfalls can limit the amount of available moose habitat during the winters. Important wintering habitat on the lower peninsula include Ninilchik River, Stariski, Creek, Anchor River, Fritz Creek, lower reaches of Fox River and Sheep Creek, and Homer Bench (Selinger 2010). Many of the wintering areas have incurred spruce bark beetle infestations. The effects on the moose habitat from the loss of spruce trees and salvage logging which has ongoing for more than a decade are unknown. Site preparation following logging if done properly can encourage the regeneration of hardwoods, but if done improperly can result in the establishment of blue-joint grass (*Calamagrostis canadensis*). If blue-joint grass becomes established it will initially crowd out seedlings from hardwoods and spruce thus creating

lower quality moose habitat and slowing down forest succession to a mature hardwood and spruce forests (Selinger 2010).

Harvest History

An average of 472 moose were harvested in Unit 15 each year between 2001 to 2010 (OSM 2013). The number taken by Federally qualified subsistence users on Federal public lands has been about 1 % of the Unit 15 average total between 2001 and 2011 (**Table 1**). During this period, approximately 11% of the moose harvested under the State regulations were in Unit 15B (**Table 2**) and 58% were in Unit 15C (**Table 3**). Excluding Unit 15A, approximately 83% were harvested in Unit 15C and 17% in Unit 15B from 2001 – 2010. In Unit 15B, the mean harvest from 2001-2010 in Unit 15B West was 42 (81%) and in Unit 15B East 10 (19%). In Unit 15C, the mean number of moose taken under the State General harvest from 2001-2010 in Unit 15C was 280. From 2002 -2010, drawing permits for cow moose have been issued in the Homer area and have resulted in an average of 24 cows per year (range 18 to 30) between 2004 and 2008 (**Table 3**) (Selinger 2010). The cow harvest accounts for approximately 9 % of the total harvest in Unit 15C. Since 2001 the proportion of spike bull moose (includes spike and spike-fork) harvested under State hunting regulations by communities that have customary and traditional use determination for units 15B and 15C averaged 62% (**Table 4**).

Table 1. Number of Federal harvest permits and moose harvested between 2001–2002 and 2011–2012 in Unit 15 (OSM 2013).

Year	Number of Permits Issued	Number of Per-mits Hunted	Moose Harvested in Unit 15(A)	Moose Harvested in Unit 15(B)	Moose Harvested in Unit 15(C)	Total Moose Harvest in Unit 15
2001/02	41	28	1	1	3	5
2002/03	43	27	0	2	5	7
2003/04	40	25	0	1	1	3
2004/05	30	19	0	1	2	3
2005/06	24	12	0	0	1	1
2006/07	92	58	2	1	2	5
2007/08	102	67	2	2	4	8
2008/09	64	41	0	3	1	8
2009/10	71	58	0	2	1	6
2010/11	63	37	0	1	2	4
2011/12	48	27	0	2	0	3
Total	618	399	5	16	22	53
Mean	56	36	0.45	1.5	2.0	4.8

Table 2. State moose harvest in Unit 15B West (general harvest area) and Unit 15B East (trophy management area: DM 530-539) from 2001–2002 to 2010–2011 (OSM 2013, Herreman 2013, pers. comm.).

Year	**15B West** (Aug. 10–Aug. 17[archery]; and Aug. 20–Sept. 20)	**15B East** (Sept. 1–Sept. 20; and Sept. 26–Oct. 15)	**Total Unit 15B Moose Harvest**
2001/02	50	16	66
2002/03	41	12	53
2003/04	42	15	57
2004/05	37	16	53
2005/06	47	16	63
2006/07	40	9	49
2007/08	40	5	45
2008/09	33	2	35
2009/10	38	2	40
2010/11	52	3	55
Totals	420	96	516
Mean	42 (81.1%)	9.6 (18.9%)	51.6

Table 3. Unit 15C State moose general harvest, regulatory years 2001/2002 to 2010/2011 (Selinger 2010, OSM 2013, Herreman 2013, pers. comm.).

Year	Bulls	Cows	Unknown	Total
2001/02	309	1	3	313
2002/03	258	27	2	287
2003/04	310	30	1	341
2004/05	278	22	2	302
2005/06	278	27	1	306
2006/07	214	18	2	234
2007/08	211	22	0	233
2008/09	195	23	1	219
2009/10	244	28	4	276
2010/11	215	22	3	240
2011/12	25	29	3	57
Totals	2537	249	22	2801
Mean	254	25	2	280

Table 4. Proportion of spike-fork moose harvest in Unit 15B and 15C by individuals who live in communities with Customary and Traditional use determination and non-Federally qualified users and harvested under the State hunting regulations. Percent represents the percentage of harvest that was a spike-fork moose within total harvest by user class (OSM 2013).

	Unit 15B Spike-fork Harvest		**Unit 15C Spike-fork Harvest**	
Year	C & T residents	Non-Federally Qualified Users	C & T residents	Non-Federally Qualified Users
2001/02	0	32 (48%)	20 (49%)	134 (46%)
2002/03	0	25 (43%)	25 (53%)	105 (40%)
2003/04	0	23 (40%)	25 (53%)	112 (36%)
2004/05	0	28 (53%)	26 (68%)	138 (50%)
2005/06	0	36 (57%)	18 (55%)	137 (49%)
2006/07	0	30 (61%)	26 (72%)	103 (50%)
2007/08	0	29 (66%)	14 (61%)	106 (48%)
2008/09	0	28 (80%)	17 (72%)	113 (56%)
2009/10	1(33%)	26 (62%)	24 (73%)	119 (47%)
2010/11	0	31 (57%)	10 (59%)	146 (70%)

Effects of the Proposal

If this proposal is adopted it will establish a cow season during the late fall hunt with a quota not to exceed 15 in Units 15B and 15C. This would provide increased opportunity for Federally-qualified subsistence users to harvest a moose.

The harvest of cows has a much greater effect on population growth than the harvest of bulls or calves. An increase in the cow harvest may impact the reproductive potential of the herd causing conservations concerns for the declining moose population in Unit 15B. The recent population estimate suggests that the moose population in Unit 15C is stable or increasing and could sustain a limited cow hunt of up to 10 cows (Loranger 2013, pers.comm.). The impact of additional hunters from a late season cow hunt in addition to the hunters hunting bulls during the late season bull hunt on Federal public lands is likely to increase the stress on the moose population which has just undergone the rut.

The addition of a cow harvest season would also cause misalignment of State and Federal regulations which would complicate management, law enforcement and add to the regulatory complexity of having to deal with two sets of regulations.

OSM CONCLUSION

Support Proposal WP14-19 **with modification** to allow a limited cow harvest only in Unit 15C from Aug. 10 to Sept. 20 and to delegate authority to open, close the season, and determine annual quotas via the existing delegation of authority letter (Appendix 1).

Unit 15A remainder, 15B, 15C—Moose

Unit 15A—remainder, 15B, and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug 10–Sept 20*
Units 15B and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. The Kenai NWR Refuge Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council	*Oct 20–Nov 10*
Units 15C- 1 cow by Federal registration permit only.	***Aug.10–Sept. 20***

Justification

Although the population data in Unit 15B is over 10 years old, the low bull:cow and calf:cow counts and anecdotal information suggests the population is declining. The reasons for the decline are probably due to several factors such as climate change, habitat loss, habitat succession, predation, and hunting. Establishing a cow harvest in Unit 15B now would likely increase the rate of decline or at the very least slow the recovery of this population. Based on the declining trend in the moose population in Unit 15B, bull:cow ratios below both State and Federal management objectives, low calf survival, and the relatively high impact of vehicle collisions on cows and calves the moose populations in Unit 15B cannot sustain an additional cow harvest at this time.

The population in Unit 15C has increased in recent years and is now considered stable. The bull:cow ratios have improved and they are just above the minimum sex and age ratio recommended by the State but below recommendations by the Kenai NWR of 40-60 bulls:100 cows for the Caribou Hills and 25-30 bulls:100 cows for the remainder of unit 15C. Under the State's regulations the cow harvest in Unit 15C has averaged 24 per year since 2002, which is approximately 9% of the total moose harvest in Unit 15C. The moose population in Unit 15C could sustain a small limited cow hunt with a season and quota to be determined by the Kenai Refuge manager. Due to the likelihood of increased disturbance from additional hunters to moose during the stressful period following the rut, a limited cow hunt should occur only during the early fall hunting season from Aug. 10 to Sept. 20. Removing the language suggested by the proponent about delegation of authority from the regulatory language and attaching the current delegation of authority

letter (**Appendix 1**) will serve to clarify regulations and allow for hunt management flexibility through in-season adjustment of hunt parameters.

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

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USDA
U.S. FOREST SERVICE

JUL 31 2012

FWS/OSM12060.CA

Refuge Manager
Kenai National Wildlife Refuge
P. O. Box 2139
Soldotna, Alaska 99669-2139

Dear Kenai Refuge Manager:

This letter delegates specific regulatory authority from the Federal Subsistence Board to the Kenai National Wildlife Refuge Manager to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within the Kenai National Wildlife Refuge.

It is the intent of the Federal Subsistence Board that special actions related to the management of wildlife by Federal officials be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G) and the Southcentral Alaska Subsistence Regional Advisory Council (Council) as stipulated in 36 CFR 242.19 and 50 CFR 100.19 and under the guidelines of the Memorandum of Understanding between the Federal Subsistence Board and the State of Alaska. Federal managers are expected to work with State managers, the Council and affected tribes to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. **Delegation:** The Kenai Refuge Manager is hereby delegated authority to issue emergency or temporary special actions affecting moose on Federal lands as outlined in Scope of Delegation. An emergency action may not exceed 60 days and may not be extended unless the procedures for adoption of a temporary special action have been followed. A temporary special action requires adequate notice and public hearing. Special actions are governed by Federal regulation at 36 CFR 242.19 and 50 CFR 100.19.

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

3. **Scope of Delegation:** The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26.

   You may set Federal subsistence harvest quotas, close, reopen or adjust seasons, and adjust harvest and possession limits to include antler restrictions for moose. You may also close Federal Public lands to the take of this species by all users.

   This delegation to issue special actions may be exercised under the conditions as defined in 36 CFR 242.19(a) and (b)(1) and 50 CFR 100.19(a) and (b)(1).

   All other proposed changes to codified regulations including, but not limited to, customary and traditional use determinations, adjustments to methods and means of take, or customary trade shall be directed to the Federal Subsistence Board.

   The Federal lands subject to this delegated authority are those within Kenai National Wildlife Refuge.

4. **Effective Period:** This delegation of authority is effective until superseded or rescinded.

5. **Guidelines for Review of Proposed Special Actions:** The Refuge Manager will use the following guidelines to determine the appropriate course of action when reviewing proposed special actions.

   A. Does the proposed special action fall within the geographic and regulatory scope of delegation?

   B. Does the proposed regulation need to be implemented immediately as a special action, or can the desired conservation or subsistence use goal be addressed by deferring the issue to the appropriate time in the normal regulatory cycle?

   C. Does the supporting information in the proposed special action substantiate the need for the action?

   D. Are the assertions in the proposed special action confirmed by biological information and/or by other affected subsistence users?

   E. Is the proposed special action supported in the context of historical information on population status and harvests by affected users?

F. Is the proposed special action likely to achieve the expected results?

G. Have the perspectives of ADF&G managers, the Council and affected tribes been fully considered in the review of the proposed special action?

H. Have the potential effects of the proposed special action on all affected users been considered?

I. Can public announcement of the proposed special action be made in a timely manner to accomplish the management objective?

J. After evaluating all information and weighing the merits of the special action against other actions, including no action, is the special action reasonable, rational and responsible?

K. **Guidelines for Delegation:**

A. The Refuge Manager will become familiar with the management history of moose in the region, with the current State and Federal regulations and management plans, and be up-to-date on population and harvest status information.

B. The Refuge Manager 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 authority, (2) if significant conservation problems or subsistence harvest concerns are indicated, and (3) what the consequences of taking or not taking an action may be on subsistence users and non-subsistence users. Requests not within the delegated authority of the Refuge Manager will be forwarded to the Federal Subsistence Board for consideration. The Refuge Manager will keep a record of all special action requests and their disposition. A copy of documents associated with each record will be provided to the Office of Subsistence Management no later than sixty days after development of the document.

C. The Refuge Manager will immediately notify the Federal Subsistence Board through the Assistant Regional Director for the Office of Subsistence Management, U.S. Fish and Wildlife Service, and notify/consult with local ADF&G managers, the Regional Advisory Council Chair, affected tribes and other affected Federal managers concerning special actions being considered.

D. The Refuge Manager will issue timely decisions. Users, affected State and Federal managers, law enforcement personnel, and the Regional Advisory Council Chair should be notified before the effective date/time of decisions. If an action is to supersede a State action not yet in effect, the decision will be communicated to affected users, State and Federal managers, and the Regional Advisory Council Chair at least six hours before the State action would be effective. If a decision is to take no action, the proponent of the request will be notified immediately.

E. There may be unusual circumstances under which the Refuge Manager will determine that he/she should not exercise the authority delegated, but instead request that the Federal Subsistence Board address the special action request. This option should be exercised judiciously and when time allows. Such a decision should not be considered when immediate management actions are necessary for wildlife conservation purposes. The Federal Subsistence Board may also determine that a special action request should not be handled by the delegated official but by the Board itself and rescind the delegated authority for that specific action only.

This delegation of authority will provide subsistence users in the region a local point of contact and will facilitate a local liaison with State managers and other user groups to modify the take-of-wildlife regulations outside of the regulatory proposal period. A timely management decision, made locally, can optimize the opportunity for users to harvest wildlife and can ensure the continued viability of a wildlife population.

Should you have any questions about this delegation of authority, please feel free to contact the Assistant Regional Director for the Office of Subsistence Management at 1-800-478-1456 or (907) 786-3888.

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Cora Campbell, Commissioner, Alaska Department of Fish and Game
Geoffrey L. Haskett, Regional Director, USFWS
Pete Probasco, Assistant Regional Director, OSM
Interagency Staff Committee
Ralph E. Lohse, Chair, Southcentral Alaska Subsistence Regional Advisory Council
Jennifer Yuhas, ADF&G
Administrative Record

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP14-19 **with modification** to allow a limited cow harvest only in Unit 15C from Aug 10 to Sept. 20 and to delegate authority to open, close the season, and determine annual quotas via the existing delegation of authority letter (Appendix 1).

Unit 15A remainder, 15B, 15C—Moose

Unit 15A—remainder, 15B, and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only.	*Aug 10–Sept 20*
Units 15B and 15C—1 antlered bull with spike-fork or 50-inch antlers or with 3 or more brow tines on either antler, by Federal registration permit only. The Kenai NWR Refuge Manager is authorized to close the October/November season based on conservation concerns, in consultation with ADF&G and the Chair of the Southcentral Alaska Subsistence Regional Advisory Council	*Oct 20–Nov 10*
Units 15C- 1 cow by Federal registration permit only.	***Aug.10–Sept. 20***

Justification: The proposed regulation allows additional subsistence harvest opportunities; the harvest quota addresses any conservation concerns for the moose population. Cow moose is a resource that will provide subsistence needs and will not be detrimental to subsistence users as well as nonsubsistence uses.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-20 Executive Summary	
General Description	Proposal WP14-20 requests an increase in the number of brown bear permits available in Unit 8 for the communities of Akhiok and Old Harbor. *Submitted by the Kodiak/Aleutians Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 8—Brown Bear** *1 bear by Federal registration permit only. Up to ~~1~~**2** permit**s** may be issued in Akhiok; up to 1 permit may be issued in Karluk; up to 3 permits may be issued in Larsen Bay; up to ~~2~~**3** permits may be issued in Old Harbor; up to 2 permits may be issued in Ouzinkie; and up to 2 permits may be issued in Port Lions. Permits will be issued by the Kodiak Refuge Manager.* — *Dec. 1–Dec 15* *Apr. 1 – May. 15*
OSM Conclusion	**Support**
Kodiak/Aleutian Regional Advisory 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP14-20

ISSUES

Proposal WP14-20, submitted by the Kodiak/Aleutians Subsistence Regional Advisory Council, requests an increase in the number of brown bear permits available in Unit 8 for the communities of Akhiok and Old Harbor.

DISCUSSION

The proposed subsistence brown bear hunt is used to mentor young hunters and families in the traditional use of bears and provides an additional food source. There are currently more hunters in Old Harbor and Ahkiok that are interested in hunting brown bears than the number of permits available. An additional permit for each village would provide more opportunity for other hunters to harvest a brown bear.

Existing Federal Regulation

Unit 8—Brown Bear

1 bear by Federal registration permit only. Up to 1 permit may be issued in Akhiok; up to 1 permit may be issued in Karluk; up to 3 permits may be issued in Larsen Bay; up to 2 permits may be issued in Old Harbor; up to 2 permits may be issued in Ouzinkie; and up to 2 permits may be issued in Port Lions. Permits will be issued by the Kodiak Refuge Manager.	*Dec. 1–Dec 15* *Apr. 1 – May. 15*

Proposed Federal Regulation

Unit 8—Brown Bear

*1 bear by Federal registration permit only. Up to ~~1~~**2** permit**s** may be issued in Akhiok; up to 1 permit may be issued in Karluk; up to 3 permits may be issued in Larsen Bay; up to ~~2~~**3** permits may be issued in Old Harbor; up to 2 permits may be issued in Ouzinkie; and up to 2 permits may be issued in Port Lions. Permits will be issued by the Kodiak Refuge Manager.*	*Dec. 1–Dec 15* *Apr. 1 – May. 15*

Existing State Regulation

Unit 8—Brown Bear

Unit 8–*Northeastern portion of Kodiak Island including all drainages into Chiniak, Anton Larsen and northeast Ugak (east of the Saltery creek drainage) bays, including Spruce, Near, Long, Woody, and Ugak Islands.*	*Residents and nonresidents: One-bear every four regulatory years by permit available in person in kodiak beginning Oct 3* ***OR***	*RB230*	*Oct. 25–Nov. 30*
	Residents and nonrersidents: One bear every four regulatory years by permit available beginning March 12	*RB260*	*Apr. 1–May. 15*

Unit 8-remainder	*Residents and nonresidents: One bear every four regulatory years by permit* ***OR***	*DB101-128/161-163 DB201-228/261-263*	*Oct. 25–Nov.30*
	Residents and nonresidents: One bear every four regulatory years by permit	*DB131-158/191-193 DB231-258/291-293*	*Apr. 1–May. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 45% of Unit 8 and consist of approximately 45% U.S. Fish and Wildlife managed lands, 0.2% Bureau of Land Management managed lands.

Customary and Traditional Use Determinations

Rural residents of Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions have a positive customary and traditional use determination for brown bear in Unit 8.

Regulatory History

In 1996 Proposal 96-26 established a positive and customary and traditional use determination for the residents of Unit 8 and Proposal 96-27 created a brown bear hunting season and community harvest quota for Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions (OSM 1996a, 1996b). Under the Federal regulation, up to 11 permits were available to residents of Kodiak Island communities. The permits, which were valid only for Federal public lands, required that the meat be salvaged for human consumption.

Biological Background

In 2002, the Kodiak Archipelago Bear Conservation and Management Plan (ADF&G 2002) was developed by a Citizens Advisory Committee which consisted of representatives from 12 diverse groups, including the Alaska Department of Fish and Game (ADF&G) and Kodiak National Wildlife Refuge (Kodiak NWR). The three main themes from the 270 recommendations on Kodiak bear management and conservation were continued conservation of the bear population at their current levels, increased outreach and education to teach people how to live with bears in Kodiak, protection of bear habitat with allowances for continued human use of the Kodiak Archipelago (Van Daele and Crye 2011).

State management goals for brown bear management in Unit 8 are:

- Maintain a stable brown bear population that will sustain an annual harvest of 150 bears composed of at least 60% males.
- Maintain diversity in the gender and age composition of the brown bear population, with adult bears of all ages represented in the population and in the harvest.
- Limit human-caused mortality of female brown bears to a level consistent with maintaining maximum productivity.

The ADF&G, with the assistance of staff from Kodiak NWR and the Alaska State Troopers conducted intensive aerial surveys in 9 study areas on Kodiak Island from 1987 to 2010 using methods developed by Barnes and Smith (1997). Seven of these areas were sampled more than once. The data were extrapolated to estimate the total population in 1995 and 2005 (Van Daele and Crye 2011).

In addition, aerial brown bear surveys are conducted yearly since 2000 along selected streams in the southern portion of Kodiak Island to monitor trends in cub production (Van Daele and Crye 2011). To determine appropriate harvest strategies and guidelines the harvest and population data are analyzed using a population model (Van Daele and Crye 2011). Inter-annual variation in the composition of brown bears from these aerial surveys, which is considerable, may be due in part to the timing of the surveys with respect to peak periods of berry and salmon abundance. The percentage of adult females in the areas surveyed from 1985-2009 were: (1985 – 1989 15.4%); (1990 – 1994 16.8%); (1995 – 1999 – 19.6%); (2000 – 2004 – 18.2%), and from (2005, 2008, and 2009 – 11.3%). Adult females are the most important segment of the population with respect to population growth (Miller 1990, Van Daele 2007).

Population estimates from the most recent survey in 2005 were 3,096 (density 0.8 bears/mi^2) bears on Kodiak Island and 430 bears in the islands north of Kodiak (density 0.5 bears/mi^2) (Van Daele and Crye 2011). Estimates from areas which contain dense Sitka spruce (*Picea sitchensis*) forests are less precise due to the difficulty of observing bears in that habitat. The Kodiak Archipelago brown bear population was estimated to have increased 16.7% between 1995and 2005 (Van Daele 2007). More recent surveys were conducted on the Aliulik Peninsula in May 2009 and in the Karluk Lake drainage in May 2010. The bear density in the Aliulik Peninsula (282/1000 km^2; SE= 27.15) increased from the previous two surveys conducted in the same area in 1993 (209/1000 km^2; SE= 16.95) and 2002 (173/1000 km^2; SE= 18.32). In

contrast, the bear density in the Karluk Lake area declined from 483/1000 km^2 in 2003 to 252/1000 km^2 in 2010. However, based on information from residents, hunters, and guides it is believed the Karluk Lake population has not declined, but was undercounted as result of the exceptionally late emergence of bears and lack of normal movement patterns (Van Daele and Crye 2011). Harvest and population data indicate that the bear population in Unit 8 is healthy and productive and can support the existing harvest pressure (Van Daele and Crye 2011). The success of the brown bear management on Kodiak Island is based on continued monitoring, research, and outreach activities.

Habitat

Most of Kodiak's inland habitat remains intact and unfragmented. The impact of commercial logging during the past 35 years on brown bears on Afognak Island is not known. Potential activities that could affect brown bears is the ongoing timber harvest on Afognak Island, expanding human populations, commercial fishing, and recreational activities in remote areas such as hunting, fishing, and wildlife viewing (Van Daele and Crye 2011).

Harvest History

The10-year mean annual reported harvest in Unit 8 between 1960 and 2000 is as follows: 1960s (137.3), 1970s (142.9), 1980s (181.9), 1990s (178.2), and 2000s (201.1; **Table 1)** (Table 3, Van Daele and Crye 2011). The annual percentage of males taken during the 2000s was 70% which exceeds the State management objective of 60%. Despite the slow increase in the number of brown bears harvested, the number of bears harvested under State regulations has remained near 5% of the total population. The mean percentage of bears harvested by residents of Unit 8 under the Federal Subsistence regulations during the 2000s was 0.5% (OSM 2013) and under the State regulations was 7.9% (Van Daele and Crye 2011). From 2001 – 2011, residents from the Akhiok harvested 2 brown bears, 1 in 2004 and 1in 2010. Residents from Old Harbor harvested 1 brown bear in 2006, 1 in 2009 and 2 in 2011 (**Table 2**).

Table 1. Unit 8 State and Federal brown bear general harvest, regulatory years 2001–2002 to 2010–2011 (Van Daele and Crye 2011, OSM 2013).

Year	Male	Female	Unknown	Total
2001/02	149	43	10	202
2002/03	108	43	11	162
2003/04	133	46	13	192
2004/05	145	39	15	199
2005/06	169	57	5	231
2006/07	166	64	10	240
2007/08	131	57	13	201
2008/09	182	91	13	286
2009/10	158	60	14	232
2010/11[a]	152	71	0	223
Totals	1493	571	116	2168
Means	149	57	12	217

Table 2. Unit 8 Federal subsistence brown bear harvest from the communities of Akhiok, Karluk, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions for regulatory years 2001–2002 to 2010–2011 (Van Daele and Crye 2011, OSM 2013).

Year	Permits Issued	Male	Female	Total
2001/02	3	0	1	1
2002/03	0	0	0	0
2003/04	2	1	0	1
2004/05	6	3	0	3
2004/05	5	2	0	2
2006/07	5	1	1	2
2007/08	5	0	0	0
2008/09	6	0	0	0
2009/10	6	1	0	1
2010/11	7	1	0	1
2011/12	5	2	0	2
Totals	50	11	2	13

[a] does not include unknowns

Effects of the Proposal

If this proposal is adopted it would increase the allowable harvest by one bear for the communities of Akhiok and Old Harbor, providing more opportunity for young hunters, families and others to hunt brown bears. This increased opportunity would allow the elders to teach the younger generation the traditional uses of brown bears. In addition it would provide meat which would likely be shared with the community.

The additional harvest of two bears should not cause any conservation concerns for the brown bear population.

OSM CONCLUSION

Support Proposal WP14-20.

Justification

The brown bear population on Kodiak Island remains healthy and productive and the State management goals are currently being met. The harvest of two additional bears, one each for the communities of Ahkiok and Old Harbor would provide the communities with additional harvest opportunities, while not endangering the brown bear population.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Kodiak/Aleutians Subsistence Regional Advisory Council

Support Proposal WP14-20. This proposal, if enacted into regulation, would provide additional subsistence opportunities for Federally qualified subsistence users. There is no indicated conservation concern.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14–29 Executive Summary	
General Description	Proposal WP14-29 requests that the Dec. 15–Apr. 15 moose season in a portion of Unit 24B be placed in permanent Federal regulations. The current winter moose season is temporary and set to sunset after June 30, 2014. *Submitted by the Western Interior Regional Advisory Council.*
Proposed Regulation	**Unit 24B—Moose** *Unit 24B—All drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage—1 antlered bull by Federal registration permit.* — *Aug. 25–Oct. 1* *Dec. 15–Apr. 15* ~~*(until Jun. 30, 2014)*~~ *Federal public lands in the Kanuti Controlled Use Area, as described in Federal regulations, are closed to taking of moose, except by Federally quali¿ed subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*
OSM Conclusion	**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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP14-29

ISSUES

Proposal WP14-29, submitted by the Western Interior Regional Advisory Council, requests that the Dec. 15–Apr. 15 moose season in a portion of Unit 24B be placed in permanent Federal regulations. The current winter moose season is temporary and set to sunset after June 30, 2014.

DISCUSSION

The proponent states the Federal winter bull moose hunt (FM2402) in Unit 24B is set to sunset at the end of the 2013/2014 regulatory year. The Western Interior Regional Advisory Council feels the hunt should be continued to provide opportunity for Federally qualified subsistence users to harvest bull moose in a portion of Unit 24B. The proponent states that moose are available at a low density in this remote area and travel can be expensive, and the winter season provides Federally qualified subsistence users who did not harvest a bull moose in the fall additional opportunity to harvest an antlered bull while trapping or wood cutting.

Existing Federal Regulation

Unit 24B—Moose

Unit 24B—All drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage—1 antlered bull by Federal registration permit.	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15* *(until Jun. 30, 2014)*
Federal public lands in the Kanuti Controlled Use Area, as described in Federal regulations, are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.	

Proposed Federal Regulation

Unit 24B—Moose

Unit 24B—All drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage—1 antlered bull by Federal registration permit.	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15* ~~*(until Jun. 30, 2014)*~~
Federal public lands in the Kanuti Controlled Use Area, as described in Federal regulations, are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting	

under these regulations.

Existing State Regulation

Unit 24B—Moose

Unit 24B remainder	*Resident: One bull*	*Harvest ticket*	*Sept. 1–Sept. 25*
	OR		
	One antlered bull by permit available online at http://hunt.alaska.gov or in person in Hughes, Allakaket or Fairbanks beginning Dec. 14.	*RM833*	*Dec. 15–Apr. 15*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Harvest ticket*	*Sept. 5–Sept. 25*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 24B, and consist of 38% NPS, 14% FWS, and 7% BLM managed lands (**Map 1**).

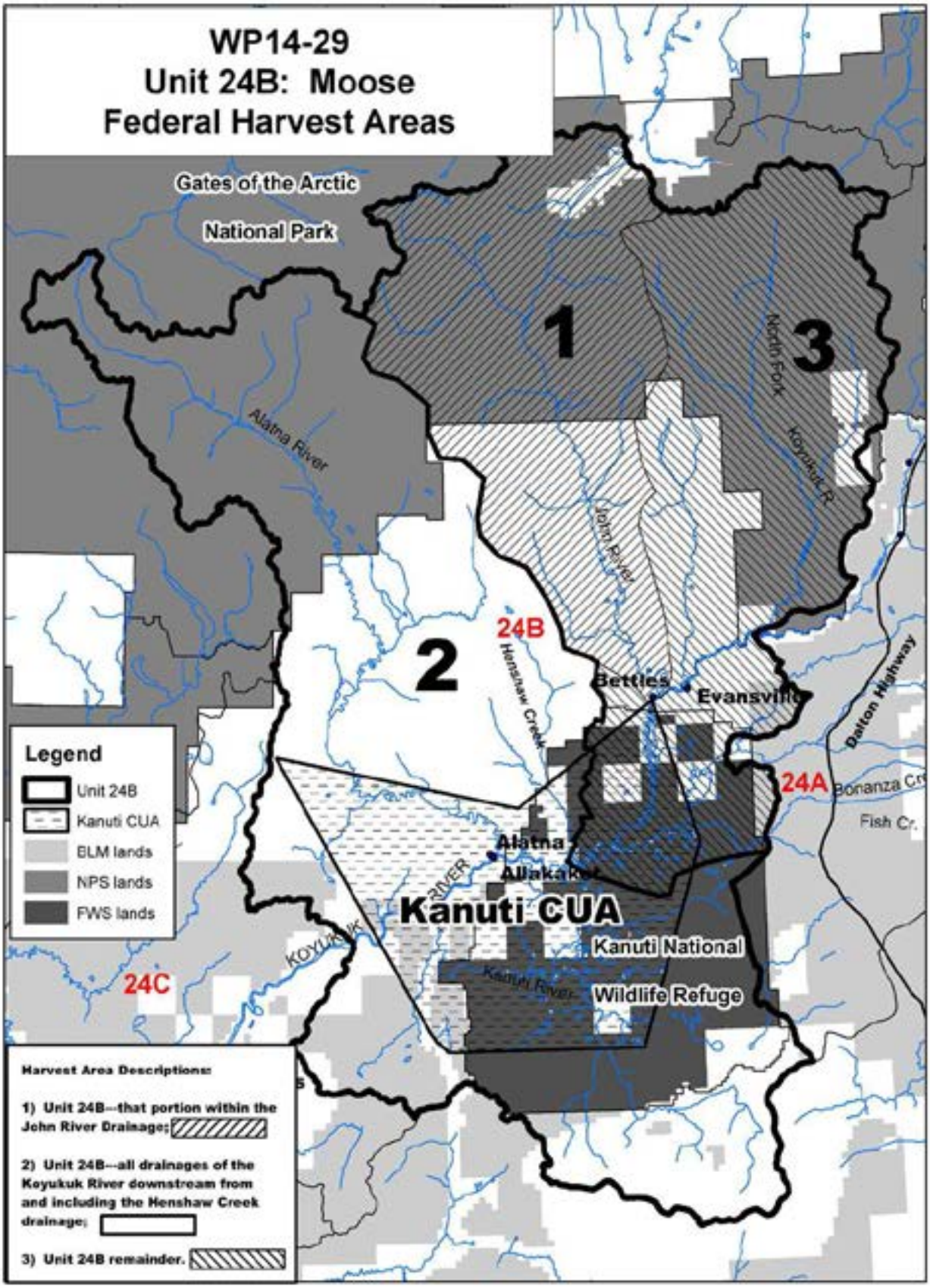
Customary and Traditional Use Determinations

Rural residents of Unit 24, Koyukuk, and Galena have a positive customary and traditional use determination to harvest moose in Unit 24.

Regulatory History

Recent regulatory changes in Unit 24B have been associated with the need to provide additional opportunities for Federally qualified subsistence users to harvest moose. The Alaska Board of Game adopted State Proposal 90A in 2010 to replace an existing Dec. 1–10 moose season with the Dec. 15–Apr. 15 season in Unit 24B, except for the drainages of the Koyukuk River upstream from the Henshaw Creek drainage, excluding the North Fork of the Koyukuk River drainage. However, the newly established winter season was adopted with a stipulation that it would sunset at the end of 2013/2014. The Federal Subsistence Board adopted WP10-67 with modification to expand the Dec. 15–Apr. 15 moose season to all Kanuti NWR and BLM lands of Unit 24B, and that the season would sunset at the end of 2013/2014.

The State previously had a 10-day winter antlerless moose hunt (Mar. 1–10) that included drainages north of the Koyukuk River near Bettles and Evansville, but the hunt was eliminated after the 2000/2001 season.


WP14-29
Unit 24B: Moose
Federal Harvest Areas
Gates of the Arctic
National Park
1
2
3
24B
24A
24C
Alatna River
John River
North Fork
Koyukuk R.
Henshaw Creek
Bettles
Evansville
Dalton Highway
Bonanza Cr.
Fish Cr.
Alatna
Allakaket
Kanuti CUA
Kanuti National
Wildlife Refuge
Koyukuk River
Legend
Unit 24B
Kanuti CUA
BLM lands
NPS lands
FWS lands
Harvest Area Descriptions:
1) Unit 24B--that portion within the John River Drainage;
2) Unit 24B--all drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage;
3) Unit 24B remainder.

The winter season was eliminated to address low moose densities, in accordance with the Koyukuk River Moose Management Plan (Spindler 2013, pers. comm.). A Mar.1–10 moose season was in Federal regulations since adopting temporary regulations from the State in 1990 until June 30, 2005. The Mar. 1–10 Federal moose season was changed to a Mar. 1–5 "to-be-announced" bulls-only season when the WP05-13 was adopted with modification by the Federal Subsistence Board in May 2005. This latter hunt applied only to lands on the Kanuti NWR, adjacent BLM lands, and nearby NPS lands. Harvest success during the five-day "to-be-announced" seasons was low due to low moose densities, users being restricted to Federal public lands, and inclement weather. Season extensions were granted by special actions (WSA06-08 and WSA07-09) due to extremely cold weather conditions during the Mar. 1–5 season in 2007 and 2008, respectively. In 2010, a special action (WSA09-15) was adopted to shift the five-day season from Mar. 1–5 to Mar. 27–31 in the Kanuti Controlled Use Area to provide harvest opportunity under better weather and daylight conditions.

The Alaska Board of Game and the Federal Subsistence Board (Board) adopted regulations in 2006 (Proposal WP06-36) that subdivided Unit 24 into Subunits A, B, C, and D. The State and Federal boards adopted these changes in response to the complexities of managing wildlife populations in large game management units, such as Unit 24. Following adoptions of the four subunits, which affected the Federal regulations of moose and sheep on Federal public lands, additional changes were required as the subdivision affected hunt area boundaries. Among the changes, the Board adopted regulatory changes for the hunt area descriptions and seasons for moose in the areas now designated as Units 24A, B, C, and D.

In 1990, the Federal Subsistence Board adopted the Kanuti Controlled Use Area (CUA) from State regulations into temporary Federal subsistence regulations. On April 9, 1992, the Federal Subsistence Board adopted Proposal 115 with modification to close Federal public lands within the CUA to all non-Federally qualified users. The closure to non-Federally qualified users was due to conservation concerns related to higher than recommended harvest levels, and to provide continued opportunity for Federally qualified subsistence users on Federal public lands within the Kanuti CUA (FSB 1992). The Alaska Board of Game adopted State Proposal 94 in 2010, which reduced the size of the Kanuti CUA under State regulations. In January 2012, the Board adopted WP12-57 to remove sections of Federal public land near Bettles and Evansville from the winter (Dec. 15–Apr. 15) season to align the winter seasons under State and Federal regulations (FSB 2012). However, the Kanuti CUA boundaries were not changed under Federal regulations. Thus, the boundary of the State CUA is currently out of alignment with Federal regulations. In conjunction with action on WP12-57, the Board adopted WP12-58 with modification to create a Federal registration permit for all Federal public lands contained in all drainages of the Koyukuk River downstream from and including the Henshaw Creek drainage, which included the Kanuti CUA (FSB 2012).

Current Events Involving Species

The Kanuti National Wildlife Refuge supports the continuation of the winter moose hunt beyond the sunset date.

At its February 2014 meeting, the Alaska Board of Game adopted an amendment of Proposal 70, which requested reauthorization of the winter moose registration hunt in Unit 24B under State regulations. The Board's amendment was to also reauthorize a similar State winter moose hunt in Unit 24C, which was also set to sunset on June 30, 2014.

Biological Background

The Koyukuk River Moose Management Plan 2000–2005 (Management Plan) (ADF&G 2001) set the management goals and objectives for the Koyukuk River moose population. The Management Plan listed biological decision-making factors for managing the moose population along the upper Koyukuk River (upstream of Hughes). The factors prescribed ratios of up to 30-40 bulls:100 cow moose to allow for adequate breeding in the low-density population, and 30-40 calves:100 cows to support population growth (ADF&G 2001).

Population surveys were conducted on the Kanuti National Wildlife Refuge (Refuge) from 1999 to 2011 using the GeoSpatial Population Estimator (GSPE) technique (Kellie and Delong 2006). Moose population estimates resulting from GSPE surveys on the Refuge have ranged from a low of 588 moose in 2007 to a high of 1,068 in 2010 (**Table 1**). The moose population on the Refuge appears to have been relatively stable at approximately 1,000 estimated moose since 1999, but the population has been at a low density (Craig and Stout 2011). Density estimates in the Refuge ranged from 0.22 to 0.39 moose/mi^2 between 1999 and 2011 (Craig and Stout 2011). The density estimates are typical of Western Interior moose populations, which range from 0.25–2.00 moose/mi^2 (Stout 2008). Population density estimates include all age and sex classes of moose; however, the density of antlered bulls, the harvestable class, were estimated at 0.11 and 0.10 bulls/mi^2 in 2010 and 2011, respectively (Craig and Stout 2011, 2012). Population and composition surveys could not be completed in 2012 due to inadequate snow conditions (Spindler 2013, pers. comm.).

Population composition estimates are generated as part of the GSPE surveys. Bull:cow ratios are (46–70 bulls:100 cows) (**Table 1**), which is above the Management Plan's objectives; however, relatively high bull:cow ratios (30–40 bulls:100 cows) may be required for this low density population to allow for adequate breeding (ADF&G 2001). The bull:cow ratios suggest this population can support current harvest levels. Calf:cow ratios have been above or within the objective for adequate recruitment (30-40 calves:100 cows) in all survey years since 1993 (**Table 1**). However, while the calf ratios meet the management objective, yearling bull:cow ratios have been low during most years and suggests limited recruitment to breeding age.

Additional surveys were also conducted on portions of Unit 24B that lie outside of the Refuge boundaries in 2010 and 2011; the Refuge was a subset of the total survey area (Craig and Stout 2011, 2012). In 2011, estimated calf ratios were similar between Refuge land (41 calves:100 cow) and the total survey area (43 calves:100 cows) (Craig and Stout 2012). However, the estimated total bull ratios were lower on the Refuge (69 bulls:100 cows) compared to the total survey area (78 bulls:100 cows) (Craig and Stout 2012).

Table 1. Summary statistics for moose population estimates (90% confidence intervals) in the Kanuti National Wildlife Refuge Survey Area, Unit 24B, Alaska (Craig and Stout 2012). Surveys were conducted using the GeoSpatial Population Estimator method (Kellie and Delong 2006).

							Estimated composition ratios		
Year	Survey area (mi^2)[a]	Units surveyed	Population estimate (90% CI)	Moose density (moose/mi^2)	Cows	Bulls	Bulls:100 cows	Yearling bulls:100 cows	Calves:100 cows
1999	2,715	108	1,003 (794–1,211)	0.37	542	320	59	4	30
2004	2,710	103	842 (602–1,083)	0.31	403	252	62	9	46
2005	2,710	82	1,025 (581–1,470)	0.38	471	331	70	20	43
2007	2,714	150	588 (463–714)	0.22	276	167	60	13	53
2008	2,715	80	872 (669–1,075)	0.32	432	199	46	14	58
2010	2,714	164	1,068 (946–1,191)	0.39	569	293	51	7	33
2011	2,714	151	797 (644–951)	0.29	388	268	69	10	41

Habitat

Habitat studies are limited in Unit 24B; however, habitat does not appear to be limiting the population in the subunit. Biomass of production and browse removal were measured at browse plots in Unit 24B in 2007. The assessment found little brooming of shrub species and that 51% of sampled plants had no evidence of past browsing by moose (Stout 2010). Browse conditions throughout Unit 24 have been described as excellent (Stout 2010), and twinning rates (an indicator of nutritional status) of radio-collared females were high (37%–60%) from 2009 to 2011 (Craig and Stout 2012).

Harvest History

Moose are an important subsistence resource to residents of communities in Unit 24B. Household surveys in 2002/2003 estimated that 92% of households in Middle Yukon and Koyukuk River communities utilized moose (Brown et al. 2004). In general, harvest levels of moose in Unit 24B (or portions of the unit that would become Unit 24B in 2006) decreased under State regulations beginning in 2003 (**Figure 1**). The mean annual harvests between 1983–2010 by nonlocal Alaska residents, residents of Unit 24B, and nonresidents were 23, 13, and 10 moose under State regulations, respectively. More recently, the mean reported harvest by nonlocal Alaska residents, residents of Unit 24B, and nonresidents declined to 15, 10, and 6 moose under State regulations between 2006 and 2010, respectively. Annual harvest success for all users hunting under State regulations ranged from 25% to 45% between 2006 and 2010 (OSM 2013).

Local subsistence users had difficulties harvesting moose, which prompted the establishment of additional seasons or season extensions (see Regulatory History). Approximately 95% of the moose harvested in Unit 24 were harvested during the Sept. 1–25 season under State regulations (Stout 2010). The winter seasons provide harvest opportunities for those subsistence users that were unable to harvest a moose in the fall. Federal moose seasons have been primarily used by residents of Allakaket, while use among residents of Alatna and Bettles/Evansville has been low. Harvest success has been low among all Federally qualified subsistence users attempting to harvest moose during Federal moose seasons in Unit 24B, with an average of 2.4 moose being harvested annually (**Table 2**). The majority of moose were harvested by

Table 2. Harvest of moose by Federally qualified subsistence users on Federal public lands in Unit 24B between 2006-2012 (OSM 2013).

Permit	Year[a]	Season	Issued	Used	Unreported[b]	Harvest
FM2401	2006	Mar. 1–5	25	10	1	0
	2007	Mar. 1–5	13	6	7	0
	2008	Mar. 27–31	6	4	1	1
	2009	Mar. 27–31	8	5	1	0
FM2402	2006	Sept. 26–Oct. 1	1	-	1	-
	2007	Sept. 26–Oct. 1	0	-	-	-
	2008	Sept. 26–Oct. 1	0	-	-	-
	2009	Sept. 26–Oct. 1	0	-	-	-
	2010	Sept. 26–Oct. 1, Dec. 15–Apr. 15	16	10	3	1
	2011	Sept. 26–Oct. 1, Dec. 15–Apr. 15	15	10	1	3
	2012	Aug. 25–Oct. 1, Dec. 15–April. 15	8	2	6	0
FM2403	2006	Sept. 26–Oct. 1	46	11	29	2
	2007	Sept. 26–Oct. 1	35	15	14	4
	2008	Sept. 26–Oct. 1	17	13	0	3
	2009	Sept. 26–Oct. 1	15	2	6	0
	2010	Sept. 26–Oct. 1	0	-	-	-
	2011	Sept. 26–Oct. 1	0	-	-	-
	2012	Sept. 26–Oct. 1	11	6	4	3
FM2404	2010	Dec. 15–Apr. 15	8	6	0	0
	2011	Dec. 15–Apr. 15	0	-	-	-

residents of Allakaket (12 moose), while residents of Bettles (3 moose) and Alatna (2 moose) also harvested moose in Unit 24B under Federal regulations between 2006 and 2012 (OSM 2013). Of moose harvested under Federal regulations, only one moose has been reportedly harvested in a winter season (Mar. 1–5, Mar. 27–31, or Dec. 15–Apr. 15 season) (OSM 2013).

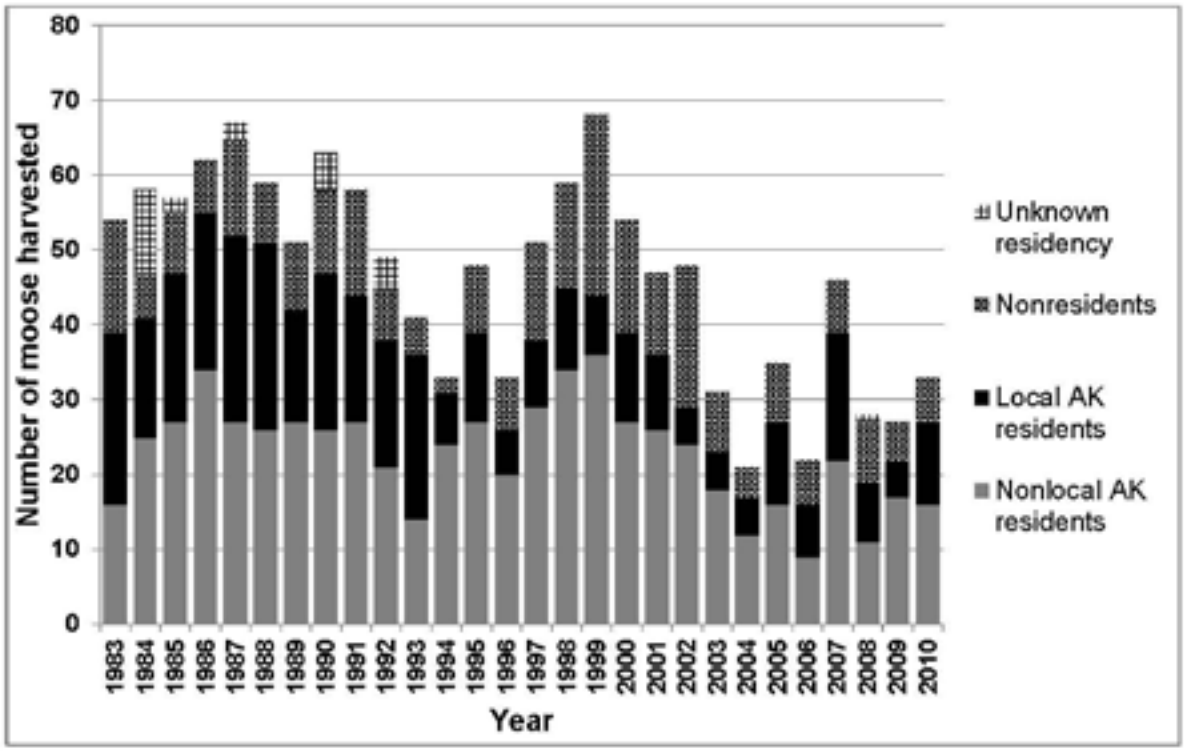


Figure 1. Moose harvested by user group in Unit 24B under State regulations, 1983–2010 (OSM 2013). Local Alaska residents are residents of communities that have a positive customary and traditional use determination under Federal regulations.

Effects of the Proposal

If this proposal is adopted, the winter moose season would continue to be included in the Federal regulations for a portion of Unit 24B, rather than allowing it to sunset after June 30, 2014. While few moose have been harvested during the Dec. 15–Apr. 15 season, the season does provide additional opportunity for Federally qualified subsistence user who were not able to harvest a moose during the fall season.

Continuing the winter season should not adversely impact the moose population in Unit 24B, as the population has been able to sustain the recent level of harvest and the harvest is restricted to antlered bulls. Moose occur in Unit 24B at a low population density, but the population appears to be stable. Despite extending the winter season from 5- or 10-day seasons to 4 months, harvest has remained low and the population has not declined. With winter seasons, there is often concern regarding cow harvest; however, the harvest is limited to antlered bulls and no cows have been inadvertently harvested under Federal regulations (OSM 2013). The long season also allows users to be more selective when harvesting a moose. Previous educational and enforcement efforts have led to a widespread understanding in the villages that only bulls may be harvested (Spindler 2013, pers. comm.).

OSM CONCLUSION

Support Proposal WP14-29.

Justification

The winter moose season in Unit 24B has been in Federal regulations since 2010, but is set to sunset after June 30, 2014. The affected season has provided additional opportunity for Federally qualified subsistence users to harvest moose if they were unsuccessful during the fall season. Hunters typically experience low moose encounter rates due to the low density of moose and overall harvest by Federally qualified subsistence users has been low. The Alaska Board of Game also recently reauthorized a similar hunt under State regulations in Unit 24B.

There are few conservation concerns with keeping the winter moose season in Federal regulations. No additional population impacts are anticipated as the moose population has been able to sustain the harvest pressure associated with the current fall and winter seasons. Inadvertent harvest of cows is unlikely, as the harvest is restricted to antlered bulls and the long season allows users to be more selective when harvesting moose.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-29. This proposed action allows Federally qualified subsistence users an opportunity for additional harvest of moose if one was not taken in the fall. Harvest is low, and there are no conservation issues.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal 14-29: The Western Interior Regional Council understands good and sound game management practices. The effect of spreading the moose hunt will help lessen impact to more heavily used areas, and provide a time when ALL the moose can be kept for use by the people. Keeping the moose frozen provides more food per moose harvested.

Donald Woodruff, Eagle

WP14–31 Executive Summary	
General Description	Proposal WP14-31 requests that a community winter hunt be established for rural residents of Nikolai for sheep in Unit 19C from Oct. 1–Mar. 30 with a quota of 3 sheep; rams or ewes without lambs only. Additionally, the proposal requests the Denali National Park and Preserve Superintendent have the authority to close the season by emergency order when the sheep population is low. *Submitted by the Denali Subsistence Resource Commission.*
Proposed Regulation	**Unit 19 – Sheep** *1 ram with 7/8 curl or larger* — *Aug. 10–Sept. 20* ***Unit 19C—residents of Nikolai only, with a community harvest quota of 3 sheep, rams or ewes without lambs only. Reporting will be by a community reporting system.*** — ***Oct. 1–Mar. 30*** *__.26(e)(2) An animal taken under Federal or State regulations by any member of a community with an established community harvest limit for that species counts toward the community harvest limit for that species. Except for wildlife taken pursuant to § __.10(d)(5)(iii) or as otherwise provided for by this part, an animal taken as part of a community harvest limit counts toward every community member's harvest limit for that species taken under Federal or State of Alaska regulations.*
OSM Conclusion	**Support with modification** to add a unit-specific stipulation to allow the accumulation of individual and community harvest limits under Federal regulations, so residents of Nikolai who harvest a sheep during the Aug. 10–Sept. 20 Federal season can participate in the community harvest Oct. 1-Mar. 30. Sheep harvested by Nikolai residents in the Aug. 10 – Sept. 20 Federal season would not count against the community harvest quota in the newly established Oct. 1–Mar. 30 community hunt. The Denali National Park and Preserve Superintendent would be given the authority to open and close the community harvest season and set the annual harvest quota for the community hunt on the portions of Unit 19C in the Denali National Park and Preserve, excluding lands within Denali National Park as it existed prior to Dec. 2, 1980, via a delegation of authority letter.

WP14–31 Executive Summary	
Western Interior Regional Council Recommendation	**Support with modification** as described in OSM Conclusion and to
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Neutral on allocation / support reasonable opportunities for subsistence**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP14-31

ISSUES

Proposal WP14-31, submitted by the Denali Subsistence Resource Commission, requests that a community winter hunt be established for rural residents of Nikolai for sheep in Unit 19C from Oct. 1–Mar. 30 with a quota of 3 sheep; rams or ewes without lambs only. Additionally, the proposal requests the Denali National Park and Preserve Superintendent have the authority to close the season by emergency order when the sheep population is low.

After further discussion with the proponent, it was clarified that the proposal would only affect those portions of Unit 19C within the Denali National Park and Preserve lands that are open to subsistence harvest (**Map 1**).

DISCUSSION

The proponent states that residents of Nikolai have a long tradition of harvesting sheep in the Alaska Range, but the current season of Aug. 10- Sept. 20 occurs at a time of year when access to the mountains is not possible without aircraft. Residents of Nikolai traditionally hunted by dog sled or snow machine after it snowed. The proponent states that by establishing a winter community harvest, residents can resume their traditional patterns of winter travel and harvest of sheep.

Existing Federal Regulation

Unit 19 – Sheep

1 ram with 7/8 curl or larger	*Aug. 10–Sept. 20*

__.26(e)(2) An animal taken under Federal or State regulations by any member of a community with an established community harvest limit for that species counts toward the community harvest limit for that species. Except for wildlife taken pursuant to § __.10(d)(5)(iii) or as otherwise provided for by this part, an animal taken as part of a community harvest limit counts toward every community member's harvest limit for that species taken under Federal or State of Alaska regulations.

Proposed Federal Regulation

Unit 19 – Sheep

1 ram with 7/8 curl or larger	*Aug. 10–Sept. 20*

Unit 19C—residents of Nikolai only, with a community harvest quota of 3 sheep, rams or ewes without lambs only. Reporting will be by a community reporting system. ***Oct. 1–Mar. 30***

__.26(e)(2) An animal taken under Federal or State regulations by any member of a community with an established community harvest limit for that species counts toward the community harvest limit for that species. Except for wildlife taken pursuant to § __.10(d)(5)(iii) or as otherwise provided for by this part, an animal taken as part of a community harvest limit counts toward every community member's harvest limit for that species taken under Federal or State of Alaska regulations.

Existing State Regulations

Unit 19 Sheep

One ram with full-curl horn or larger *Aug. 10–Sept. 20*

State regulations for a community hunt include:

Seasons for community harvest permits will be the same as those established for other subsistence harvests for that species in the geographic area included in a community harvest hunt area, unless separate community harvest hunt seasons are established. The total bag limit for a community harvest permit will be equal to the sum of the individual participants' bag limits, established for other subsistence harvests for that species in the hunt area or otherwise by the board. Seasons and bag limits may vary within a hunt area according to established subsistence regulations for different game management units or other geographic delineations in a hunt area.

Establishment of a community harvest hunt area will not constrain nonsubscribing residents of the community or members of the group from participating in subsistence harvest activities for a species in that hunt area using individual harvest tickets or other state permits authorized by regulation, nor will it require any resident of the community or member of the group eligible to hunt under existing subsistence regulations to subscribe to a community

harvest permit.

Extent of Federal Public Lands

Federal public lands comprise approximately 20% of Unit 19C, and consist of 11% Bureau of Land Management managed lands and 9% National Park Service managed lands **(Map 1).**

Special Requirements for Park Service Lands

Under the guidelines of Alaska National Interest Lands Conservation Act (ANILCA), National Park Service regulations identify qualified local and subsistence users in the National Parks and Monuments by: 1) identifying resident zone communities which include a significant concentration of people who have customarily and traditionally used subsistence resources on park lands; and 2) identifying and issuing subsistence use (§___13.440) permits to individuals residing outside the resident zone communities who have a personal or family history of subsistence use.

Federally qualified subsistence users for those portions of Unit 19C within the Denali National Park that are open to subsistence harvest include rural subsistence users of resident zone communities Cantwell, Lake Minchumina, Nikolai and Telida along with sixteen local rural families with subsistence use permits, who do not live within these designated resident zone communities but have traditionally engaged in subsistence activities within the park (NPS 2013).

The use of aircraft to access Denali National Preserve lands for subsistence purposes is permitted. In Denali National Park, airplanes are not permitted for providing access for subsistence taking of fish and wildlife. Subsistence users may not land outside the park, in the preserve, or on private land within the park/preserve boundary, and walk into the park to engage in subsistence hunting or trapping.

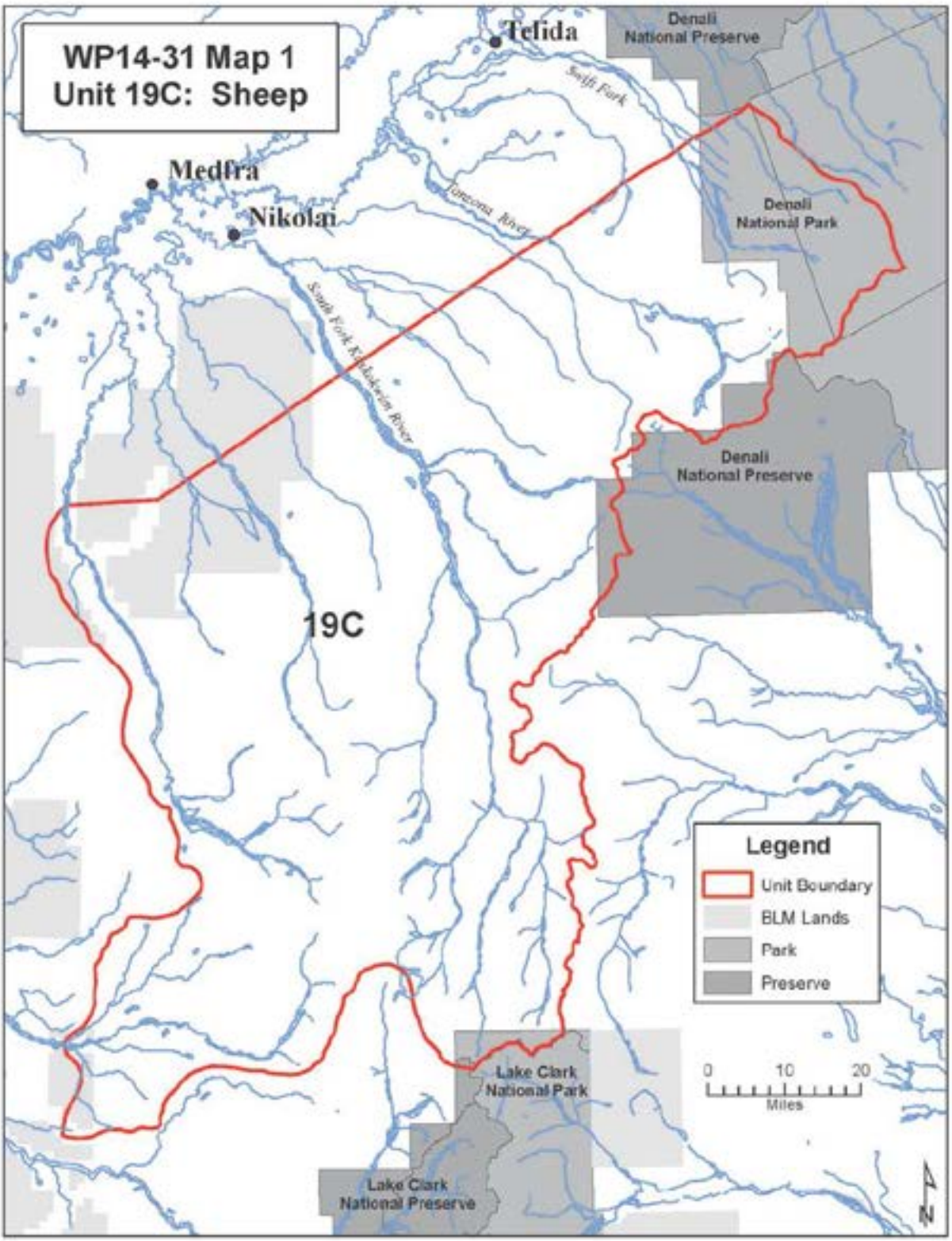
Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for sheep in Unit 19.

Regulatory History

The existing Federal regulation was established in 1990 by the Federal Subsistence Board when the Board adopted the State subsistence regulations for sheep in Unit 19 for the Federal Subsistence Management Program.

The first regulations for sheep in the area were in 1917 when Mount McKinley National Park, now a portion of Denali National Park and Preserve, was established. Charles Sheldon, an early conservationist and hunter, was an advocate for creating a park that would protect wildlife from increasing hunting pressure by commercial hunters that were supplying meat for miners and railroad construction workers. Commercial hunters were also supplying meat for communities in the interior. Sheldon was especially concerned that Dall sheep be protected (NPS 2013).


WP14-31 Map 1
Unit 19C: Sheep
Telida
Medfra
Nikolai
Denali National Preserve
Denali National Park
Denali National Preserve
19C
Lake Clark National Park
Lake Clark National Preserve
Legend
Unit Boundary
BLM Lands
Park
Preserve
0 10 20
Miles

After Mount McKinley National Park was established, there were provisions that allowed for subsistence hunting by local residents in the Park. These provisions also allowed prospectors and miners to hunt for personal food while they were in the area, but they were not allowed to sell or trade the harvested meat. Starting in 1927, due to continued incidents of poaching, the Park started prohibiting prospectors and miners from hunting.

With the 1980 passage of the ANILCA, the National Park Service lands in Alaska were expanded. Subsistence hunting is permitted in the Denali National Preserve and on lands added to Denali National Park on December 2, 1980.

Current Events

In February 2014, the Alaska Board of Game took action on Proposal 65, which requested the establishment of residents-only registration hunt for sheep in Unit 19C with a limit of one sheep with ¾-curl or less, excluding lambs, ewes accompanied by lambs, and rams with broomed horns, from Oct. 1 – Apr. 30. The proposal also requested to: (1) prohibit the use of aircraft for access to hunt sheep except into and out of McGrath, Nikolai, and Telida airports; (2) require hunters to call in to the area management biologist within three days of the beginning and end of each hunt; (3) require hunters to report any sheep harvested after each hunt; (4) give discretionary authority to the area management biologist to limit the number of hunters in the field to prevent overharvest; (5) allow the season to be closed by emergency order when the total harvest reaches ten sheep, or prior to that quota at the discretion of the area biologist, (6) require horns to be sealed within 30 days of the close of the season; and (7) have the hunt eligible for proxy hunting for elders over 65 years old. The Board of Game adopted Proposal 65 with an amendment to remove the proxy hunting provision.

Biological Background

Knowledge of sheep in the southwestern portion of Denali National Park and Preserve, which includes portions of Units 19C, 16A, and 16B, is lacking (Rattenbury 2013, pers. comm.). Accurate population estimates of sheep in Unit 19C are not available; however, aerial trend surveys have been conducted in the region. Alaska Department of Fish and Game conducted aerial population count and composition surveys annually from 2008 to 2010 in Unit 19 within the Sheep Creek, Jones River, Tonzona, Post, and Windy Fork drainages. The estimated density from the composition counts increased from 1.98 to 2.83 sheep/mi^2 from 2008 to 2010; however, the precision of the estimates is unknown and limits the interpretation of the data (Seavoy 2011). In addition, National Park Service conducted a population composition survey for sheep throughout Denali National Park and Preserve in 2011. Few sheep (28 sheep) were observed within the nine transects located in Unit 19C (Rattenbury 2013, pers. comm.). The results of the composition data from the Park-wide survey in 2011 were 26.7 lambs/100 ewe-like sheep and 61.8 rams/100 ewe-like sheep within the population (Rattenbury 2013, pers. comm.).

Harvest History

No specific harvest data is available for the Denali National Park and Preserve lands of Unit 19C. The overall reported sheep harvest throughout Unit 19C averaged 70.4 rams harvested annually between 2005 and 2011 **(Table 1)**. Between 2005 and 2009, the majority (33%–51 %) of the sheep harvested under State regulations in the Alaska Range West, which includes portions of Units 9B, 16B, 17B, 19B and 19C, occurred during the first week of the season (August 10–16) (Seavoy 2011). Airplanes were the primary means (82% to 92% of annual reported harvest) of transportation used to harvest sheep in the Alaska Range West region between 2005 and 2009 (Seavoy 2011). Other means of transportation included horses (0% to 9%), off-highway vehicles (3% to 5%), boats (0% to 4%), and highway vehicles (0% to 1%) (Seavoy 2011).

Sporadic household surveys suggest that some Nikolai residents used sheep, but no recent harvest has occurred. In 1984, 3% of Nikolai households reported using sheep but 0% reported attempting to harvest sheep in that year (ADF&G 2013). During the 1980s, most of the meat coming in to Nikolai was from local guides who would often be given meat by non-local hunters following their hunt (Stokes 1985). Household surveys in 2002 provided similar results, with only 3.7% of Nikolai households reportedly using sheep, and no residents reporting harvesting a sheep that year (Holen et al. 2006). A more recent survey in 2011 reported higher use, with 15.3% of Nikolai households reportedly using sheep (ADF&G 2013). The 2011 report also found that 11.5% of households attempted to harvest a sheep, but no residents successfully harvested a sheep (ADF&G 2013).

Table 1. Reported sheep harvest in Unit 19C under State regulations, 2005–2011 (ADF&G 2013).

Year	Sheep harvested
2005	72
2006	66
2007	64
2008	75
2009	66
2010	68
2011	82

Cultural Knowledge

Many of the people of the Upper Kuskokwim area, including Nikolai, depend on subsistence foods to feed their families. People harvest salmon, plant resources, and large and small game. They harvest a variety of foods because one food source cannot be counted on. If one resource is not available within a given year, they may rely more heavily on other resources. Traditionally, Athabascans moved around to harvest foods in various areas depending on the season.

Nikolai residents traditionally harvested sheep in the Denali National Park and Preserve area; however, once Mount McKinley National Park was established, local people stopped hunting there (Craver 2013, pers. comm.). Nikolai residents used to rely on caribou and sheep as a primary protein source, but because a portion of the park is or was closed to subsistence harvest they can no longer harvest sheep in their traditional subsistence use areas (Collins 2004). In addition, residents of Nikolai do not have access to sheep in the winter when the sheep are lower on the mountain, because there currently is no harvest season (Collins 2004). Therefore, younger residents cannot learn about traditional ways of hunting during the winter when residents of Nikoli could get there by dogsleds or snow machines. Traditionally, sheep hunts were carried out in the winters when men from the village went to the mountains, including the area now encompassed by Denali National Park and Preserve, and brought back game to the village. The meat was used for winter potlatches for the whole village which would last for several days (Collins 2004).

Sheep meat was highly prized by Nikolai residents (Stokes 1985). Traditionally hunters traveled great distances to hunt sheep in the Alaska Range in the winter when the sheep were at lower elevations (Stokes 1985). Residents of Nikolai hunted sheep in the mountainous areas at the headwaters of the Big River and the Upper Middle, Windy, South, and East forks (Collins 2004, Stokes 1985). In the 1960s, Nikolai residents would travel up the Little Tonzona River to hunt sheep in November when there was enough snow for dog sleds (Stokes 1985). They also hunted in a place called Dry Creek, east of Dillinger River where they hunted both ewes and rams (Collins 2004; Holen et al. 2006). Changes in resource use and restrictive State regulations on sheep hunting have caused a sharp decline in sheep hunting by residents of Nikolai (Holen et al. 2006).

Other Alternatives Considered

An alternative considered to address the proponents request for a community hunt was to establish a cultural and educational permit allowing the harvest of 3 sheep for the community of Nikolai. An organization may apply to the Federal Subsistence Board for a cultural and educational permit to harvest wildlife for a qualifying cultural or educational program. However, customary and educational permit regulations require a qualifying program to have instructors, enrolled students, minimum attendance requirements, and standards for completion of the course. This alternative was not selected because it would add additional stipulations to harvest sheep, and the proposal made no mention of an established cultural or educational program; nor was any interest expressed in currently establishing such a program.

A second alternative considered was to establish a winter season in the affected area for the residents of Nikolai, rather than a winter community hunt. The season would be from Oct. 1-Mar. 30 with a quota of 3 sheep in the portion of Unit 19C within the Denali National Park and Preserve lands that are open to subsistence harvest. Under this scenario, Nikolai residents would be restricted to an individual harvest limit of one ram with 7/8 curl or larger in the fall or one sheep in the newly established winter season, and any harvest would count against the annual quota. The proponent (Denali Subsistence Resource Commission) was contacted for further clarification on the intent of the proposed winter hunt. It was determined that the intent was to allow for the harvest of sheep in the winter that would be shared among the community, not for personal consumption (Collins 2013, pers. comm.). Therefore, this alternative was not selected because it would be contrary to a community hunt where individuals may be part of the group who harvest up to the quota of 3 sheep that are shared by the community.

Effects of the Proposal

If this proposal is adopted, a winter community harvest would be established for residents of Nikolai from Oct. 1–Mar. 30 in the portion of Unit 19C within the Denali National Park and Preserve lands that are open to subsistence activities. Residents of Nikolai would be able to harvest sheep during the winter when the sheep move to lower elevations and they can reach the hunting areas after it snows by snow machine or dog sled. Although individuals can currently hunt for sheep under State or Federal regulations Aug. 10-Sept. 20, sheep are difficult to reach during this time frame without the use of an airplane. The people in this area had a long history of hunting sheep in the Alaska Range during the winter, including portions of the Denali National Park and Preserve lands of Unit 19C.

The intent of the proposal is to establish a winter community hunt for sheep in an area where Nikolai residents traditionally hunted sheep and share the harvest among the community. However, participation in the State or Federal fall hunt in Unit 19 would preclude individuals from participating in the proposed winter community hunt. Federal regulations do not allow for the accumulation of harvest limits between individual (State or Federal) and community hunts, unless an exception is made in unit-specific regulations. State regulations allow users to opt in to State community hunts, but Federal regulations do not have similar options. Thus, any harvest of a sheep by Nikolai resident during the fall (under State or Federal regulations) or proposed winter season would count towards the community's Federal harvest quota.

The proposed community hunt would likely result in minimal impacts to other users due to the low quota of sheep requested and the limited area of Unit 19C affected by the proposal. In Unit 19C, the majority of NPS managed lands open to Federal subsistence harvest consist of ANILCA additions to the Park, which are only open to those living in Resident Zone Communities (including Nikolai) or rural residents who have a §___13.440 Subsistence Permit. Residents of Nikolai would have more opportunity to harvest sheep than other resident zone communities for Denali National Park, but other qualified communities would not be precluded from making similar requests in the area. Other Federally qualified and non-Federally qualified subsistence users would still be able to harvest sheep in the Denali National Preserve lands under State and Federal regulations, but only during the Aug. 10-Sept. 20 seasons.

The proposed community harvest quota of 3 sheep should not likely cause an adverse impact to the sheep population in the Denali National Park and Preserve lands portions of Unit 19C, as the population appears to be stable and the harvest of 3 sheep should be sustainable. Harvest is also likely limited in the area due to access issues during the current State and Federal sheep seasons and the user restrictions associated with Park areas. This proposal would also add specific language that would authorize Federal managers to close the season hunt if sheep numbers were low enough to be a conservation concern.

OSM CONCLUSION

Support Proposal WP 14-31 **with modification** to add a unit-specific stipulation to allow the accumulation of individual and community harvest limits under Federal regulations, so residents of Nikolai who harvest a sheep during the Aug. 10–Sept. 20 Federal season can participate in the community harvest Oct. 1-Mar. 30. Sheep harvested by Nikolai residents in the Aug. 10 – Sept. 20 Federal season would not count against the community harvest quota in the newly established Oct. 1–Mar. 30 community hunt. The Denali National Park and Preserve Superintendent would be given the authority to open and close the community harvest season and set the annual harvest quota for the community hunt on the portions of Unit 19C in the Denali National Park and Preserve, excluding lands within Denali National Park as it existed prior to Dec. 2, 1980, via a delegation of authority letter (**Appendix 1**).

The modified regulation should read:

Unit 19 – Sheep

1 ram with 7/8 curl horn or larger	*Aug. 10-Sept. 20*

Unit 19C– that portion within the Denali National Park and Preserve- residents of Nikolai only – no individual harvest limit, but a community harvest quota would be set by the Denali National Park and Preserve Superintendent each year, rams or ewes without lambs only. Reporting will be by a community reporting system.	***Oct. 1-Mar. 30***
__.26(n)(19)(iii)(C) Individual residents of Nikolai may harvest sheep during the Aug. 10 – Sept. 20 Federal season and not have that animal count against the community harvest limit. Individual residents of Nikolai that harvest a sheep under State regulations may not participate in the community harvest.	
__.26(e)(2) An animal taken under Federal or State regulations by any member of a community with an established community harvest limit for that species counts toward the community harvest limit for that species. Except for wildlife taken pursuant to § __.10(d)(5)(iii) or as otherwise provided for by this part, an animal taken as part of a community harvest limit counts toward every community member's harvest limit for that species taken under Federal or State of Alaska regulations.	

Justification

After further discussion with the proponent, the suggested changes were incorporated consistent with their clarifications for this proposal. The new regulations would allow residents of Nikolai to hold a winter community hunt in the portions of Unit 19C within the Denali National Park and Preserve that are open to subsistence uses from Oct. 1–Mar. 30, when sheep move down to lower elevations and the areas are more accessible by snow machine or dog sled. During the current season, the affected area is difficult to reach without the use of a plane. The newly established community hunt will help Nikolai residents revive the tradition of a community hunt and teach young people in the community about their cultural traditions.

The addition of a unit-specific stipulation will allow residents of Nikolai who harvests a sheep under the Unit 19 Federal sheep season to participate in the winter community hunt. Federal regulations prohibit the accumulation of individual and community harvest limits; however, __.26(e)(2) allows for exceptions. Adopting this regulation would set a precedent as it would be the first community harvest regulation under Federal regulations to allow accumulation of harvest limits between a general season and a community harvest season. Historically, the Board has made exceptions to the regulations in other areas, such as designated hunters (e.g. allowing the harvest of additional species and changes to possession limits) and prohibited methods and means (e.g. harvesting moose/caribou from a moving boat). If a resident of Nikolai harvests a sheep under the State regulations, they would not be allowed to harvest sheep under the Federal regulations.

The limited harvest of sheep during the winter season would not likely impact the sheep population or other users. Residents of Nikolai would be restricted to harvesting rams or ewes without lambs, so harvest would not necessarily reduce the larger (7/8-curl and full-curl rams) component of the population that is available to other users during Federal and State harvest seasons. In addition, the hunt area makes

up a small portion of Unit 19C, most of which is within Park lands that are restricted to four resident zone communities and rural residents with §___13.440 Subsistence Permits.

Residents of Nikolai would have more opportunity to harvest sheep than other resident zone communities for Denali National Park, but other qualified communities would not be precluded from making similar requests in the area.

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Appendix 1

Superintendent
Denali National Park and Preserve
P.O. Box 9
Denali Park, AK
99755-0009

Dear Superintendent:

This letter delegates specific regulatory authority from the Federal Subsistence Board (Board) to the Denali National Park and Preserve Superintendent, as approved by the Board, to issue emergency special actions if necessary to ensure the continued viability of a wildlife population, to continue subsistence uses of wildlife, or for reasons of public safety; or temporary special actions if the proposed temporary change will not interfere with the conservation of healthy wildlife populations, will not be detrimental to the long-term subsistence use of wildlife resources, and is not an unnecessary restriction on non-subsistence users. This delegation only applies to the Federal public lands subject to ANILCA Title VIII within the Denali National Park and Preserve portions of Unit 19C.

It is the intent of the Board that actions related to setting the quota for a winter community hunt for sheep by the residents of Nikolai by the Denali National Park and Preserve Superintendent be coordinated, prior to implementation, with the Alaska Department of Fish and Game (ADF&G), the Chair of the Denali Subsistence Resource Commission (Commission), and the Chair of the Western Interior Subsistence Regional Advisory Council (Council) to the extent possible. Federal managers are expected to work with State managers and the Chairs and applicable members of the Commission and Council to minimize disruption to resource users and existing agency programs, consistent with the need for special action.

DELEGATION OF AUTHORITY

1. Delegation: The Superintendent of the Denali National Park and Preserve is hereby delegated the authority to open and close the season, and determine the quota for a winter community hunt for sheep by the residents of Nikolai on lands in the Denali National Park and Preserve portion of Unit 19C.

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

DRAFT

3. Scope of Delegation: The regulatory authority hereby delegated is limited to the following authorities within the limits set by regulation at 36 CFR 242.26 and 50 CFR 100.26:

- To open and close the season the winter community hunt for sheep by the residents of Nikolai on lands in the Denali National Park and Preserve portion of Unit 19C.

- As needed, set or adjust harvest quotas for the winter community hunt for sheep by residents of Nikolai on lands in the Denali National Park and Preserve portion of Unit 19C.

All other proposed changes to codified regulations, such as customary and traditional use determinations, adjustments to methods and means of take, or closures to only non-Federally qualified users shall be directed to the Federal Subsistence Board.

The Federal public lands subject to this delegated authority are those within the Denali National Park and Preserve portions of Unit 19C.

4. Effective Period: This delegation of authority is effective from the date of this letter and continues until superseded or rescinded.

5. Guidelines for Delegation: You will become familiar with the management history of the wildlife species relevant to this delegation in the region, with current State and Federal regulations and management plans, and be up-to-date on population and harvest status information. You will review special action requests or situations that may require a special action and all supporting information to determine (1) consistency with 36 CFR 242.19, (2) if the request/situation falls within the scope of authority, (3) if significant conservation problems or subsistence harvest concerns are indicated, and (4) what the consequences of taking an action or no 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 maintain a record of all special action requests and rationale for your decision. A copy of this record will be provided to the Administrative Records Specialist in the Office of Subsistence Management no later than sixty days after development of the document.

You will notify the Office of Subsistence Management, the Denali Subsistence Resource Commission, Western Interior Subsistence Regional Advisory Council, and ADF&G managers each year regarding the quota for a winter community hunt for sheep by the residents of Nikolai. You will issue decisions in a timely manner. Before the effective date of any decision, reasonable efforts will be made to notify the public, the Office of Subsistence Management, affected State and Federal managers, law enforcement personnel, and Council representatives. If an action is to supersede a State action not yet in effect, the decision will be communicated to the public, the Office of Subsistence Management, affected State and Federal Managers, and the local Council representatives at least 24 hours before the State action would be effective. If a decision to take no action is made, you will notify the proponent of the request immediately.

You may defer a special action request, otherwise covered by this delegation of authority, to the Federal Subsistence Board in instances when the proposed management action will have a significant impact on a large number of Federal subsistence users or is particularly controversial. This option should be exercised judiciously and may be initiated only when sufficient time allows for it. Such deferrals should not be considered when immediate management actions are necessary for conservation purposes. The Federal Subsistence Board may determine that a special action request may best be handled by the Board, subsequently rescinding the delegated regulatory authority for the specific action only.

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

Sincerely,

Tim Towarak
Chair, Federal Subsistence Board

cc: Assistants to the Board
Interagency Staff Committee
Chair, Denali Subsistence Resource Commission
Chair, Western Interior Subsistence Regional Advisory Council
Commissioner, Alaska Department of Fish and Game
Subsistence Liaison, Alaska Department of Fish and Game
ARD, Office of Subsistence Management
Administrative Record

DRAFT

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-31 **with modification** to amend the OSM recommendation by modifying the delegation of authority letter to specifically state that the Chairs of the Denali SRC and WIRAC be consulted. The Council supported the additional opportunity for a residents to harvest sheep at a traditional time of the year. There should not be a conservation concern with the low harvest. Supported the delegation of authority to the Superintendent of Denali National Park and Preserve, but the letter needs to include consultation with the Chairs of the Denali SRC and WIRAC.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal 14-31: The Nikolai people have been deprived of this cultural activity and traditional food source for so long that only older folks even remember doing it. Let's get this passed while they are still able to show the younger generations how to do it properly. The very small number of sheep should not impact the population, especially with the Superintendent's ability to shut it down quickly if need be (without going through a years-long proposal process!).

Miki and Julie Collins, Lake Minchumina

WP14-42 Executive Summary	
General Description	Proposal WP14-42 requests a customary and traditional use determination for sheep in Units 20E, 25B, and 25C. *Submitted by the Eastern Interior Subsistence Regional Advisory Council.*
Proposed Regulation	**Customary and Traditional Use Determinations—Sheep** Unit 20E — ~~All rural residents~~ **Rural residents of Units 20E, 25B, and 25C** Unit 25B and 25C — ~~No Federal subsistence priority~~ **Rural residents of Units 20E, 25B, and 25C**
OSM Conclusion	**Support** WP14-42 with **modification** to recognize the customary and traditional uses of sheep by residents of additional areas and communities. **Customary and Traditional Use Determinations—Sheep** Unit 20E — ~~All rural residents~~ **Rural residents of Units 20E, 25B, 25C, 25D and Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok** Unit 25B and 25C — ~~No Federal subsistence priority~~ **Rural residents of Units 20E, 25B, 25C, and 25D**
Eastern Interior Regional Council Recommendation	**Support** WP14-42 with **modification** to recognize the customary and traditional uses of sheep by residents of additional areas and communities. **Customary and Traditional Use Determinations—Sheep** Unit 20E — ~~All rural residents~~ **Rural residents of Units 20E, 25B, 25C, 25D and Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok** Unit 25B and 25C — ~~No Federal subsistence priority~~ **Rural residents of Units 20E, 25B, 25C, and 25D**
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.

WP14-42 Executive Summary	
ADF&G Comments	**Support** WP14-42 with **modification** to recognize the customary and traditional uses of sheep by residents of additional areas and communities. **Customary and Traditional Use Determinations—Sheep** Unit 20E: ~~All rural residents~~ **Rural residents of Units 20E, 25B, 25C, 25D and Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok** Unit 25B and 25C: ~~No Federal subsistence priority~~ **Rural residents of Units 20E, 25B, 25C, and 25D**
Written Public Comments	**1 support**

STAFF ANALYSIS
WP14-42

ISSUES

Proposal WP14-42 submitted by the Eastern Interior Subsistence Regional Advisory Council (Council) requests a customary and traditional use determination for sheep in Units 20E, 25B, and 25C. A related proposal, WP14-43, addresses hunting seasons and harvest limits for sheep.

DISCUSSION

Currently, there are no open Federal seasons for sheep in Units 20E, 25B, and 25C. According to the proponent, establishing a subsistence priority for sheep is important to the residents of the area. Residents of local communities have harvested sheep on many of the parcels of Federal public lands in the management units, and Council members are aware of this use through local oral history. The proponent continues that people are looking for alternative resources to Chinook salmon because of the decade-long decline in Chinook salmon stocks in the Yukon River drainage. The Council member who introduced the motion said the intent of the proposal is to open a Federal hunting season in the Yukon-Charley Rivers National Preserve. Subsequently, the Council amended the proposal to include all Federal public lands in the management units.

The Federal Subsistence Board (Board) has never reviewed the customary and traditional uses of sheep in Units 20E, 25B, or 25C. Additionally, Central, Chicken, Eagle City, and Eagle Village are situated in Units 20E, 25B, or 25C, and this analysis is the first review of their customary and traditional uses of sheep.

Existing Federal Regulation

Customary and Traditional Use Determinations—Sheep

Unit 20E	*All rural residents*
Unit 25B and 25C	*No Federal subsistence priority*

Proposed Federal Regulation

Customary and Traditional Use Determinations—Sheep

Unit 20E	~~*All rural residents*~~ ***Rural residents of Units 20E, 25B, and 25C***
Unit 25B and 25C	~~*No Federal subsistence priority Rural*~~ ***Rural residents of Units 20E, 25B, and 25C***

Extent of Federal Public Lands

Federal public lands in each management unit are described in **Table 1** (see also **Unit 20 Map** and **Unit 25 Map)**.

Table 1. Federal public lands in Units 20E, 25B, and 25C.

Management Unit	Percentage Federal Public Lands	Percentage Managed by Each Agency
20E	29%	20% National Park Service 9% Bureau of Land Management
25B	70%	36% Fish and Wildlife Service 26% Bureau of Land Management 8% National Park Service
25C	74%	63% Bureau of Land Management 9% National Park Service 2% Fish and Wildlife Service

Regulatory History

In Unit 20E, *all rural residents* of the state are eligible to hunt sheep under Federal regulations because the Federal Subsistence Board did not adopt a specific customary and traditional use determination. The situation is different in Units 25B and 25C; currently, *no rural residents* are eligible to hunt sheep under Federal regulations because the Board adopted a determination of "no Federal subsistence priority" (72 FR 22961; May 29, 1992).

The proponent requested a customary and traditional use determination for sheep. "Customary and traditional uses" were described in the Alaska National Interest Land Claims Act. 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 nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through 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)).

Demographic History

Units 20E, 25B, and 25C encompass upper Yukon River drainages. Han Athabascan territory extended along the Yukon River on both sides of the U.S. and Canada border, upstream from the Yukon flats (Crow and Obley 1981). Settlement patterns in the upper Yukon region were heavily impacted by the gold rush in the 1890s that brought tens of thousands of miners. Large numbers of Han and Peel River *Gwich'in* were attracted to the Eagle area and Dawson. Their descendants are the primary residents of Eagle Village. The enforcement of the U.S-Canada boundary since the 1940s has cut them off from much of their hunting and trapping areas in Canada. Eagle City, Chicken, and Central were established as gold mining supply sites; however, most miners had left the area by 1910. Native and non-Natives worked on steamboats, in mines, and in wood chopping camps, as well as on traplines. In the 1970s land auctions attracted new residents to Eagle City, and the construction of the oil pipeline, development of oil and gas in the area, and road construction provided wage employment. Gold miners continue to return to the area seasonally. The communities rely on subsistence resources, government wage employment, such as in firefighting, and other seasonal work, such as mining and handicrafts. The decline of the Fortymile caribou herd has meant the loss of the most significant resource available in the area. Roads have linked Eagle with the Alaska Highway since the 1950s, and the Steese Highway connected Central with Fairbanks in 1927. Additionally, the Yukon River continues to be used as a water "highway" (ADCCED 2013, Caulfield 1979, Crow and Obley 1981, Hosley 1981).

The population in the management units was about 256 people living in 130 households according to the 2010 US Census (see **Table 2** below). There was a small number of people living along the Yukon River from Eagle to Circle outside of any organized community. In 1979, about 70% had lived on the river only since 1971, and the number was growing (see Caulfield 1979) .

Ethnographic Information

Sheep hunting is a well-documented Athabascan tradition. Descriptions of the knowledge of sheep possessed by Han, Gwich'in, Tanacross, and Upper Tanana Athabascans included the location of mineral licks used by sheep. In the past, sheep were most often caught with babiche (long strips of caribou or moose

Table 2. The human population in communities located in Units 20E, 25B, and 25C, 1960–2010.

US CENSUS POPULATION								
Unit of residence	Community	1960	1970	1980	1990	2000	2010	
		Number of people						Number of households
25C	Central	28	26	36	52	134	96	53
20E	Chicken					17	7	5
20E	Eagle City	92	36	110	168	129	86	41
20E	Eagle Village			54	35	68	67	31
Total		120	62	200	255	348	256	130

Blank=not available Source: ADCCED 2013

skin) snares, but hunters sometimes took them with bows and arrows. Men hunted sheep in late summer and early fall when sheep were fat and their meat was in good condition, and to obtain sheepskins for winter. Tallow-rich ribs were favored and eaten fresh. Women dried much of the meat and cached it for later use and made the skins into sleeping blankets or into warm winter pants and coats. Sheep horns were steamed and bent and made into highly-prized spoons and dippers. Descriptions of sheep were repeated in stories and songs. Interior Alaska Athabascans were known to barter and sell the meat of sheep and other animals to feed people from outside of Alaska who were moving into the area. In years when caribou were not available in significant numbers, moose, sheep, and fish were often taken in larger numbers to compensate. In contemporary times, fall continues to be a an important sheep hunting season (Caulfield 1979, Haynes and Simeone 2007, Mishler and Simeone 2004, McKennan 1981, Pedersen and Caulfield 1981).

Residents of the management units that are, or are the descendants of people, originally from outside Alaska have relied heavily on the take of wild resources in the area, especially the Charley, Kandik, Nation, Tatonduk, Fortymile and Seventymile rivers in the Yukon-Charley Rivers National Preserve, during the twentieth century (see Caulfield 1979).

Eagle Village Sheep Harvests in Units 20E and 25B

The Yukon River flows from Canada and immediately passes by Eagle Village. Eagle Creek and Tatonduk River (also known as Sheep Creek) leave Canada and flow into the Yukon River here. Conversations with Han elder Sarah Malcolm provided documentary evidence of sheep hunting in the area. She remembered that "as a girl, her family hunted sheep during the fall in the Ogilvie. Today, if people want to hunt sheep they go into the Glacier Mountains located south of Eagle or travel up to Eagle Creek in Unit 25B" (Mishler and Simeone 2004:69–70). "Two families would often travel with dogs to camp near the mouth of the Tatonduk River in the fall to hunt sheep and moose" (Caulfield 1979:19). "Two sheep were taken [at

Glacier Mountains] by residents [of Eagle Village] in the fall of 1976. People have also gone up the Charley [River] looking for sheep, although this is not common" (1979: 28). "Sheep come down out of the higher elevation in winter and have been hunted along Mission Creek" (1979:34).

Eagle City Sheep Harvests in Units 20E and 25B

Ethnographic information indicates that subsistence resources used by Eagle City residents included firewood, salmon, moose, bear, sheep, and/or running a trapline in winter. "Eagle people occasionally take Dall sheep, generally from the Glacier Peak area to the west of Eagle. Two sheep were taken there by residents in the fall of 1976. People have also gone up the Charley and Tatonduk Rivers looking for sheep, although this is not as common" (Caulfield 1979:28).

People-Living-along-the-Yukon-River Sheep Harvests in Units 20E and 25B

People living along the river from Circle to Eagle not in an established community in Units 20E, 25B, and 25C were described by Caulfield (1979). "Dall sheep are occasionally taken by river residents from the Charley River and from the Ogilvie Mountains (near Tatonduk River). Two sheep were taken off the Charley River bluffs by river people in 1975, and one Dall sheep has taken from Twin Mountain in the Charley [River drainage] in 1976. Other sheep are occasionally taken from Glacier Peaks near Eagle" (1979: 49). The "river people" were shown to be heavily reliant on a wide range of subsistence resources.

Chalkyitsik Sheep Harvests in Unit 25B

The Black River Gwich'in (or *Tranjik*) primarily occupied the Black River drainage, Little Black River drainage, and Porcupine River drainage in historical times. They spent fall and winter months at the headwaters of the Black River drainage harvesting moose, caribou, and sheep in the mountainous area, specifically at the head of the Salmon Fork of the Black River. "Hunters traveled upstream to the head of navigation in small canoes, and then proceeded overland to sheep hunting areas" (Caulfield 1983:141). They then moved down river for fishing in the spring and summer months. Tranjik settled in the contemporary community of Chalkyitsik. The Black River drainage and Porcupine River drainage, in Unit 25B, continued to be primary subsistence use areas of contemporary Chalkyitsik residents (Van Lanen et al. 2012).

Circle Sheep Harvests in Unit 25B

Residents of Circle were primarily Gwich'in with strong ties to Fort Yukon. They historically hunted sheep from the slopes of Kathul Mountain located on the north side of the Yukon River upriver from Circle (Caulfield 1983). Contemporary Circle residents use primarily both the Yukon Flats National Wildlife Refuge down river, and the Yukon-Charley Rivers National Park upriver to harvest wild resources (Van Lanen et al. 2012).

Dot Lake Village, Healy Lake, Northway, Tanacross, and Tetlin Sheep Harvests in Unit 20E

The historical harvest areas of Tanacross and Upper Tanana Athabascans included the Fortymile River drainage where caribou, moose, and sheep were harvested (Haynes and Simeone 2007). Their descendants reside in the contemporary villages of Dot Lake, Healy Lake, Northway, Tanacross, and Tetlin. Contemporary hunters accessed caribou and moose hunting areas primarily using highway vehicles, boats, and off-road vehicles, including up the Taylor Highway (Holen et al. 2012).

Harvest Reporting Systems

The Alaska Department of Fish and Game and U.S. Fish and Wildlife Service (ADF&G/FWS) maintain a harvest reporting database (FWS 2013). However, complete records were not kept until the mid-1980s, and it is likely that some hunters have not reported their harvests (see the discussions in Van Lanen et al. 2012 and Anderson and Alexander 1992 for an understanding).

There is a State general hunt for sheep in all three units, Units 20E, 25B, and 25C. Additionally, the Alaska Department of Fish and Game distributes draw permits to hunt sheep in the Mount Harper area of Unit 20E (see **Table 3** and **Table 4** for seasons and harvest limits).

Table 3. Unit 20E—*State of Alaska* hunting regulations for residents and nonresidents of the state since 2000.

STATE OF ALASKA HUNTING REGULATIONS Unit 20E Sheep			
Regulatory Year	**Management Unit**	**Hunt Type**	**Harvest Limit/Season**
2007–2012 *Nonresident hunters must be accompanied by a guide*	20D/20E north of the Alaska Hwy; and north and west of the north bank of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage	Draw	1 ram with full-curl horn or larger Aug. 10–Sept. 20
	20 remainder	Harvest Ticket	1 ram with full-curl horn or larger, Aug. 10–Sept. 20
2000–2006 *Nonresident hunters must be accompanied by a guide*	20E encompassing Mt. Harper south of Joseph Creek and the headwaters of the Charley River	Draw	1 ram with full-curl horn or larger Aug. 10–Sept. 20
	20 remainder	Harvest Ticket	1 ram with full-curl horn or larger Aug. 10–Sept. 20

Unit 20E Reported Harvest of Sheep

Sheep in Tanana Hills in Unit 20E comprise several small groups separated by unsuitable habitat. Most sheep habitat in the area is remote and difficult to access. Sheep are described as two populations: Mount

Harper, requiring a State drawing permit; and Tanana Hills, all other sheep, requiring a State harvest ticket. Most sheep hunters in Unit 20E were residents of the state. No motorized access is allowed in the Glacier Mountain Controlled Use Area, adjacent to Eagle. Most hunters used aircraft (DuBois 2011). In 2012, 273 people applied for the drawing permit to hunt sheep around Mount Harper, and 4 permits were available, a 1% draw rate (ADF&G 2013). Almost all of the sheep harvest reported in Unit 20E occurred through the general hunt.

Table 4. Unit 25B and 25C—*State of Alaska* hunting regulations for residents and nonresidents of the state since 2000.

STATE OF ALASKA HUNTING REGULATIONS Units 25B and 25C Sheep			
Regulatory Year	**Hunt Type**	**Season**	**Harvest Limit**
2000–2012 *Nonresident hunters must be accompanied by a guide*	Harvest Ticket	Aug. 10–Sept. 20	1 ram with full-curl horn or larger

Table 5 is based on the ADF&G/FWS harvest reporting database and shows that people from all over Alaska have harvested or tried to harvest sheep in Unit 20E since 1983. It is clear that residents of rural communities were responsible for much of the hunting effort (102 of 448 hunters, about 23%) and sheep taken (32 of 149 sheep, about 22%) (see **Table 6).** (It should be noted that Healy Lake does not have a post office and its harvest is not enumerated by the ADF&G/FWS harvest reporting database.)

Additionally, in 2011, the community of Tok harvested an estimated 17 sheep in September based on the results of a household harvest survey. The location of harvest was not reported for each sheep but Tok residents described generally harvesting sheep and caribou from the Taylor Highway north to Eagle and east to the border with Canada in Unit 20E (Holen et al. 2012).

Unit 25B Reported Harvest of Sheep

Most sheep hunters in Unit 25B were Alaska residents. Hunting occurred primarily in an area in the southeastern portion of Unit 25B, between the Yukon River and the Canada border. Most of the area is in the Yukon-Charley Rivers National Preserve. All of the reported harvests by Eagle residents in Unit 25B (4 sheep) were taken there (see **Table 7).** The area is adjacent to the communities of Eagle City and Eagle Village.

Table 7 is based on the ADF&G/FWS harvest reporting database and shows that people from all over Alaska have harvested or tried to harvest sheep in Unit 25B since 1983 (FWS 2013). It is clear that residents of rural communities were responsible for much of the hunting effort (25 of 145 hunters, about 17%) and sheep taken (10 of 52 sheep, about 19%) (see **Table 8)**.

Unit 25C Reported Harvest of Sheep

Table 9 is based on the ADF&G/FWS harvest reporting database and shows that people from all over Alaska have harvested or tried to harvest sheep in Unit 25C since 1983 (FWS 2013). It is clear that residents of rural communities were responsible for a small portion of the hunting effort (34 of 921 hunters, about 4%) and sheep taken (10 of 171 sheep, about 6%) (see **Table 10)**.

Table 5. Unit 20E: the harvest of sheep by residents and nonresidents of Alaska, based on the ADF&G/FWS reporting system, 1983–2010 cumulative.

UNIT 20E SHEEP HARVEST 1983–2010							
Unit of residence	**Community**	**Number of hunters**	**Number of sheep harvested**		**Unit of residence**	**Community**	**Number of hunters**	**Number of sheep harvested**
	Nonresident	39	27		14C	Eagle River	11	1
	Residency unknown	4	2		14C	Fort Richardson	1	0
1C	Juneau	30	11		15A	Kenai	1	0
1C	Auke Bay	2	1		15A	Nikiski	1	0
1C	**Gustavus**	7	2		15A	Soldotna	7	3
1D	**Haines**	1	0		15C	Homer	5	4
3	**Wrangell**	1	0		15C	**Ninilchik**	1	0
3	**Petersburg**	3	2		15C	Anchor Point	1	1
4	**Sitka**	5	1		16A	Trapper Creek	1	0
6D	Valdez	6	1		20A	**Nenana**	2	0
8	**Kodiak**	3	1		20B	Ester	1	1
9C	**King Salmon**	1	0		20B	Fairbanks	105	32
9D	**Cold Bay**	1	1		20B	North Pole	24	8
12	**Tok**	28	11		20B	Two Rivers	5	4
13A	**Chickaloon**	2	1		20B	Eielson AFB	14	7
14A	Palmer	5	2		20B	Fort Wainwright	11	0
14A	Wasilla	11	1		20D	**Delta Junction**	7	2
14A	Big Lake	2	0		20D	**Fort Greely**	1	0
14B	**Talkeetna**	1	0		20E	**Eagle**	29	11
14C	Chugiak	6	1		25C	**Central**	5	0
14C	Anchorage	53	10		25D	**Circle**	4	0
	(*continue next column*)					TOTAL	448	149

Bold=rural communities.

Source: FWS 2013

Summary

Table 11 describes the interior Alaska communities for which an effort to harvest sheep in Units 20E, 25B, or 25C has been documented based in the ADF&G/FWS harvest reporting database and ethnographic descriptions that were described above. There is no available information indicating that the harvests by rural residents of communities outside of interior Alaska should be included in the customary and traditional use determination for sheep. Rural residents from outside of interior Alaska who hunt sheep in Units 20E, 25B, or 25C may be reasonably excluded from a customary and traditional use determination.

Table 6. Unit 20E: the harvest of sheep by residents of only *rural* communities, based on the ADF&G/FWS reporting system, 1983–2010 cumulative.

UNIT 20E SHEEP HARVEST 1983–2010			
Unit of Residence	***Rural* Community**	**Number of hunters**	**Number of sheep harvested**
01C	Gustavus	7	2
01D	Haines	1	0
3	Wrangell	1	0
3	Petersburg	3	2
4	Sitka	5	1
8	Kodiak	3	1
09C	King Salmon	1	0
09D	Cold Bay	1	1
12	Tok	28	11
14A	Chickaloon	2	1
14B	Talkeetna	1	0
15C	Ninilchik	1	0
20A	Nenana	2	0
20D	Delta Junction	7	2
20D	Fort Greely	1	0
20E	Eagle	29	11
25C	Central	5	0
25D	Circle	4	0
	TOTAL	102	32

Source: FWS 2013.

Three appendices contain information to help evaluate who is eligible to be included in a customary and traditional use determination for sheep**. Appendix A** describes the customary and traditional use determinations for other resources (brown bear, moose, and caribou) in the management units. **Appendix B** describes customary and traditional use determinations for sheep in surrounding units. **Appendix C** describes the areas used to hunt sheep.

Unit 20E Summary

Most sheep habitat in Unit 20E is remote and difficult to access. Hunting sheep in the Mount Harper area requires a State draw permit that is difficult to get, and motorized vehicles are not allowed in the Glacier

Mountain Controlled Use Area. The Glacier Mountain area has been used by nearby Eagle City and Eagle Village; and Dot Lake Village, Healy Lake, Northway, Tanacross, and Tetlin have used tributaries of the Fortymile River to access nearby sheep habitat, as described by residents and documented in ethnographic accounts (Caulfield 1979, Haynes and Simeone 2007, Mishler and Simeone 2004). Hunting records begin in 1983. Most successful hunters were residents of nonrural areas (see **Table 5**) who used airplanes to access sheep habitat (DuBois 2011). The drawing permit hunt and prohibitions against motorized access in some areas likely limited the harvest of sheep by rural residents of the state.

Table 7. Unit 25B: the harvest of sheep by residents and nonresidents of Alaska, based on the ADF&G/FWS reporting system, 1983–2010 cumulative.

UNIT 25B SHEEP HARVEST 1983–2010			
Unit of residence	**Community**	**Number of hunters**	**Number of sheep harvested**
	Nonresident	16	10
	Unknown	3	0
01C	Auke Bay	2	1
01C	Douglas	1	0
01C	**Gustavus**	1	0
01C	Juneau	4	0
04	**Sitka**	1	0
06D	Valdez	6	6
09D	**Cold Bay**	1	1
12	**Tok**	2	2
14A	Palmer	5	2
14A	Wasilla	15	7
14C	Anchorage	26	5
14C	Eagle River	18	4
20B	Fairbanks	22	8
20B	North Pole	2	0
20D	**Delta Junction**	1	1
20D	**Dot Lake**	1	0
20E	**Eagle**	17	4
23	**Kotzebue**	1	1
TOTAL		145	52

Bold=rural communities.
Source: FWS 2013

Table 11 shows the rural interior Alaska communities for which an effort to harvest sheep in Unit 20E has been documented (based on the ADF&G/FWS harvest reporting database and ethnographic descriptions that were described above). They are Northway, Tetlin, and Tok in Unit 12; Nenana in Unit 20A; Dot Lake Village, Delta Junction, Fort Greely, Healy Lake, and Tanacross in 20D; Eagle City and Eagle Village in 20E; Central in 25C; and Circle in 25D.

Table 8. Unit 25B: the harvest of sheep by residents of only *rural* communities, based on the ADF&G/FWS reporting system, 1983–2010 cumulative.

UNIT 25B SHEEP HARVEST 1983–2010			
Unit of residence	***Rural* community**	**Number of hunters**	**Number of sheep harvested**
01C	Gustavus	1	0
04	Sitka	1	0
09D	Cold Bay	1	1
12	Delta Junction	1	1
12	Tok	2	2
20D	Dot Lake	1	0
20E	Eagle	17	4
23	Kotzebue	1	1
TOTAL		25	10

Source: FWS 2013.

Unit 25B Summary

Hunting for sheep in Unit 25B occurs primarily in the southeastern portion, which is adjacent to Eagle City and Eagle Village, with a harvest permit. The majority of sheep were taken by nonrural residents of the state (see **Table 7**). The mountainous sheep habitat near the headwaters of the Salmon Fork of the Black River have been used by Chalkyitsik to take sheep. The area of Kathul Mountain has been used by residents of Circle to take sheep (Caulfield 1979). **Table 11** shows the rural interior Alaska communities for which an effort to harvest sheep in Unit 25B has been documented (based in the ADF&G/FWS harvest reporting database and ethnographic descriptions described above). They include Tok in Unit 12; Delta Junction, Dot Lake, and Dot Lake Village in Unit 20D; Eagle City and Eagle Village in Unit 20E; and Chalkyitsik and Circle in Unit 25D.

Unit 25C Summary

Most sheep habitat is in the White Mountains area within the White Mountains National Recreational Area, and the majority of sheep are taken by nonrural Alaska residents (see **Table 9**). Since 1988, most of the range has been closed to off-road vehicles, and the majority of successful hunters accessed the area by plane (Hollis 2011). The community of Central is adjacent to the area. Customary and traditional takes of sheep have likely been impacted by prohibitions against motorized access. **Table 11** shows the rural interior Alaska communities for which an effort to harvest sheep in Unit 25C has been documented (based in the ADF&G/FWS harvest reporting database and ethnographic descriptions described above). They include Tok in Unit 12; Anderson and Nenana in Unit 20A; Denali National Park Headquarters in Unit 20C; Eagle City and Eagle Village in Unit 20E; Rampart in Unit 20F; and Central in Unit 25C.

Table 9. Unit 25C: the harvest of sheep by residents and nonresidents of Alaska, based on the ADF&G/FWS reporting system, 1983–2010 cumulative ("Z" indicates the subunit was not reported).

UNIT 25C SHEEP HARVEST 1983–2010							
Unit of residence	**Community**	**Number of hunters**	**Number of sheep harvested**	**Unit of residence**	**Community**	**Number of hunters**	**Number of sheep harvested**
	Nonresident	24	7	15A	Sterling	2	0
	Unknown	8	3	15C	Anchor Point	4	0
01C	Juneau	2	0	15C	Homer	3	0
01D	**Haines**	1	0	16A	Trapper Creek	1	0
01D	**Klukwan**	1	1	17C	**Dillingham**	5	2
04	**Sitka**	4	2	18	**Nunapitchuk**	1	1
06D	Valdez	2	0	19A	**Chuathbaluk**	1	0
08Z	**Kodiak**	4	1	20A	**Anderson**	1	0
09B	**Port Alsworth**	2	0	20A	**Nenana**	4	0
12	**Tok**	1	0	20B	Eielson AFB	25	1
13D	**Copper Center**	1	0	20B	Ester	5	0
14A	Big Lake	2	1	20B	Fairbanks	555	114
14A	Palmer	11	0	20B	Fort Wainwright	42	6
14A	Sutton	1	0	20B	North Pole	119	12
14A	Wasilla	12	1	20B	Salcha	9	0
14C	Anchorage	34	6	20B	Two Rivers	2	0
14C	Chugiak	5	2	20C	**Denali National Park Hdqters**	1	0
14C	Eagle River	9	3	20E	**Eagle**	1	1
14C	Fort Richardson	4	2	20F	**Rampart**	1	0
15A	Kenai	2	1	23	**Kotzebue**	1	1
15A	Soldotna	4	2	25C	**Central**	4	1
	(*continue next column)*			TOTAL		921	171

Bold=rural communities.

Source: FWS 2013

Table 10. Unit 25C: the harvest of sheep by residents of only *rural* communities, based on the ADF&G/FWS reporting system, 1983–2010 cumulative.

UNIT 25C SHEEP HARVEST 1983–2010			
Unit of residence	***Rural* community**	**Number of hunters**	**Number harvested**
01D	Haines	1	0
01D	Klukwan	1	1
04	Sitka	4	2
08	Kodiak	4	1
09B	Port Alsworth	2	0
12	Tok	1	0
13D	Copper Center	1	0
17C	Dillingham	5	2
18	Nunapitchuk	1	1
19A	Chuathbaluk	1	0
20A	Anderson	1	0
20A	Nenana	4	0
20C	Denali National Park	1	0
20E	Eagle	1	1
20F	Rampart	1	0
23	Kotzebue	1	1
25C	Central	4	1
TOTAL		34	10

Source: FWS 2013

Table 11. The rural interior Alaska communities for which an effort to harvest sheep in Units 20E, 25B, or 25C has been documented (based in the ADF&G/FWS harvest reporting database and ethnographic descriptions).

2010 US CENSUS			
Unit of Residence	**Community**	**Number of people**	**Number of households**
Unit 20E			
12	Northway Village	98	30
12	Northway Junction	54	20
12	Tanacross	136	53
12	Tetlin	127	43
12	Tok	1,258	532
20A	Nenana	378	171
20D	Delta Junction	958	377
20D	Dot Lake Village	63	19
20D	Fort Greely	539	236
20D	Healy Lake	13	7
20E	Eagle City	86	41
20E	Eagle Village	67	31
25C	Central	96	53
25D	Circle	104	40
Unit 25B			
12	Tok	1,258	532
20D	Delta Junction	958	377
20D	Dot Lake	13	7
20D	Dot Lake Village	62	19
20E	Eagle City	86	41
20E	Eagle Village	67	31
25D	Chalkyitsik	69	24
25D	Circle	104	40
Unit 25C			
12	Tok	1,258	532
20A	Anderson	246	90
20A	Nenana	378	171
20C	Denali National Park Hdq	unknown	unknown
20E	Eagle City	86	41
20E	Eagle Village	67	31
20F	Rampart	24	10
25C	Central	96	53

Effects of the Proposal

If the proposal is adopted, those eligible to hunt sheep under Federal regulations in Units 25B and 25C would *increase* from *no* rural residents of the state to residents of Units 20E, 25B, and 25C. In contrast, eligibility to hunt sheep under Federal regulations in Unit 20E, would be *reduced* from *all* rural residents of the state, to residents of only Units 20E, 25B, and 25C. This would have no effect on people's eligibility to hunt sheep under State regulations. People could continue to hunt sheep under State regulations.

If this proposal is not adopted, there would continue to be no priority for rural residents of the state to hunt sheep in Units 25B and 25C, and the Board would be unable to adopt Federal hunting seasons. The priority for sheep hunting in Unit 20E would continue to include all rural residents of the state, and the Board could go forward and adopt a hunting season and harvest limit for sheep in Unit 20E.

OSM PRELIMINARY CONCLUSION

Support Proposal WP14-42 with **modification** to recognize the customary and traditional uses of sheep by residents of rural interior Alaska for which customary and traditional uses have been documented, based on harvest reporting systems and ethnographic descriptions.

The modified regulation would read:

Customary and Traditional Use Determinations—Sheep

Unit 20E	~~*All rural residents.*~~ ***Rural Residents of Units 20E, 25B, 25C, and Circle, Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok***
Unit 25B	~~*No Federal subsistence priority*~~ ***Rural Residents of Units 20E, 25B, 25C, and Chalkyitsik and Circle***
Unit 25C	~~*No Federal subsistence priority*~~ ***Rural Residents of Units 20E, 25B, 25C***

Justification

Rural residents of Units 20E, 25B, and 25C exemplify customary and traditional uses of sheep in the Yukon-Charley Rivers National Preserve. Documented evidence in the harvest reporting database from 1983–2010 and ethnographic accounts demonstrate this.

Ethnographic documentation was heavily weighted towards descriptions of Han, Gwich'in, Tanacross, and Upper Tanana Athabascan customary and traditional uses. The Gwich'in community at Chalkyitsik was shown to rely on the Black River drainage where they harvested sheep (Caulfield 1983). The area continues to be an important harvesting area for wild resources (Van Lanen et al. 2012). The contemporary

community of Circle that was settled by Gwich'in was shown to hunt sheep at Kathul Mountain historically (Caulfield 1979), and Circle residents continue to use the Yukon-Charley Rivers National Preserve to harvest sheep and other wild resources (Van Lanen et al. 2012). The contemporary communities of Dot Lake Village, Healy Lake, Northway Village, Tanacross, and Tetlin were settled by Tanacross and Upper Tanana Athabascans who used the Fortymile River drainage to harvest sheep and other resources historically (Haynes and Simeone 2007) and continue to use the area to harvest caribou and moose (Van Lanen et al. 2012). Additionally, some documentation existed that residents not associated with established communities, mostly living along the Yukon River, are also eligible to be considered in the proposed customary and traditional use determinations for sheep. They were known to rely heavily on subsistence harvests that included harvests of sheep in the Yukon-Charley Rivers National Preserve (Caulfield 1979).

All interior Alaska communities larger than 500 residents were represented in the harvest reporting databases except Fort Yukon (see **Table 11**). They are Delta Junction, Fort Greely, and Tok. Except for Tok, the reported use by them was minimal since 1983 (see **Table 6**, **Table 8**, and **Table 10)**. Additionally, minimal use was demonstrated by the smaller communities of Anderson, Nenana, Rampart, and the Denali National Park Headquarters. Ethnographic descriptions of their subsistence uses in the Yukon-Charley Rivers National Preserve, or on other Federal public lands in Units 20E, 25B, or 25C, were not found, and the analysis conclusion does not include them in the customary and traditional use determinations for sheep in Units 20E, 25B, or 25C.

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP14-42 with **modification** to recognize the customary and traditional uses of sheep by residents of rural interior Alaska for which customary and traditional uses have been documented, based on harvest reporting systems and ethnographic descriptions.

The modified regulation would read:

Customary and Traditional Use Determinations—Sheep

Unit 20E	~~*All rural residents.*~~ ***Rural Residents of Units 20E, 25B, 25C, 25D and Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok***
Unit 25B	~~*No Federal subsistence priority*~~ ***Rural Residents of Units 20E, 25B, 25C, and 25D***
Unit 25C	~~*No Federal subsistence priority*~~ ***Rural Residents of Units 20E, 25B, 25C, and 25D***

Justification

Rural residents of Units 20E, 25B, and 25C exemplify customary and traditional uses of sheep in the Yukon-Charley Rivers National Preserve. Documented evidence in the harvest reporting database from 1983–2010 and ethnographic accounts demonstrate this.

Ethnographic documentation was heavily weighted towards descriptions of Han, Gwich'in, Tanacross, and Upper Tanana Athabascan customary and traditional uses. The Gwich'in community at Chalkyitsik was shown to rely on the Black River drainage where they harvested sheep (Caulfield 1983). The area continues to be an important harvesting area for wild resources (Van Lanen et al. 2012). The contemporary community of Circle that was settled by Gwich'in was shown to hunt sheep at Kathul Mountain historically (Caulfield 1979), and Circle residents continue to use the Yukon-Charley Rivers National Preserve to harvest sheep and other wild resources (Van Lanen et al. 2012). The Eastern Interior Council determined that the Gwich'in communities situated in Unit 25D, in addition to Chalkyitsik and Circle (Fort Yukon, Venetie, Birch Creek, Beaver, and Stevens Village) have demonstrated customary and traditional uses of sheep in Units 20E, 25B, and 25C.]The contemporary communities of Dot Lake Village, Healy Lake, Northway Village, Tanacross, and Tetlin were settled by Tanacross and Upper Tanana Athabascans who used the Fortymile River drainage to harvest sheep and other resources historically (Haynes and Simeone 2007) and continue to use the area to harvest caribou and moose (Van Lanen et al. 2012). Additionally, some documentation existed that residents not associated with established communities, mostly living along the Yukon River, are also eligible to be considered in the proposed customary and traditional use determinations for sheep. They were known to rely heavily on subsistence harvests that included harvests of sheep in the Yukon-Charley Rivers National Preserve (Caulfield 1979).

All interior Alaska communities larger than 500 residents were represented in the harvest reporting databases except Fort Yukon (see **Table 11**). They are Delta Junction, Fort Greely, and Tok. Except for Tok, the reported use by them was minimal since 1983 (see **Table 6**, **Table 8**, and **Table 10)**. Additionally, minimal use was demonstrated by the smaller communities of Anderson, Nenana, Rampart, and the Denali National Park Headquarters. Ethnographic descriptions of their subsistence uses in the Yukon-Charley Rivers National Preserve, or on other Federal public lands in Units 20E, 25B, or 25C, were not found, and the analysis conclusion does not include them in the customary and traditional use determinations for sheep in Units 20E, 25B, or 25C.

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APPENDIX A

Appendix A. Existing customary and traditional use determinations for *brown bear, moose*, and *caribou*, for rural interior Alaska communities for which an effort to harvest sheep in Units 20E, 25B, or 25C has been documented (based on harvest reporting databases and ethnographic information described in the analysis).

CUSTOMARY AND TRADITONAL USE DETERMINATIONS				
Unit of residence	**Rural community**	**Brown bear**	**Moose**	**Caribou**
MANAGEMENT UNIT 20E				
12	Northway	Yes	Yes	Yes
12	Tanacross	Yes	Yes	Yes
12	Tetlin	Yes	Yes	Yes
12	Tok	Yes	Yes	Yes
20A	Nenana			
20D	Delta Junction	Yes		Yes
20D	Dot Lake	Yes	Yes	Yes
20D	Fort Greely			Yes
20D	Healy Lake		Yes	Yes
20E	Eagle		Yes	Yes
25C	Central		Yes	
25D	Circle		Yes	
MANAGEMENT UNIT 25B				
12	Tok		nd	
20D	Delta Junction		nd	
20D	Dot Lake		nd	
20E	Eagle	Yes	nd	
25D	Chalkyitsik	Yes	nd	Yes
25D	Circle	Yes	nd	Yes
MANAGEMENT UNIT 25C				
12	Tok		nd	
20A	Anderson		nd	
20A	Nenana		nd	
20C	Denali National Pk. Hq.		nd	
20E	Eagle	Yes	nd	
20F	Rampart		nd	
25C	Central	Yes	nd	Yes

nd=No customary and traditional use determination. All rural residents are eligible to harvest moose under Federal regulations.

APPENDIX B

Appendix B. Sheep: existing customary and traditional use determinations for *sheep*, rural interior Alaska communities for which an effort to harvest sheep in Units 20E, 25B, or 25C has been documented (based on harvest reporting databases and ethnographic information described in the analysis).

SHEEP		
Unit of residence	**Rural community**	**Customary and traditional use determination for sheep**
12	Northway	Units 11 (north of Sanford River) and 12
12	Tanacross	Units 11 (north of Sanford River) and 12
12	Tetlin	Units 11 (north of Sanford River) and 12
12	Tok	Units 11 (north of Sanford River) and 12
20A	Anderson	
20A	Nenana	
20C	Denali National Park Headquarters	
20D	Delta Junction	
20D	Dot Lake	Units 11 (north of Sanford River) and 12
20D	Fort Greely	
20D	Healy Lake	Units 11 (north of Sanford River) and 12
20F	Rampart	
20E	Eagle City	
20E	Eagle City	
25C	Central	
25D	Chalkyitsik	Units 25A, 26A, and 26C
25D	Circle	

APPENDIX C

Appendix C. Sheep hunting areas based on the FWS/ADF&G harvest reporting system, 1983–2010. (Rural interior Alaska communities for which an effort to harvest sheep in Units 20E, 25B, or 25C has been documented, based on harvest reporting databases and ethnographic information described in the analysis.)

SHEEP HARVEST AREAS 1983–2010			
Unit of residence	**Community**	**Management unit hunted**	**Unit most used**
12	Northway and Northway Junction	11	
12	Tanacross	20D	
12	Tetlin	11, 12	
12	Tok	06, 07, 11, 12, 13, 14A, 14B, 14C, 20D, **20E**, 20F, 24A, 25A, **25B, 25C**, 26B, 26C	11, 12
20A	Anderson	7, 11, 12, 13, 14C, 20A, 20C, 20D, **25C**, 26B	20A
20A	Nenana	7, 11, 12, 13, 14, 15B, 15C,19C, 20A, 20C, 20D, **20E**, 24A, 25A, **25C**, 26B, 26C	20A
20C	Denali National Park Headquarters	11, 12, 13, 14A, 14C, 19C, 20A, 20C, 20D, 20F, 25A, **25C**, 26B	20A
20D	Delta Junction	11, 12, 13, 14A, 14C, 19C, 20A, 20B, 20C, 20D, **20E**, 23, 24A, 25A, **25B**, 26B, 26C	12, 13, 20A, 20D
20D	Dot Lake and Dot Lake Village	12, 20D, **25B**	
20D	Fort Greely	11, 12, 13, 14C, 16B, 20A, 20D, **20E**, 24A, 25A, 26A, 26B, 26C	20A, 20D
20D	Healy Lake	Not covered by harvest reporting system	
20F	Rampart	20A, **25C**, 26B	
20E	Eagle City and Eagle Village	11, **20E, 25B, 25C**	**25B**
25C	Central	12, 14, 20A, **20E, 25C**, 26C	26C
25D	Chalkyitsik	None reported	
25D	Circle	**20E**, 25A, 26B, 26C	

Bold=Unit in the request.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP14-42 **with modification** to recognize the customary and traditional uses of sheep by residents of additional areas and communities.

Customary and Traditional Use Determinations—Sheep

Unit 20E	~~All rural residents~~ **Rural residents of Units 20E, 25B, 25C, 25D and Dot Lake, Healy Lake, Northway, Tanacross, Tetlin, and Tok**
Unit 25B and 25C	~~No Federal subsistence priority~~ **Rural residents of Units 20E, 25B, 25C, and 25D**

JUSTIFICATION: WP14-42 was submitted by the Eastern Interior Regional Advisory Council. Eagle resident, council member Donald Woodruff notes this is long term use of sheep in the region and oral history in the area supports long distance travel overland with return by skin boat in order to hunt sheep in these areas. Council concurs C&T should be recognized based on the importance of sheep for subsistence and recognition of greater importance during times of Chinook decline.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-42: These [Proposals WP14-42 and WP14-43] proposals allow traditional use of the resource by Federally qualified subsistence users a long documented tradition since early 1900 by the local people.

Donald Woodruff, Eagle

WP14-43 Executive Summary	
General Description	Proposal WP14-43 requests establishment of a hunting season and harvest limit for sheep in Units 20E, 25B, 25C, and 25D . *Submitted by the Eastern Interior Subsistence Regional Advisory Council*
Proposed Regulation	**WP14-43** **Unit 20 – Sheep** **Unit 20E – 1 ram with full-curl horn or larger** ***Aug. 10 – Sept. 20*** Unit 20 **remiander** *No Federal open season* **Unit 25 – Sheep** **Unit 25B –** ~~No Federal open season~~**1 ram with full-curl horn or larger** ***Aug. 10 – Sept. 20*** **Unit 25C –** ~~No Federal open season~~**1 ram with full-curl horn or larger** ***Aug. 10 – Sept. 20*** **Unit 25D –** ~~No Federal open season~~**1 ram with full-curl horn or larger** ***Aug. 10 – Sept. 20***
OSM Conclusion	**Support** Proposal WP14-43.
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	**1 Support**

STAFF ANALYSIS
WP14-43

ISSUES

Proposal WP14-43, submitted by the Eastern Interior Subsistence Regional Advisory Council, requests establishment of a hunting season and harvest limit for sheep in Units 20E, 25B, 25C, and 25D.

DISCUSSION

The proponent states that there is a need to establish a season for sheep in Units 20E, 25B, 25C, and 25D as there are currently no Federal open seasons and establishing a Federal season in these units would provide for a subsistence priority over other uses on Federal public lands. The proposed regulatory changes would also align with current State seasons and harvest limits.

Note: A companion proposal WP14-42, requests a customary and traditional use determination for sheep in Units 20E and 25B and 25C.

Existing Federal Regulation

Unit 20 – Sheep

No Federal open season.

Unit 25 – Sheep

Units 25B, 25C, and 25D	*No Federal open season*

Proposed Federal Regulation

Unit 20 – Sheep

Unit 20E – 1 ram with full-curl horn or larger	***Aug. 10 – Sept. 20***
Unit 20 ***remiander***	*No Federal open season*

Unit 25 – Sheep

Unit 25B – ~~No Federal open season~~1 ram with full-curl horn or larger Aug. 10 – Sept. 20

Unit 25C – ~~No Federal open season~~1 ram with full-curl horn or larger Aug. 10 – Sept. 20

Unit 25D – ~~No Federal open season~~1 ram with full-curl horn or larger Aug. 10 – Sept. 20

Existing State Regulation

Unit 20E — Sheep

Residents and nonresidents – one ram with full-curl horn or larger by drawing permit *Aug. 10 – Sept. 20*

Unit 20 remainder — Sheep

Residents and nonresidents – one ram with full-curl horn or larger *Aug. 10 – Sept. 20*

Unit 25 remainder – Sheep

Residents and nonresidents – one ram with full-curl horn or larger *Aug. 10 – Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 30% of Unit 20E and consist of 21% National Park Service (NPS) managed lands and 9% Bureau of Land Management (BLM) managed lands (**Unit 20 Map**).

Federal public lands compromise approximately 70% of Unit 25 and consist of 56% US Fish and Wildlife Service managed lands, 12% BLM lands, and 2% NPS managed lands (**Unit 25 Map**).

Customary and Traditional Use Determinations

The customary and traditional use determination for sheep in Unit 20 includes all rural residents (see Staff Analysis WP14-42).

There is no customary and traditional use determination for sheep in Units 25B and 25C (see Staff Analysis WP14-42). All rural residents have a customary and traditional use determination for sheep in Unit 25D.

Regulatory History

Since the beginning of the Federal subsistence management program in 1990, there has never been a Federal hunting season for sheep in either Unit 20 or in Units 25B, 25C, and 25D.

Biological Background

The Dall sheep population in Units 20B, 20D, and 20E is composed of several small, discrete subpopulations that are somewhat isolated from one another by large areas of unsuitable habitat. Much of the sheep habitat in this area is remote and difficult to access and there has been little historical use of the sheep populations (DuBois 2011). Subpopulations outside of Yukon-Charley Rivers National Preserve are centered around Mount Harper, Glacier Peak, and West Point (Herriges 2013, pers. comm.). Between 2003 and 2009, sheep surveys were flown on the Mount Harper-upper Goodpaster River portion of Unit 20E. During that time, a total of 78–108 sheep were counted with six to ten legal rams and between 11 and 35 lambs per 100 ewes (DuBois 2011).

The Glacier Mountain Controlled Use Area within Unit 20E has a somewhat isolated sheep population. Sheep surveys have been flown in the area in 1981, 82, 92, 93, and 1998-2005. An average of 76 sheep were observed during these surveys with an average of 4 legal rams as well. Twelve years of harvest data collected between 1996 and 2012 showed an average of 2.2 legal rams being harvested from the area (Gronquist 2013, pers. comm.).

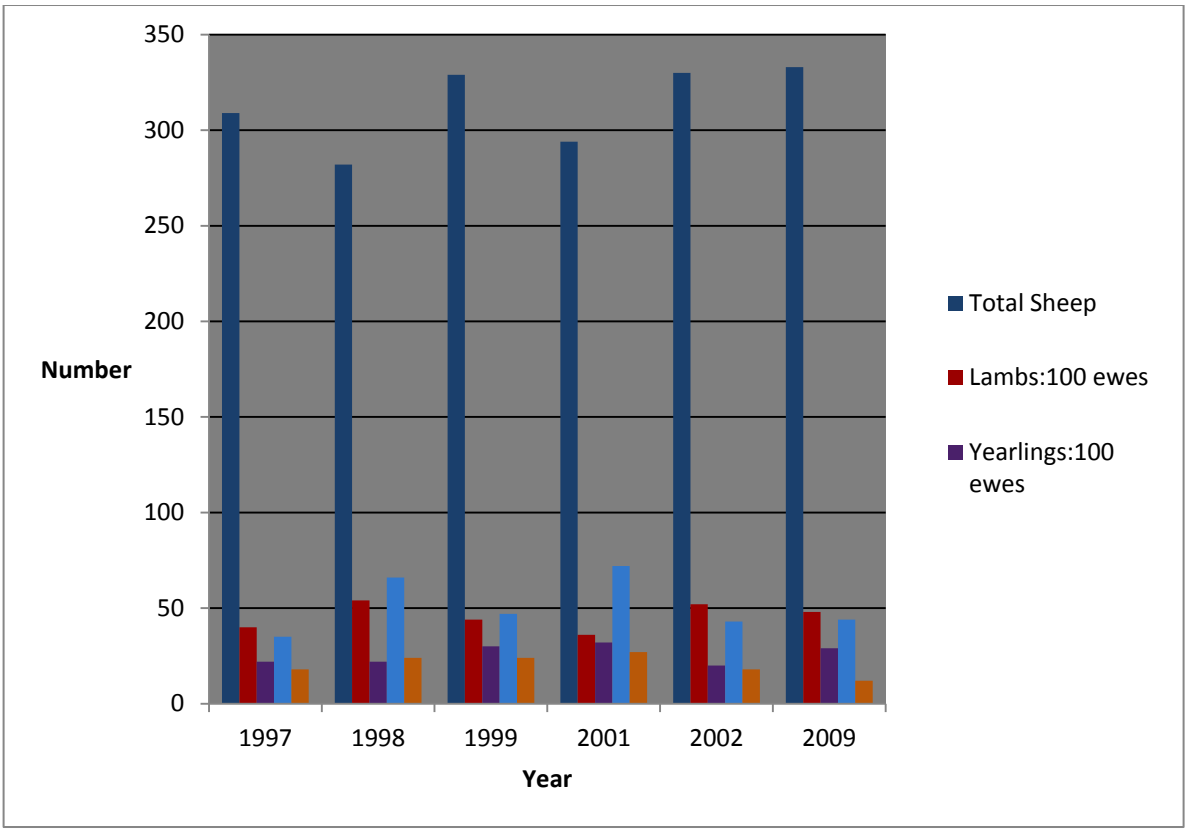

Figure 1. Sheep population trends for all 7 survey units in Yukon-Charley Rivers National Preserve (Burch 2010).

There is also a small population of sheep that ranges between West Point in the Upper Salcha River drainage and Big Windy Creek in the Steese National Conservation Area (NCA). The West Point portions

of this population inhabit Unit 20B and the Steese NCA portions of Unit 25C. Movement occurs between this subpopulation and those within Yukon Charley Rivers National Preserve to the east (Herriges 2013, pers. comm.).

Yukon-Charley Rivers National Preserve covers portions of Units 20E, 25B, and 25C. Dall sheep inhabit the mountains in the southwestern portion of the preserve, and the bluffs and hills along the Charley River, upper Seventymile River and upper Woodchopper Creek areas. Sheep also occur in the northeastern portion of the preserve in the Ogilvie Mountains along the Alaska-Canada border (Burch 2010). Sheep surveys were flown in the southwestern portion of the preserve between 1983 and 2009. However, due to extensive and frequent movement of sheep between survey units, evaluating trends from these surveys is difficult at best, especially years when the entire survey area was not flown (Burch 2010). With this in mind, Burch (2010) stated that comparable years include 1997, 1998, 1999, 2001, 2002, and 2009. Based on these surveys, the sheep population appears stable with good lamb survival and yearling recruitment (**Figure 1**) (Burch 2010).

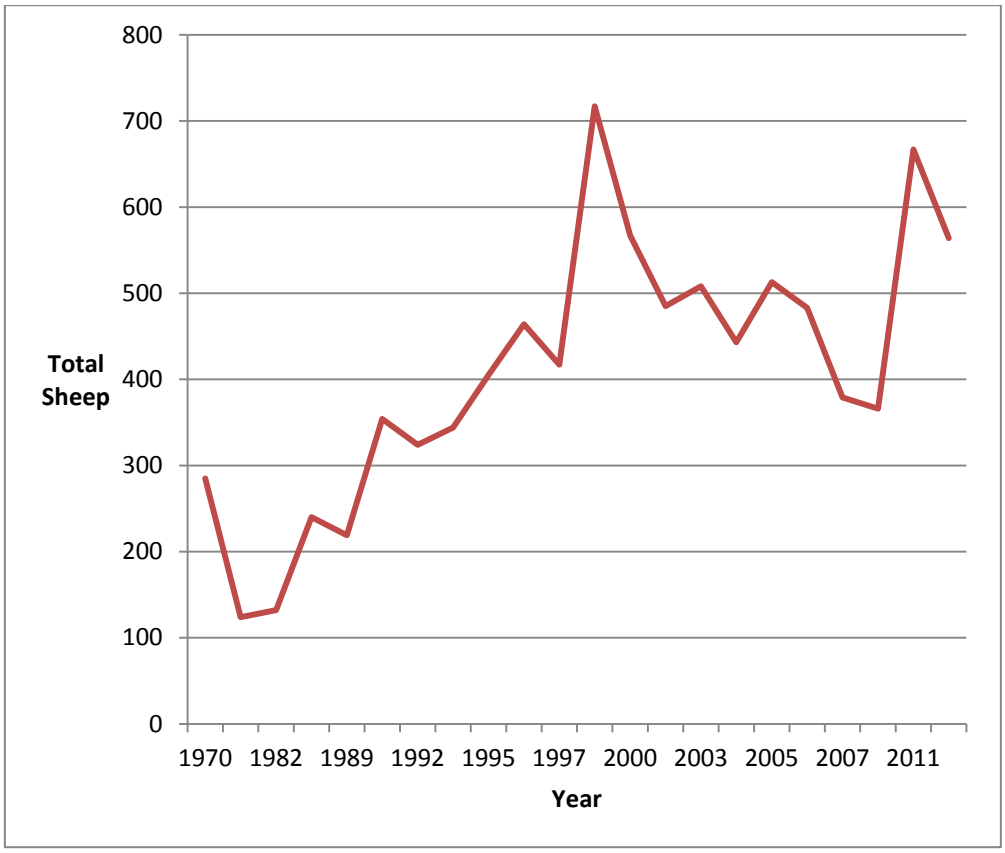

Figure 2. White Mountains aerial sheep counts, 1970-2008 (DuBois 2011).

Dall sheep populations in the White Mountains (portions of Units 20B, 20F, 25C and 25D) are the largest involved in this proposal, with little reported harvest until recent decades. However, beginning in 1980, sheep harvest started to increase, peaking in the late 1990s and 2000s (Seaton 2008). Survey data indicated that sheep populations increased from a low in 1977 to a peak in 1999. Population numbers have remained in the upper portion of that range from 2000 through 2012 (**Figure 2** and Herriges 2013, pers.

comm.). The mean ratio of lambs:ewes was 26:100 from 1970 to 2006 but increased to 44:100 and 34:100 in 2007 and 2008 respectively. The percentage of legal rams has ranged from 3–7% of the population since the 1970s. However, caution should be used when interpreting this composition data since different areas were surveyed in different years due to weather precluding complete coverage of the survey area each year (Hollis 2011).

Harvest History

Between 1990 and 2010, an average of 1.5 sheep were harvested per year under the State drawing permit (DS206), which includes a portion of Unit 20E (**Table 1**). Most individuals participating in this hunt have been nonlocal residents (DuBois 2011). There is very little Federal land within this hunt area, with only a small portion of Bureau of Land Management land near the Mount Harper area. Harvest in the Tanana Hills in Unit 20E averaged 5 sheep between 1990 and 2010 (**Table 2**). Access for both hunt areas has been mostly by aircraft due to the remote nature of the country (DuBois 2011).

Table 1. Mount Harper (DS206) drawing permit sheep harvest, regulatory years 1990-2010 (DuBois 2011).

Regulatory Year	Permits Issued	Did Not Hunt	Unsuccessful Hunters	Successful Hunters	Total Harvest
1990-1991	4	2	1	1	1
1991-1992	4	1	1	2	2
1992-1993	4	2	0	2	2
1993-1994	4	0	3	1	1
1994-1995	4	1	3	0	0
1995-1996	4	0	0	4	4
1996-1997	4	1	1	2	2
1997-1998	4	2	0	2	2
1998-1999	4	1	2	1	1
1999-2000	4	0	1	3	3
2000-2001	4	1	1	2	2
2001-2002	4	0	1	3	3
2002-2003	4	0	2	2	2
2003-2004	4	1	2	1	1
2004-2005	4	3	1	0	0
2005-2006	4	1	1	2	2
2006-2007	4	2	0	2	2
2007-2008	4	2	2	0	0
2008-2009	4	3	1	0	0
2009-2010	4	2	1	1	1

Within the boundaries of Yukon-Charley National Preserve (portions of Unit 20E, 25B, 25C), an average of 4 rams were harvested per year between 1983 and 2007. An increase in sheep harvest within the Preserve took place after hunting regulations changed from a drawing permit to an open hunt in 1993, though the sheep population appears to have remained stable (Burch 2010).

Sheep harvest in the White Mountains (portions of Units 20B, 20F, 25C and 25D) averaged 10 sheep per year between 2000 and 2010. The majority of harvest in this area is by residents. There has been a consistent percentage of legal rams harvested from this population since the 1970s, indicating that current harvest levels will most likely not result in overharvest (Hollis 2011).

Table 2. Tanana Hills sheep harvest, regulatory years 1990-1991 through 2009-2010 (DuBois 2011).

Regulatory Year	Total Sheep Harvested
1990-1991	1
1991-1992	3
1992-1993	1
1993-1994	5
1994-1995	3
1995-1996	8
1996-1997	5
1997-1998	9
1998-1999	5
1999-2000	10
2000-2001	5
2001-2002	7
2002-2003	8
2003-2004	10
2004-2005	3
2005-2006	8
2006-2007	2
2007-2008	7
2008-2009	3
2009-2010	0

Effects of the Proposal

If this Proposal is adopted it would establish a Federal season for sheep in Units 20E, 25B, 25C, and 25D. No increase in harvest is anticipated since there is already an existing State season in the areas in question. Sheep populations in the proposed areas have been hunted under State regulations for decades and the populations in all of the affected units appear to be stable, with the possible exception of Unit 25C, which may be starting to experience declines. Federal and State seasons would be aligned under this proposal, thereby minimizing regulatory complexity for users. Establishment of a Federal season could provide more hunting opportunities to Federally qualified users should seasons or harvest limits be liberalized in the future. Additionally, Federally qualified users would not have to get a drawing permit to hunt sheep in Unit 20E should if this proposal is adopted.

OSM CONCLUSION

Support Proposal WP14-43.

Justification

Dall sheep populations in the proposed units are stable and have withstood hunting pressure for several decades without any apparent detriment. Much of the areas proposed for a Federal season are remote and hard to access, and there is already an existing State hunting season, so harvest pressure should remain the same. Harvest of sheep in any of the affected individual units has not exceeded 10 legal rams for at least the last 10 to 20 years, depending upon the area. Establishment of a Federal season would allow for hunting opportunities for Federally qualified users should seasons or harvest limits be liberalized in the future, and State and Federal would also be aligned, although Federally qualified subsistence users would not have to get a drawing permit to hunt sheep in Unit 20E if hunting under these proposed hunting regulations.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support WP14-43. The Council just passed a motion for positive C&T and now needs to establish season and bag limits. The Council discussed that difficult access to this area would prevent any conservation issues or concern for overharvest.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-43: These [Proposals WP14-42 and WP14-43] proposals allow traditional use of the resource by Federally qualified subsistence users a long documented tradition since early 1900 by the local people.

Donald Woodruff, Eagle

WP14-44 Executive Summary	
General Description	Proposal WP14-44 requests a five day extension of the moose season in Unit 20F remainder from Sept. 1 – 25 to Sept. 1-30. *Submitted by the Eastern Interior Subsistence Regional Advisory Council*
Proposed Regulation	**WP14-44** **Unit 20F remainder – Moose** Unit 20F remainder – 1 antlered bull Sept. 1 – Sept. ~~25~~**30**
OSM Conclusion	**Support** Proposal WP14-44.
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 Support**

STAFF ANALYSIS
WP14-44

ISSUES

Proposal WP14-44, submitted by the Eastern Interior Subsistence Regional Advisory Council, requests a five day extension of the moose season in Unit 20F remainder from Sept. 1 – 25 to Sept. 1-30.

DISCUSSION

The proponent states that the weather is too warm in early September with temperatures in recent years reaching into the 60s and that hunters who harvest a moose during this time are having difficulty keeping the meat from spoiling under these warm conditions. The proponent requests extension of the fall season to compensate for lost hunting days during the early part of the season due to warm temperatures.

Existing Federal Regulation

Unit 20F remainder – Moose

Unit 20F remainder – 1 antlered bull	*Sept. 1 – Sept. 25*

Proposed Federal Regulation

Unit 20F remainder – Moose

Unit 20F remainder – 1 antlered bull	*Sept. 1 – Sept. ~~25~~**30***

Existing State Regulation

Unit 20F remainder – Moose

Residents – one bull	*Sept. 1 – Sept. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20F and consist of 23% Bureau of Land Management managed lands and 1% US Fish and Wildlife Service managed lands (**Unit 20 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 20F and residents of Manley, Minto, and Stevens Village have a customary and traditional use determination for moose in Unit 20F. The affected Federal lands in Unit 20F include all BLM lands excluding the Dalton Highway Corridor Management Area.

Regulatory History

Proposal 32 was adopted by the Federal Subsistence Board in 1991/92 and established the current fall hunting season for moose in Unit 20F remainder. The proposal requested the harvest season be changed from Sept. 16 – Sept. 26 to Sept. 1 – Sept. 25, which more accurately reflected actual harvest patterns and traditional hunting times of the villages in the region.

Biological Background

Moose densities in Unit 20F have been low for many years, with predation by wolves and bears and habitat limitations seen as the likely reasons (Gassaway et al. 1992). Moose densities are thought to fluctuate between 0.2-0.7 moose/mi^2 and predators are thought to be lightly harvested, which may be contributing to the low moose densities observed in the unit (Hollis 2010). The State of Alaska management objective in Unit 20C and 20F is to maintain a bull:cow ratio of ≥ 30:100 in areas with aerial surveys and ≥ 20% large bulls in the harvest in areas without aerial surveys (Hollis 2010). Population composition data for Unit 20F is limited to the percentage of large bulls (antlers wider than 50 inches) in the harvest. Harvest of large bulls (antlers larger than 50 inches) in Unit 20F was 24%-55% of the reported harvest, suggesting that overharvest of bulls was not a concern (Hollis 2010).

Habitat

Unit 20F contains tracks of mature black spruce that are poor habitat for moose but there are many riparian areas, subalpine hills and burns that have habitat capable of supporting moose at higher densities than currently exist (Hollis 2010). Fire is the most effective means for improving moose habitat in Unit 20F although moose densities are thought to be limited by predation rather than forage (Hollis 2010). Habitat that has been enhanced by wildfire may help the growth of moose populations by increasing reproductive rates, while wildfires may also decrease the efficiency of predators due to increases in deadfall (Boertje et al. 1995).

Harvest History

Moose harvest has steadily increased in Unit 20F over the last ten years from a low of 20 moose in 2003 to a high of 56 moose in 2009 (**Figure 1**). Harvest has declined slightly in the last few years, but there is still an increasing harvest trend in the unit for the last decade. Hunting pressure has remained low in Unit 20F relative to other areas of Unit 20 (Hollis 2010).

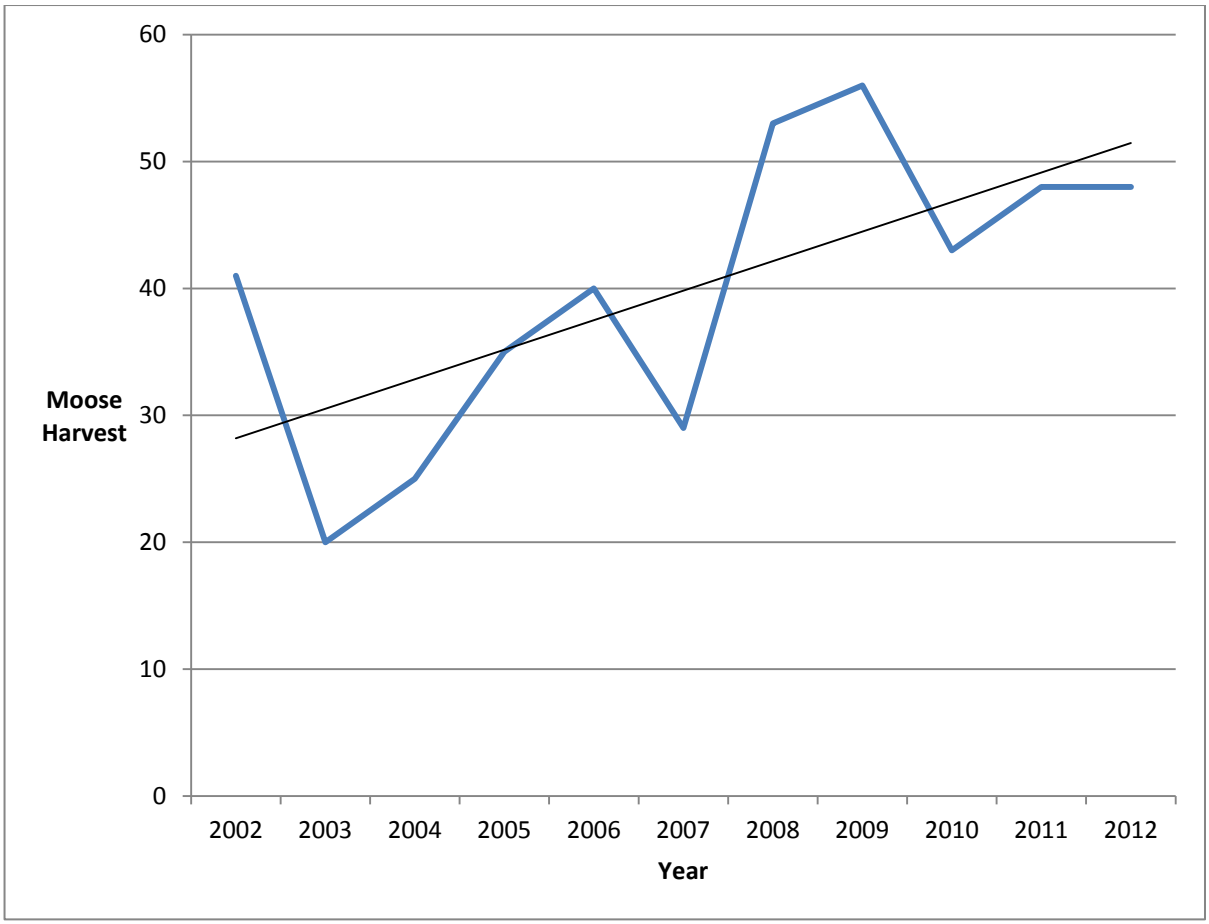

Figure 1. Moose harvest in Unit 20F, 2003-2012 (OSM 2013, ADF&G 2013).

Effects of the Proposal

If adopted this proposal would extend the fall moose hunt in Unit 20F remainder by five days. This would create a longer season, providing additional opportunity for Federally qualified users to harvest moose during potentially cooler temperatures later in the season, thereby helping to minimize the spoiling of meat in the field. Adding an additional 5 days to the existing season should not have an effect on the moose population since hunting pressure in the subunit is already low relative to other areas of Unit 20C, with the harvest of bulls over the last several years not seen as a conservation concern.

OSM Conclusion

Support Proposal WP14-44.

Justification

Adopting this proposal would add five days to the end of the fall moose season in Unit 20F remainder. Extension of the season may help Federally qualified users harvest moose later in the season, thereby reducing the risk of meat spoilage associated with the warmer temperatures that rural users have experienced in recent years. The moose population should not be adversely effected by this short extension of the season as harvest pressure has been relatively low in the subunit.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support WP14-44. Proposal was submitted by the Eastern Interior Regional Advisory Council. The Council stressed observed weather changes and temperatures too hot to put up meat safely earlier in September. The council also noted it is easier to see moose when leaves fall and is still early enough before the rut. Warmer temperatures are a problem for meat spoiling before being able to pack it out of the hunt area and get back home to a freezer.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal 14-44: Support this proposal – we have the same problems in our area of seasons being too early and meat not keeping due to warm weather and meat not keeping due to warm weather, and the longer season we got has helped a great deal. The last half of September moose are easier to find (more active, leaves gone from trees) and the meat can usually be hung through freeze-up. However, I'd prefer to see the season stay the same length , i.e. starting 5 days later.

Miki and Julie Collins, Lake Minchumina

Support Proposal 14-44: I support this proposal moves the season to a later date. Over the last 10 years, early September temps are way too warm to properly care for our moose meat. This proposal is very sound reasoning.

Donald Woodruff, Eagle

WP14-46/47 Executive Summary	
General Description	Proposal WP14-46 requests the Board to recognize the customary and traditional uses of caribou in Unit 25B by residents of Eagle. *Submitted by Steven Hamilton of Eagle*. Proposal WP14-47 requests the Board to modify the customary and traditional use determinations for caribou in Units 20D, 20E, 25B, and 25C. *Submitted by the Eastern Interior*
Proposed Regulation	**Customary and Traditional Use Determinations—Caribou** *Units 20D and 20E* — *Residents of Units 12 north of Wrangell-St. Elias National Preserve, 20D, 20E,* ***20F, 25, and Eureka, Livengood, Manley, and Minto.*** *Unit 25B and 25C* — *Residents of* ***Units 12 north of Wrangell-St. Elias National Preserve, 20D, 20E, 20F****, 25,*
OSM Conclusion	Proposal WP14-46—**Support** Proposal WP14-47—**Support**
Eastern Interior Regional Council Recommendation	Proposal WP14-46—**Support** Proposal WP14-47—**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	**WP14-46: 2 Support / WP14-47: 1 Support**

STAFF ANALYSIS
WP14-46/47

ISSUES

Proposal WP14-46, submitted by Steven Hamilton of Eagle, requests that the Federal Subsistence Board (Board) recognize the customary and traditional uses of caribou in Unit 25B by residents of Eagle.

Proposal WP14-47 submitted by the Eastern Interior Subsistence Regional Advisory Council requests the Board to recognize the customary and traditional uses of caribou in Units 20D and 20E by residents of Units 20F and 25, and the communities of Eureka, Livengood, Manley, and Minto. Additionally, the Council requests the Board to recognize the customary and traditional uses of caribou in Units 25B and 25C by residents of Unit 12 north of Wrangell-St. Elias National Preserve, 20D, 20E, 20F, and Eureka, Livengood, Manley, and Minto.

DISCUSSION

Concerning WP14-46, the proponent from Eagle, Alaska, indicated that residents of Eagle have a long history hunting both sides of the Yukon River, and therefore, should be allowed to hunt caribou under Federal regulations north of the Yukon River in Unit 25B. Currently, Eagle people are not allowed under Federal regulations to hunt in half of their traditional hunting range because they are not included in the customary and traditional use determination.

The focus of Proposal WP14-47 is the Fortymile caribou herd, which expanded its range and now migrates as far west as Unit 25C. According the Eastern Interior Council, caribou move throughout the year and are not consistently and continuously available to harvest in all areas of their range during hunting season, and subsistence hunters can access caribou in most of the herd's range using the Alaska road system. The intent of Proposal WP14-47 is to modify the customary and traditional use determinations for caribou in Units 20D, 20E, 25B, and 25C to allow all rural residents living within or adjacent to the Fortymile caribou herd's range to hunt under Federal regulations throughout the herd's range, rather than being restricted to hunting in only in a portion of the herd's range.

It is important to note that there are early Federal fall and winter caribou hunting seasons. The Federal fall season in Units 20E and 25C opens 19 days before the State season. The Federal winter season in the entire range of the Fortymile caribou herd opens 30 days before the State season. The current patchwork of customary and traditional use determinations for caribou is limiting who can participate, and where, in the early Federal fall and winter caribou hunting seasons.

The customary and traditional uses of caribou by residents of all the communities in the proposal have been recognized by the Board. Consequently, the focus of the analysis is expanding the existing customary and traditional use determinations for each community to the proposed management units. The 28 communities included in the request are listed in **Table 1** below. **Appendix A** shows the effects of the proposal on each community.

Table 1. The 28 communities in the requested customary and traditional use determinations for caribou.

Management unit	Community
12	Northway, Northway Junction, Tanacross, Tetlin, and Tok
20B	Eureka, Livengood, Manley, and Minto
20D	Dot Lake, Dot Lake Village, Delta Junction, Fort Greely, Healy Lake,
20E	Chicken, Eagle City, and Eagle Village
20F	Rampart and Tanana
25A	Arctic Village
25B	none
25C	Central
25D	Beaver, Birch Creek, Chalkyitsik, Circle, Fort Yukon, Stevens Village, and Venetie

Existing Federal Regulation

Customary and Traditional Use Determinations—Caribou

Units 20D and 20E	*Residents of Units 20D, 20E, and 12 north of the Wrangell-St. Elias National Park and Preserve.*
Unit 25A	*Residents of Units 24A and 25.*
Unit 25B and 25C	*Residents of Unit 25.*
Unit 25D	*Residents of Units 20F, 25D, and Manley.*

Proposed Federal Regulation WP14-46

Customary and Traditional Use Determinations—Caribou

Units 20D and 20E	*Residents of Units 20D, 20E, and 12 north of the Wrangell-St. Elias National Park and Preserve.*
Unit 25A	*Residents of Units 24A and 25.*
Unit 25B	*Residents of Unit 25* ***and Eagle****.*
Unit 25C	*Residents of Unit 25*
Unit 25D	*Residents of Units 20F, 25D, and Manley.*

Proposed Federal Regulation WP14-47

Customary and Traditional Use Determinations—Caribou

Units 20D and 20E	*Residents of Units 12 north of Wrangell-St. Elias National Preserve, 20D, 20E,* ***20F, 25, and Eureka, Livengood, Manley, and Minto***
Unit 25A	*Residents of Units 24A and 25.*
Unit 25B and 25C	*Residents of* ***Units 12 north of Wrangell-St. Elias National Preserve, 20D, 20E, 20F,*** *25,* ***and Eureka, Livengood, Manley, and Minto***
Unit 25D	*Residents of Units 20F, 25D, and Manley.*

Note: **Appendix A** describes the existing and proposed customary and traditional caribou use determinations for each of the 28 communities in the proposal.

Extent of Federal Public Land

Federal public lands in each management unit are described on the **Unit 20 Map, Unit 25 Map** and in **Table 2** below.

Table 2. Federal public lands in Units 20D, 20E, 25B, and 25C.

Management unit	Percentage Federal public lands	Percentage of Federal public lands managed by each agency
20D	1%	100% Bureau of Land Management
20E	29%	20% National Park Service 9% Bureau of Land Management
25B	70%	36% Fish and Wildlife Service 26% Bureau of Land Management 8% National Park Service
25C	74%	63% Bureau of Land Management 9% National Park Service 2% Fish and Wildlife Service

Regulatory History

Units 20D and 20E

At the beginning of the Federal Subsistence Management Program in Alaska in 1992, the Board adopted the State's customary and traditional use determination in Units 20D and 20E for *only* the Fortymile caribou herd. The customary and traditional use determination was for rural residents of Unit 12 north of Wrangell-St. Elias National Preserve, 20D, and 20E. The Board did not make a specific customary and traditional use determination for *other* caribou in Unit 20D, and all rural residents of the state were eligible to hunt *other* caribou in Unit 20D, excluding residents of McKinley Village, the area along the Parks Highway between mileposts 216 and 239, and households of the Denali National Park Headquarters (72 FR 22961; May 29, 1992).

Between 1991 and 1998, the Board received many proposals requesting changes to the customary and traditional use determinations for caribou in Unit 20. Most were deferred. In 1996, the Board revised, among other changes, the customary and traditional use determination in Unit 20D. The Board adopted the Eastern Interior Council's recommendation to include residents of McKinley Village and the area along the Parks Highway between mileposts 216 and 239 (Proposal WP96-19) (61 FR39705; July 30, 1996). In 1997, deferred proposals were combined in Proposal 97-71. The proponents were the Stevens Village Council (Proposal 96-027), Upper Tanana/Fortymile Fish and Game Advisory Committee (Proposal 96-049), Bureau of Land Management Kobuk District (Proposal C140), Native Village of Dot Lake (Proposal C022), and Minto/Nenana Fish and Game Advisory Committee (Proposal 93-024). The Eastern Interior Council recommended no changes to the customary and traditional use determinations for caribou in Units 20D and 20E, but the Board deferred the proposal (97-71). In its justification, the Interagency Staff Committee said it was "uncomfortable with the information and analysis provided to the Regional Council, and felt that action on the proposal at this time was premature" (FWS 1997:960). In 1998, deferred proposals were combined in Proposal 98-102. For Units 20D and 20E, the proposal requested the Board to exclude residents of Unit 12 north from the customary and traditional use determinations for caribou. The Board adopted the Eastern Interior Council's recommendation and did not exclude the residents of Unit 12 north (63 FR 35304; June 29, 1998). The Interagency Staff Committee concluded in its justification:

> Heretofore, residents of all the management units, areas, or communities, identified in the conclusions, have been recognized as having a customary and traditional use of resources in the specific units. In all cases the data indicate that the individuals from the afore identified communities have used caribou. In the cases of units 20D and 20E, residents of the communities identified above already have been recognized as having a subsistence use of Fortymile caribou within these units. Moreover, communities recommended for recognition of customary and traditional use of caribou in this proposal have positive customary and traditional use determinations for other species in the subunits at issue (FWS 1998:1352).

Units 25B and 25C

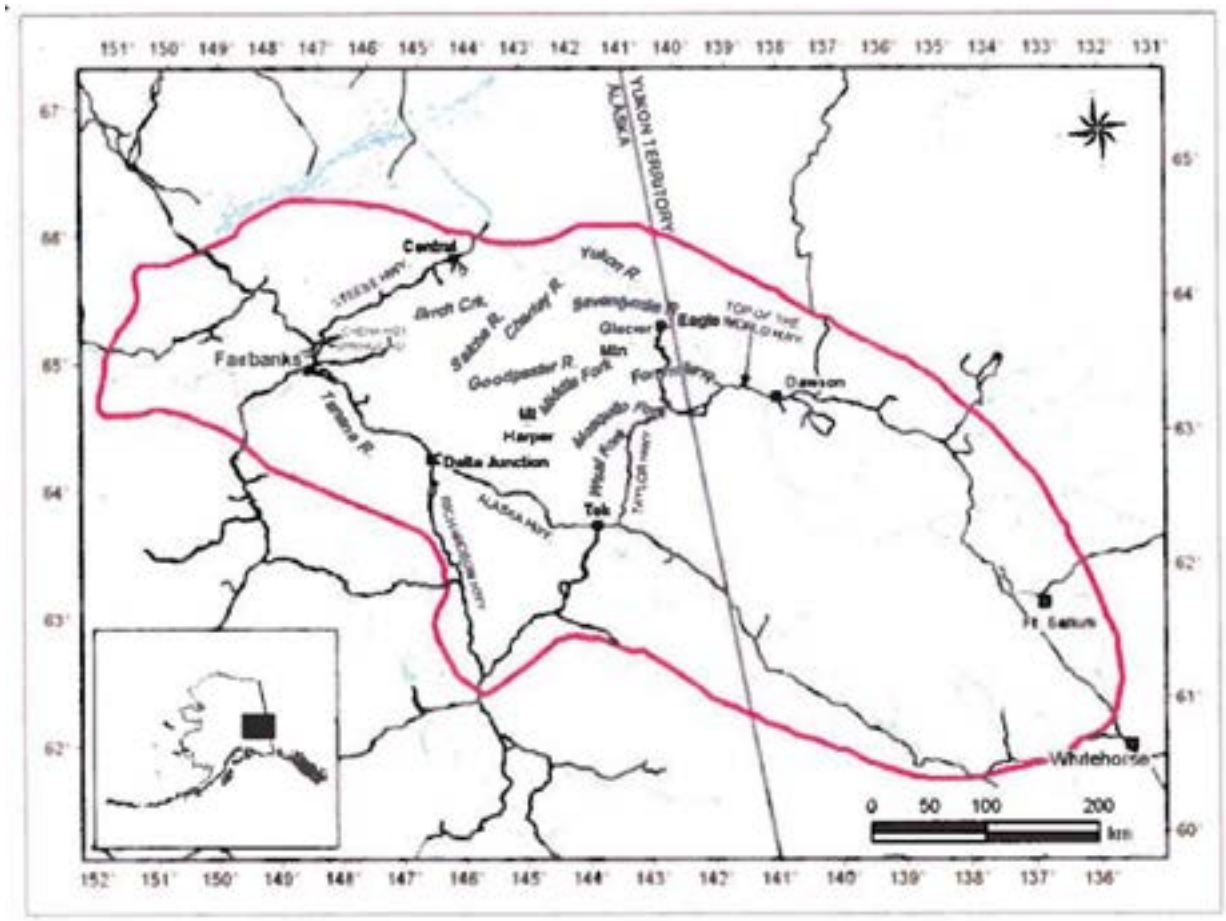
Concerning Units 25B and 25C, in 1992 the Board did not make a specific customary and traditional caribou use determination, and all rural residents of the state were eligible to hunt caribou under Federal regulations in Unit 25 (72 FR 22962; May 29, 1992). In 2012, the Board adopted the Eastern Interior Council's recommendation to change the customary and traditional use determination in Units 25B and 25C to include rural residents of Unit 25 (Proposal WP12-69).

Fortymile Caribou Herd

The historic range of the Fortymile caribou herd stretches from Whitehorse, Yukon Territory, in the east to Unit 25C past Fairbanks in the west, both north and south of the Yukon River. (see **Map 1**). In 1920, Murie (1935) estimated the herd size at 250,000–300,000 caribou. By the 1970s, the herd had declined to an estimated 5,000 caribou. Since 1995, the herd size has been stable or growing. In 2010, the herd size was estimated at almost 52,000 caribou. The herd's migration has expanded to north and south of the Yukon River. The herd extends about 50 miles into the Yukon Territory to the east, and as far as Unit 25C to the west (see **Map 2**). Between 2006 and 2012 the Fortymile caribou herd expanded its range in the White Mountains north of the Steese Highway (in Unit 25C). It is expected to eventually absorb the White Mountains caribou herd (Gross 2011, Harvest Management Coalition 2012).

Since 1990, competition among Alaska hunters has increased because of reduced quotas and complex regulations. Since 1995, the herd has become became increasingly available along the Alaska road system. This resulted in some fall harvest quotas being reached or exceeded in 1–10 days**.** A team of people representing the public and management agencies in Canada and Alaska wrote the first management plan for the herd in 1995. A revised management plan has been completed every 5 to 6 years. The goal of management plans has been to restore the herd to its traditional range in Alaska and Canada and increase the harvest as the herd grows.

In 2010, the Board adopted the Eastern Interior Council's recommendation to adopt WP10-105 to provide for take by Federally qualified hunters not to exceed 100 caribou during an August 10–28 Federal season that occurred in Units 20E and 25C before a State season opened on August 29. A similar proposal was adopted by the Alaska Board of Game at its February 2010 meeting. The Alaska Board of Game proposal requested a change in the harvest limit to prevent excessive harvest of the Fortymile caribou herd when the herd is migrating past major roads. The intent of the proposal was to improve the field conditions caused by overcrowding of hunters and decrease the large harvest of Fortymile caribou near the Steese Highway and Taylor Highway. 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 have managed the fall and winter Fortymile caribou hunts using a joint Federal-State registration permit. One permit is used for all hunts, and harvest reports are returned to ADF&G. Additionally, the "*Fortymile Caribou Herd Harvest Plan 2012-2018*" recommends that ADF&G announce a 1 to 3-day season between October 20 and November 30 with permits available only at Eagle. This hunt is intended to accommodate residents of Eagle.

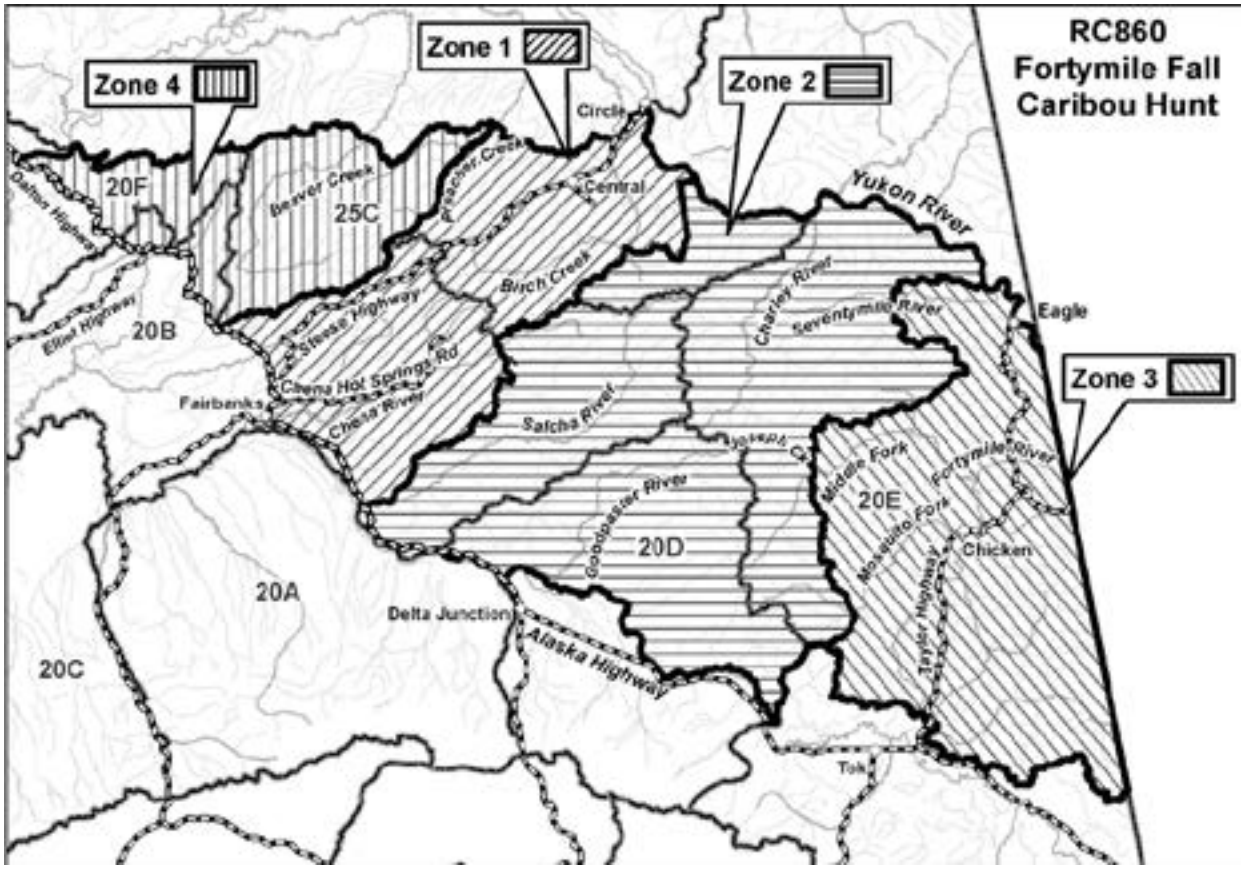


Map 1. Historic range of Fortymile caribou herd (Harvest Management Coalition 2012).

Currently, there are early Federal fall and winter caribou seasons. The Federal fall season in Units 20E and 25C opens 19 days before the State season. The Federal winter season in the entire range of the Fortymile caribou herd opens 30 days before the State season. The current patchwork of customary and traditional use determinations for caribou is limiting who can participate, and where, in the early Federal fall and winter caribou seasons.

Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through 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



Map 2. White Mountains-Fortymile caribou herd hunt management zones in Alaska (ADF&G 2013).

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)).

Introduction

The customary and traditional uses of caribou by residents of each community in the proposal have been recognized by the Board. Consequently, the focus of the analysis is expanding the existing customary and traditional use determinations for each community to the proposed management units. **Appendix A** shows the effects of the proposals on each community.

The Fortymile caribou herd currently migrates through the management units in the request (Units 20D, 20E, 25A, and 25B) (see **Map 2**). Over the past 20 years, the Fortymile caribou herd has expanded its range into areas south of the Yukon River and has recently crossed to the north side of the Yukon River.

Community Characteristics and Subsistence History

The 28 communities in the proposal consisted of 5,338 people living in 2,189 households, according to the 2010 U.S. Census (see **Table 3**). The population is comprised of members of several Athabascan groups and immigrants, or their descendants, from other places who entered the area to work in military, mining, communication, and recreation industries. **Table 4** describes communities by origins and cultural affiliations, that is, Athabascan languages and settlement patterns over the last century or so. Sources of descriptions of the subsistence economy can be found in the Literature Cited at the back of the analysis and include: Andersen and Alexander 1992; Andrews 1986; Caulfield 1979, 1983; Clark 1981; Crow and Obley 1981; Haynes and Simeone, 2007; Holen et al. 2012; Hosley 1981; Guédon 1974; Martin 1983; McKennan 1959; Slobodin 1981; VanStone and Goddard 1981; and Van Lanen et al. 2012.

The villages in the proposal are generally described as culturally affiliated with Koyukon, *Gwich'in*, Han, Tanana, Tanacross, and Upper Tanana Athabascans (see **Table 4**). For centuries, caribou comprised a large part of the harvest of wild resources for food. Large numbers of migratory caribou were available from the Porcupine and Fortymile caribou herds. Communal hunting of caribou was common. Fences were used to guide caribou or funnel them into corrals to be killed. Large quantities of caribou meat (from harvests of sometimes hundreds of caribou) were dried for winter. Since the mid-1800s, agents of change included a growing emphasis on trapping furs to be used in trade and barter, the introduction of sleds pulled by dogs to work trap lines that required the harvest of more fish to feed dogs, and the introduction of accurate rifles that made communal hunting methods less necessary. Settlement patterns since 1900 have been characterized by movement from nomadism to permanent settlements at important harvesting sites, around trading posts, to send children to school, for employment in the developing mining industry, or building highways and communication systems (Hosley 1981, VanStone and Goddard 1981). The collapse of the Fortymile caribou herd between 1950 and 1970 had an enormous effect on the ability of many villages to harvest caribou (Van Lanen et al. 2012).

The communities established more recently were originally supply sites for construction of the Alaska Highway, such as, Northway Junction and Tok; mining operations, such as, Eagle and Chicken; and telegraph line maintenance, such as Manley and Delta Junction (Hosley 1981) (see **Table 4**). Gold miners continue to return to the area seasonally, and economies based on recreation are developing in some

Table 3. Human population of communities in the request.

Unit of residence	Community	US Census						
		1960	1970	1980	1990	2000	2010	
		Number of people						Number of households
12	Northway	196	40	73	123	95	71	27
	Northway Junction	0	0	0	88	72	54	20
	Tanacross	102	84	117	106	140	136	53
	Tetlin	122	114	107	87	117	127	43
	Tok	129	214	589	935	1,393	1,258	532
20B	Livengood	NA	NA	NA	NA	29	13	7
	Manley	72	34	61	96	72	89	41
	Minto	161	168	153	218	258	210	65
20D	Delta Junction	0	703	945	652	840	958	377
	Dot Lake	56	42	67	70	19	13	7
	Dot Lake Village	NA	NA	NA	NA	38	62	19
	Fort Greely	0	1,820	1,635	1,299	461	539	236
	Healy Lake	0	0	33	47	37	13	7
20E	Chicken	0	0	0	0	17	7	5
	Eagle City	92	36	110	168	129	86	41
	Eagle Village	0	0	54	35	68	67	31
20F	Rampart	49	36	50	68	45	24	10
	Tanana	349	120	388	345	308	246	100
25A	Arctic Village	110	85	111	96	152	152	65
25C	Central	28	26	36	52	134	96	53
25D	Beaver	101	101	66	103	84	84	36
	Birch Creek	32	45	32	42	28	33	17
	Chalkyitsik	57	130	100	90	83	69	24
	Circle	41	54	81	73	100	104	40
	Fort Yukon	701	448	619	580	595	583	246
	Stevens Village	102	74	96	102	87	78	26
	Venetie	107	112	132	182	202	166	61
Total		**2,607**	**4,486**	**5,655**	**5,657**	**5,603**	**5,338**	**2,189**

NA=not available Source: ADCCED 2013

communities. Additionally, there are people living on the road system or on the Yukon River, for example, who are not affiliated with a community.

The Alaska Department of Fish and Game and U.S. Fish and Wildlife Service (ADF&G/FWS) maintain a harvest reporting database (FWS 2013). However, complete records were not kept until the mid-1980s, and it is likely that some hunters have not reported their harvests (see the discussions in Van Lanen et al. 2012 and Anderson and Alexander 1992 for an understanding). Because of the potential for underreporting, conventional ADF&G and FWS harvest reporting systems do not always reflect the true level of harvest. On the other hand, low harvest levels in some communities reflect low populations of

Table 4. Origins and cultural affiliations of the communities in the request.

Unit of residence	Community	Origin of community
12	Northway	*Upper Tanana*, salmon fishcamp at nearby Moose Creek
	Northway Junction	Alaska Highway construction supply site with airfield (1940s)
	Tanacross	*Upper Tanana*, Alaska Highway construction supply site with airfield (1940s)
	Tetlin	*Upper Tanana* whitefish camp
	Tok	Alaska Highway supply site and airfield (1940s)
20B	Livengood	Gold mining supply site (1910s)
	Manley	Homesteaded (1900s), telegraph line maintenance station (1900s), trading post (1900s), mining supply site (1900s), vacation resort
	Minto	*Tanana*, telegraph line maintenance station (1900s)
20D	Delta Junction	McCarthy telegraph line construction supply site
	Dot Lake	Highway construction supply site
	Dot Lake Village	*Tanacross*, people from Tanacross, Healy River, and Mentasta Lake
	Fort Greely	McCarthy telegraph station supply site.
	Healy Lake	*Tanacross*, trading post
20E	Chicken	Gold mining supply site (1880s)
	Eagle City	Gold mining supply site (1880s), Ft Egbert telegraph line (1902)
	Eagle Village	*Han*, trading post (1880s), mining supply site (1980s)
20F	Rampart	*Koyukon*, trading post (1880s)
	Tanana	*Koyukon*, trading post, telegraph line maintenance station (1900s), hospital (1950s)
25A	Arctic Village	*Gwich'in*
25C	Central	Mining supply site (1890s), telegraph line maintenance station (1900s), road-connected to Fairbanks (1927)
25D	Beaver	*Gwich'in*
	Birch Creek	*Gwich'in*
	Chalkyitsik	*Gwich'in*
	Circle	*Gwich'in*
	Fort Yukon	*Gwich'in*, trading post
	Stevens Village	*Koyukon/Gwich'in*
	Venetie	*Gwich'in*

Source: Hosley 1981, VanStone and Goddard 1981.

caribou. The management units reportedly used to hunt caribou, based on the harvest reporting database, are shown in **Appendix B**.

Summary

The proposal seeks to add 15 communities to the customary and traditional use determination for caribou in Units 20D and 20E. **Table 5** lists the 15 communities in the proposal. The communities are: Eureka, Livengood, Manley, and Minto in Unit 20B; Rampart and Tanana in Unit 20F; and Arctic Village, Beaver, Birch Creek, Chalkyitsik, Central, Circle, Fort Yukon, Stevens Village, and Venetie in Unit 25.

Table 5. Units 20D and 20E: communities to be added to the customary and traditional caribou use determination.

Management units	Communities
20B	Eureka, Livengood, Manley, and Minto
20F	Rampart and Tanana
25A	Arctic Village
25B	none
25C	Central
25D	Chalkyitsik, Circle, Fort Yukon, Birch Creek, Stevens Village, Beaver, and Venetie

The proposal seeks to add the 18 communities in **Table 6** to the customary and traditional use determination for caribou in Units 25B and 25C: Tanacross, Tetlin, Tok, Northway, and Northway Junction in Unit 12; Delta Junction, Healy Lake, Dot Lake, and Fort Greely in Unit 20D; Chicken, Eagle City, and Eagle Village in Unit 20E; Rampart and Tanana in Unit 20F; and Eureka, Livengood, Manley, and Minto in Unit 20B.

Table 6. Units 25B and 25C: communities to be added to the customary and traditional caribou use determination.

Management units	Communities
12	Tanacross, Tetlin, Tok, Northway, and Northway Junction
20B	Eureka, Livengood, Manley, and Minto
20D	Delta Junction, Healy Lake, Dot Lake, Fort Greely
20E	Chicken, Eagle City, and Eagle Village
20F	Rampart and Tanana

Subsistence users hunt for caribou in areas they can access based on the modes of access available to them, such as, on foot or using highway vehicles, off-road vehicles, or airplanes. As well as other modes, people using highway vehicles on the Alaska road system can easily access caribou hunting areas in Units 20D, 20E, 25B, and 25C; the Alaska Highway crosses Unit 20D, the Taylor Highway crosses Unit 20E, ending at the Yukon River across from Unit 25B, and the Steese Highway crosses Unit 25C.

Effects of the Proposal

This proposal, if adopted, would allow all rural residents living within or adjacent to the Fortymile caribou herd's range to hunt under Federal regulations throughout the herd's range, rather than being

restricted to hunting in only a portion of the herd's range. They would be able to hunt in the early Federal fall and winter caribou seasons that open before the State seasons. This would have no effect on people's eligibility to hunt moose under State regulations. People could continue to hunt moose under State regulations.

If this proposal is not adopted, the current patchwork of customary and traditional use determinations for caribou will limit who can participate, and where, in the early Federal fall and winter hunting seasons for the Fortymile caribou.

OSM CONCLUSION

Support Proposal WP14-46.

Support Proposal WP14-47

Justification

Eagle is situated on the south bank of the Yukon River and its residents cannot hunt caribou across the river, according to Federal regulations. Adopting Proposal WP14-47 would allow Eagle residents to hunt caribou in an area nearby and easily accessible to them, across the river in Unit 25B.

The Eastern Interior Council requests that residents of communities that traditionally or currently rely on the Fortymile caribou herd be allowed to hunt in the entire range of the herd under Federal regulations (see the list of communities in **Table 1**). Additionally, through its proposal, the Council requests the Board to adopt customary and traditional caribou use determinations based on management subunits. Unit 20B is an exception because the Fairbanks North Star Borough is situated in Unit 20B and under Federal regulations was determined to be *nonrural*. Federal hunting seasons and harvest limits cannot apply to people living in nonrural areas. The Council requested that residents of only Eureka, Livengood, Manley, and Minto in Unit 20B be included in the revised customary and traditional use determinations.

The residents of the areas or communities in the proposal harvest caribou for subsistence purposes. The Alaska road system provides access to caribou hunting areas in each of the four management units in the proposal, Units 20D, 20E, 25B, and 25C. The Fortymile caribou herd's population and migratory range has been growing. Current customary and traditional use determinations exclude some people from hunting areas they used historically and from hunting areas they can easily access today using the Alaska road system.

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APPENDIX A

Appendix A. The customary and traditional use determinations for caribou for each of the 28 communities in the request, and the management units that would be added by Proposal WP14-46/47.

CUSTOMARY AND TRADITIONAL USE DETERMINATION CARIBOU			
Unit of residence	**Communities**	**Existing**	**Proposal WP14-46/47**
12	Northway, Northway Junction, Tanacross, Tetlin, and Tok	11 (north of Sanford River), 12, 20D/E	25B/C
	Residents of Tok Cutoff Road, mileposts 79-110	11 (north of Sanford River), 12, 13B/C, 20D/E	25B/C
20B	Eureka and Livengood	20B	20D/E, 25B/C
	Minto	20B/C	20D/E, 25B/C
	Manley	20B/C/F, 25D	20D/E, 25B/C
20D	Fort Greely	20D/E	25B/C
	Delta Junction, Healy Lake, Dot Lake, and Dot Lake Village,	13B, 20D/E	25B/C
20E	Chicken, Eagle City, and Eagle Village	20D/E	25B/25C
20F	Rampart	20F, 25D	20D/E, 25B/C
	Tanana	20B/F, 21B/C, 24, 25D	20D/E, 25B/C
25A	Arctic Village	25	20D/E
25B	No communities	25	20D/E
25C	Central	25	20D/E
25D	Beaver, Birch Creek, Chalkyitsik, Fort Yukon, Circle, and Venetie	20F, 25	20D/E
	Stevens Village	20F, 24, 25	20D/E

APPENDIX B

Appendix B. Areas used to hunt caribou, based on the ADF&G/FWS harvest reporting system , 1977-2011 (Some communities do not use or minimally use the ADF&G/FWS harvest reporting system.)

CARIBOU HARVEST AREAS 1977–2010			
Unit of residence	**Community**	**Management units hunted**	**Units most used**
12	Northway	11, 12, 13A, 13B, 18, 20E, 22,	12, 20E
	Tanacross	12, 13A, 13C, 20E	12, 20E
	Tetlin	12, 20E	12
	Tok	8, 9C, 9E, 10, 11, 12, 13A, 13B, 13C, 13E, 14A, 17A, 17B, 17C, 18, 20A, 20B, 20D, 20E, 20F, 21, 23, 24A, 24B, 25A, 25B, 25C 25D, 26A, 26B	12, 20E
20B	Livengood	13E, 20B	13E, 20B
	Manley	13, 20B, 20F, 21, 23, 25C, 26B	23, 26B
	Minto	12, 13, 20C	12
20D	Delta Junction	7, 9B, 11, 12, 13A, 13B, 13C, 13D, 13E, 15B, 17B, 20A, 20B, 20C, 20D, 20E, 20F, 23, 24A, 25A, 25C, 26A, 26B, 26C	12, 13B, 20D, 20E, 26B
	Dot Lake	12, 13B, 20D, 20E, 26B	20E
	Fort Greely	12, 13A, 13B, 13E, 17B, 18, 20A, 20B, 20D, 20E, 24A, 25A, 25C, 26A, 26B	13B, 20D, 20E
	Healy Lake		
20E	Chicken	12, 13B, 13C, 13E, 20B, 20E, 25C, 26B	20E
	Eagle	12, 19D, 20B, 20D, 20E, 25B, 25C, 25D, 26B	20E
20F	Rampart	13E, 20F, 25C	
	Tanana	9, 20F, 21B, 23, 26A	
25A	Arctic Village	25	
25C	Central	18, 12, 13, 20A, 20C, 20D, 20E, 25A, 25B, 25C, 26B	25C
25D	Beaver	12, 13A, 13C, 13E, 23	
	Birch Creek		
	Chalkyitsik		
	Circle	20E, 21E, 25A, 25B, 25C	20E, 25C
	Fort Yukon	9, 12,19B, 20E, 24, 25A, 25B, 25C, 25D, 26B	25B
	Stevens Village	12	
	Venetie		

Source: FWS 2013.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support WP14-46/47. WP14-47 was submitted by the EIRAC. They support this proposal because it would allow all communities in the range of the Fortymile Caribou herd to be able to have recognized C&T to hunt them when they are in the area. Also it will provide a federal subsistence priority to rural hunters on federal lands in these areas so of which are accessible by road system. It will be more inclusive than the current communities with C&T in the region.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal WP14-46: I support this C&T proposal is another example of a housekeeping issue when Eagles traditional use of caribou in 25-B was overlooked. I've hunted in this area 32 years and have harvested caribou in 25-B.

Donald Woodruff, Eagle

Support Proposal 14-46: I have no personal knowledge of this but **IF** the statements are accurate, I support it. Those who haven't experienced subsistence lifestyles tend to underestimate the importance of a wide variety of local traditionally-used natural resources, including access to them.

Miki and Julie Collins, Lake Minchumina

Support Proposal WP14-47: This proposal is a correction issue to allow us to hunt caribou, which we have hunted traditionally. As a member of the Fortymile Herd Management Coalition it was our intent to allow this type of hunt to continue.

Donald Woodruff, Eagle

WP14-48 Executive Summary	
General Description	Proposal WP14-48 requests that a portion of Federal lands in Unit 25A be closed to the taking of moose except by rural residents of Arctic Village, Venetie, Chalkyitsik, and Fort Yukon with a Federal registration permit, and that a harvest quota be established for that portion of the unit. *Submitted by Joe Matesi*
Proposed Regulation	**Unit 25A - Moose** Unit 25A – ~~1 antlered bull~~ **that portion consisting of the drainage of Sheenjek River upstream from and including Monument Creek, and the drainages of the Coleen River and Old Crow River (including Bilwaddy Creek), — 5 bulls by Federal registration permit by residents of Arctic Village, Venetie, Chalkyitsik, and Fort Yukon only. Only 5 Federal registration permits will be issued. Federal public lands described above are closed to the taking of moose except by a resident of Arctic Village, Venetie, Chalkyitsik, or Fort Yukon holding a Federal registration permit and hunting under these regulations.** Aug. 25 – Sept. 25 Dec. 1 – Dec. 10
OSM Conclusion	**Oppose** Proposal WP14-48.
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	**2 Support, 1 Oppose**

STAFF ANALYSIS
WP14-48

ISSUES

Proposal WP14-48, submitted by Joe Matesi, requests that a portion of Federal lands in Unit 25A be closed to the taking of moose except by rural residents of Arctic Village, Venetie, Chalkyitsik, and Fort Yukon with a Federal registration permit, and that a harvest quota be established for that portion of the unit.

DISCUSSION

The proponent states that moose populations in Unit 25A have declined significantly over the last 22 years and have yet to recover from these declines. Additionally, it is stated that the migratory population of moose move into the unit during the fall hunting season and are more vulnerable to harvest due to the low shrub cover and open tundra present in the area, along with the fact that migratory routes are well defined and have resulted in high hunter success. The proponent feels that a reduction in hunting pressure is needed to conserve the moose population and aid in recovery.

Existing Federal Regulation

Unit 25A – Moose

Unit 25A – 1 antlered bull	*Aug. 25 – Sept. 25*
	Dec. 1 – Dec. 10

Proposed Federal Regulation

Unit 25A - Moose

Unit 25A – ~~1 antlered bull~~ ***that portion consisting of the drainage of Sheenjek River upstream from and including Monument Creek, and the drainages of the Coleen River and Old Crow River (including Bilwaddy Creek), — 5 bulls by Federal registration permit by residents of Arctic Village, Venetie, Chalkyitsik, and Fort Yukon only. Only 5 Federal registration permits will be issued. Federal public lands described above are closed to the taking of moose except by a resident of Arctic Village, Venetie, Chalkyitsik, or Fort Yukon holding a Federal registration permit and hunting under these regulations.***	*Aug. 25 – Sept. 25*

Dec. 1 – Dec. 10

Existing State Regulation

Unit 25A remainder – Moose

Residents – one bull	*Sept. 5 – Sept. 25*
Nonresidents – one bull with 50-inch antlers or 4 or more brow tines on at least one side	*Sept. 5 – Sept. 25*

Extent of Federal Public Lands

Federal public lands comprise approximately 76% of Unit 25A and consist of 74% US Fish and Wildlife Service managed lands and 2% Bureau of Land Management managed lands (**Map 1**).

Customary and Traditional Use Determinations

Rural residents of Unit 25A and Unit 25D have a customary and traditional use determination for moose in Unit 25A.

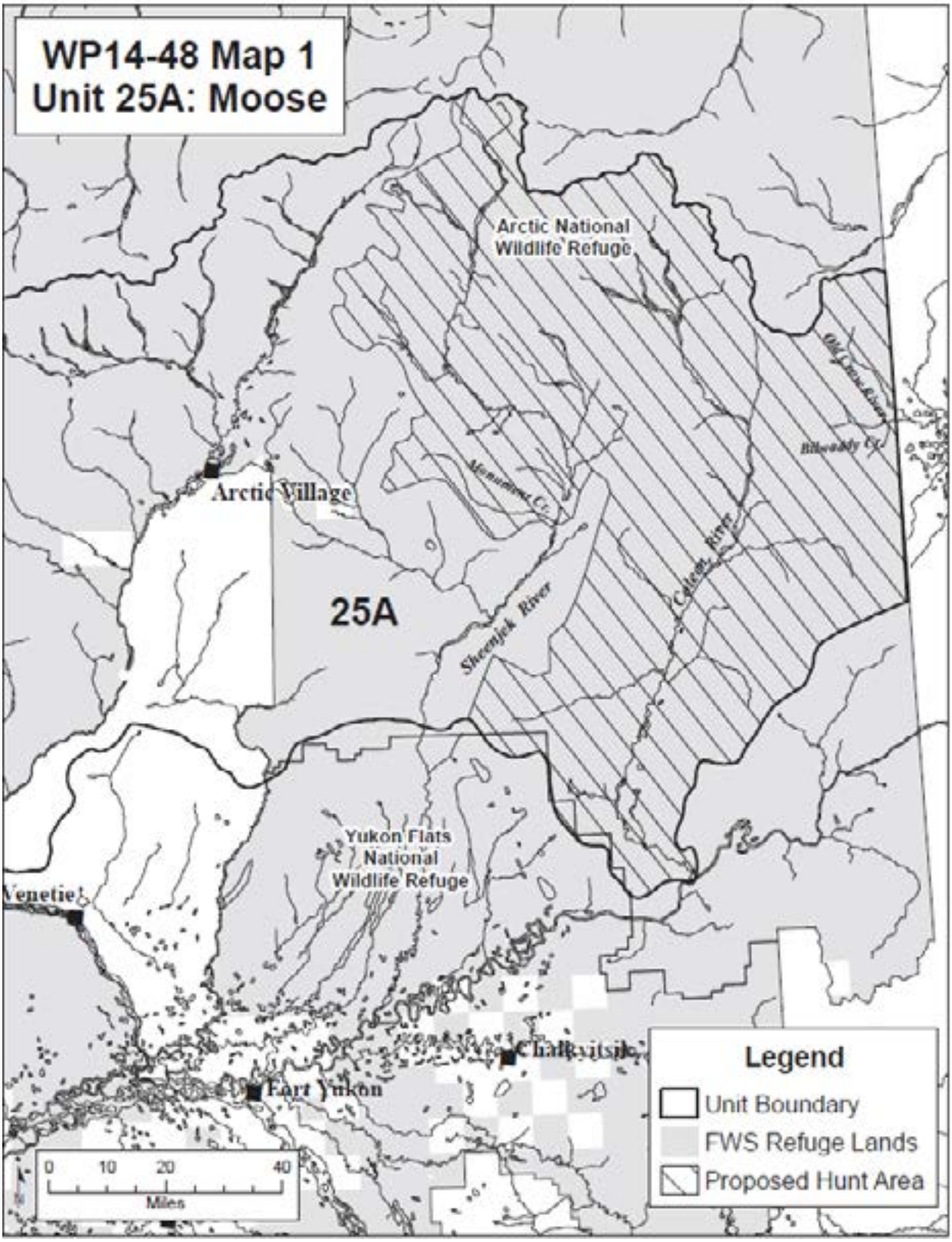
Regulatory History

The Federal Subsistence Board (Board) adopted the State hunting regulations for moose in Unit 25A when the Federal program was established, with a fall season of Aug. 25 – Sept. 25 and a winter season of Dec. 1 – Dec. 10 open to all rural residents.

In 1996, Proposal 96, submitted by the Native Village of Fort Yukon, requested a customary and traditional use determination for moose in Unit 25A for all communities within Unit 25A and Unit 25D. The Board adopted the proposal at its April 1996 meeting.

Current Events Involving the Species

The Eastern Interior Federal Subsistence Regional Advisory Council (RAC) submitted a proposal to the Alaska Board of Game in May of 2013 to create another hunt area for moose in Unit 25A, that portion consisting of the Sheenjek River, upstream but not including the Koness River and the drainages of the Coleen River and Old Crow Rivers. The season would be Sept. 5 – 25 and for residents, the harvest limit would be one bull with 50-inch antlers or four or more brow tines on at least one side. Nonresidents would have the same season and antler restrictions but the hunt would be by drawing permit. The proposal was submitted due to conservation concerns for the small, migratory moose population of the area.


WP14-48 Map 1
Unit 25A: Moose
Arctic National Wildlife Refuge
Arctic Village
25A
Sheenjek River
Yukon Flats National Wildlife Refuge
Venetie
Chalkyitsik
Fort Yukon
0 10 20 40
Miles
Legend
Unit Boundary
FWS Refuge Lands
Proposed Hunt Area

Biological Background

Periodic surveys suggested that moose numbers in Unit 25A declined in the area from the late 1980s through the early 2000s (Caikoski 2010). Surveys along the Sheenjek and Coleen Rivers within Unit 25A have been done sporadically since 1977. Both drainages have seen declines in moose populations since 1991 (**Table 1**), though the population in the Sheenjek River appears to have stabilized at a low level since 2000 (Wald 2012). Composition surveys on the Coleen and Sheenjek River drainages in 1991, 2000, and 2002 showed an average bull:cow ratio of .87 on the Coleen River and 1.9 on the Sheenjek, while calf:cow ratios averaged .39 on the Coleen and .75 on the Sheenjek (Wertz and Payer 2003). The most recent survey along the Sheenjek River showed a calf:cow and bull:cow ratio of 0.38 and 1.23 respectively, while a recent survey on the Coleen River had a calf:cow and bull:cow ratio of 0.38 and 1.09 respectively (Wald 2012, Lenart 2013, pers. comm., preliminary data). Moose habitat in Unit 25A is limited to narrow corridors which support a low density population of moose. Harvest is low due to the remoteness of the area and the time, distance, and expense of accessing hunting grounds. Population dynamics of the area are poorly understood but predation may be serving to maintain moose populations at a low density (Caikoski 2010). The moose in the Coleen and Sheenjek River drainages are thought to be part of a larger meta-population that includes animals in the Firth, Mancha, and Kongakut River drainages of Unit 26 (Payer 2013, pers. comm.) and the most recent available surveys for these areas has shown an increase in moose numbers (Caikoski, 2011, unpublished preliminary data).

A study of moose movements and population identity in the southeastern Brooks Range from 1995 to 1998 indicated a population with a high proportion of migratory animals. A majority of migrants moved to the Old Crow Flats region in the Yukon Territory of Canada beginning in March, where they calved and spent the summer. These moose then moved to winter ranges in the upper Sheenjek and Coleen River drainages of Unit 25A in late August, with the migration completed by the rut in early October (Mauer 1998). An additional study was conducted in 2007-2009 using satellite (GPS) collars to track individual moose movements at finer temporal and spatial scales (Cooley 2013, pers. comm.). Data analysis is not yet complete, but preliminary results corroborate the seasonal movements identified by Mauer (1998), along with high fidelity to wintering and rutting areas and straight line migration routes to and from winter and summer areas in Alaska and Canada, making them highly susceptible to harvest (Cooley 2013, pers. comm., Mauer 1998).

Harvest History

An average of 9 moose have been harvested per year on the upper Sheenjek River and 12 moose per year on the Coleen and Old Crow River drainages over the last two decades (ADF&G 2013a). There has been a decline in moose harvest on the Sheenjek River, while harvest on the Coleen and Old Crow Rivers has increased slightly since 1990 (**Figures 1 and 2**), though hunter success has declined in both areas over the last twenty years (**Figures 3 and 4**). However, decreased hunter success might be due to larger number of hunters in the field, rather than an actual decline in the number of legal animals for harvest. Bull:cow ratios indicate a surplus of bulls available for harvest in the Coleen and Sheenjek River drainages (Wertz and Payer 2003). Harvest by commercially guided moose hunters over the last decade has been low with an average of 2.4 moose harvested per year (Arctic National Wildlife Refuge 2013). Between 1983 and 2010, the

majority of moose harvested in the Sheenjek, Coleen and Old Crow drainages of Unit 25 has been by nonresident hunters (**Figure 5**). Annual nonresident harvest ranged from 13-71% and averaged 44% over the 27 year time period for which data is available, with an average of 7 moose harvested per year (OSM 2013). Of the communities with a customary and traditional use determination for moose in Unit 25A, only Fort Yukon reported any harvest in the drainages in question with a total of 61 moose being harvested between 1983 and 2010 and an average of 2 moose harvested per year.

Table 1. Total moose counted by fall aerial surveys between 1977 and 2012 on the Sheenjek and Coleen Rivers, Alaska.

Year	Sheenjek River	Coleen River
1977[1]	104	219
1978[2]	125	No Survey
1979[3]	151	245
1983	No Survey	No Survey
1984	No Survey	No Survey
1985	No Survey	No Survey
1986	No Survey	No Survey
1987[4]	149	No Survey
1989[5]	147	220
1991[6]	81	233
2000[7]	21	129
2002[8]	21	103
2008[9]	22	No Survey
2011	No Survey	No Survey
2012	26[10]	79[11]

[1]Haggstrom 1977
[2]Spindler 1978
[3]Spindler 1980
[4]Nowlin 1987
[5]Mauer 1989
[6]Mauer and Akaran 1991
[7]Mauer 2000
[8]Bucholtz 2002
[9]Wertz 2008
[10]Wald 2012
[11]Lenart 2013 (preliminary data)

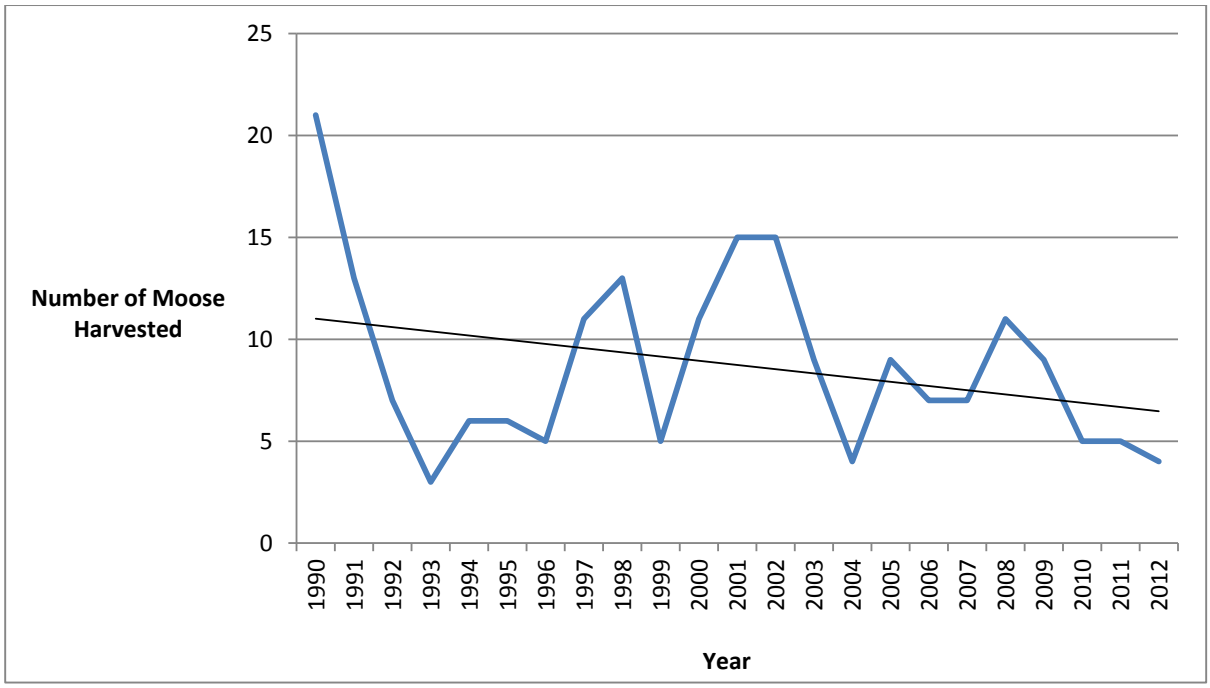


Figure 1. Reported moose harvest in the Sheenjek River of Unit 25A, 1990-2012 (ADF&G 2013).

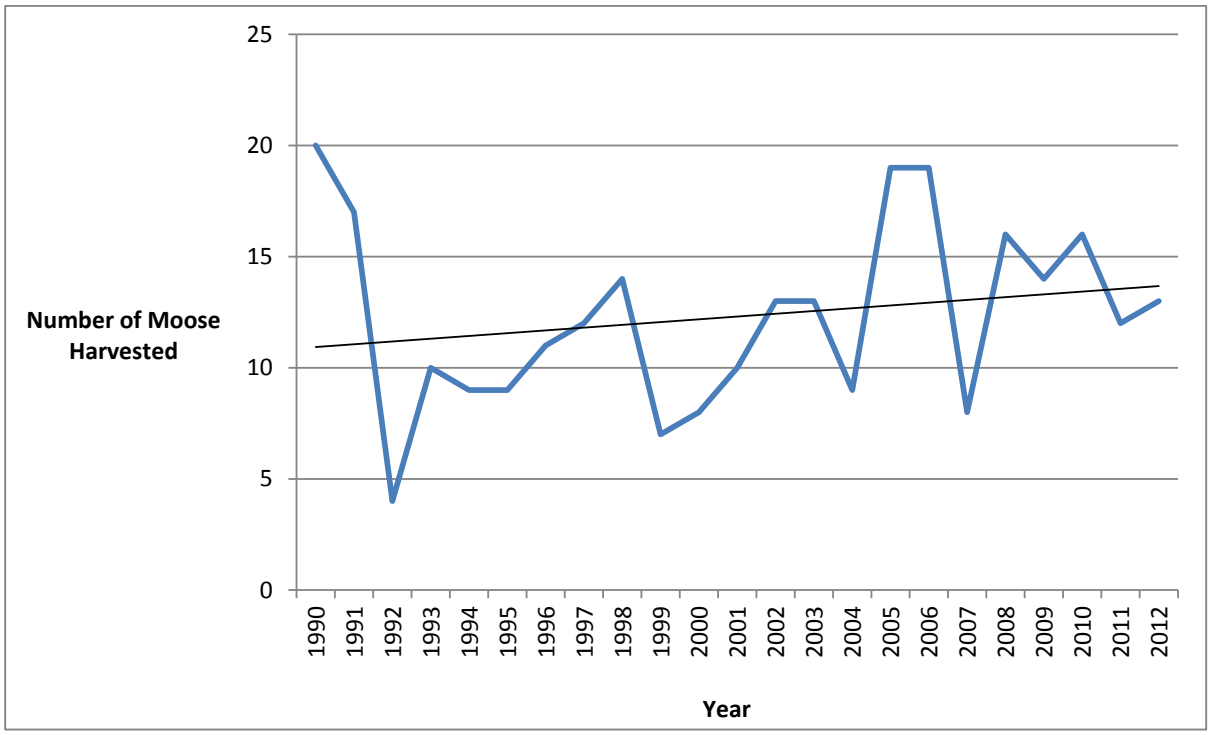


Figure 2. Reported moose harvest on the Coleen and Old Crow River drainages of Unit 25A, 1990-2012 (ADF&G 2013).

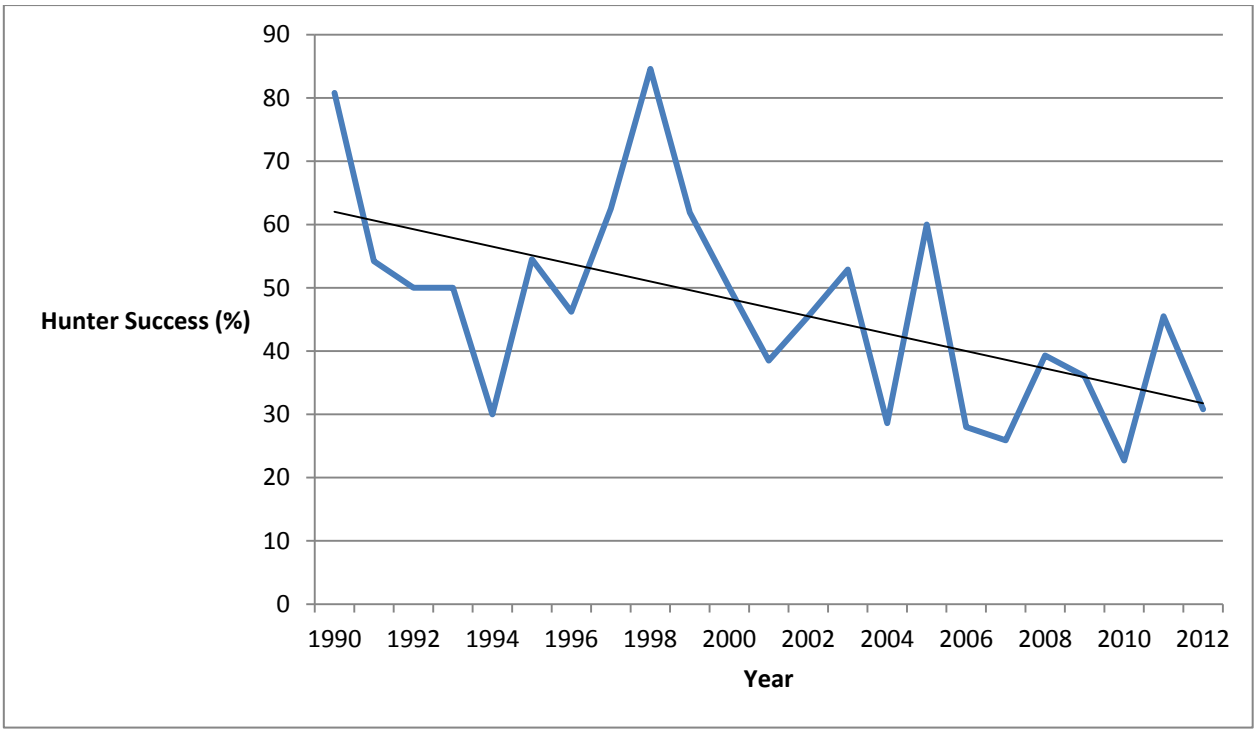


Figure 3. Moose hunting success on the Sheenjek River, 1990-2012 (ADF&G 2013).

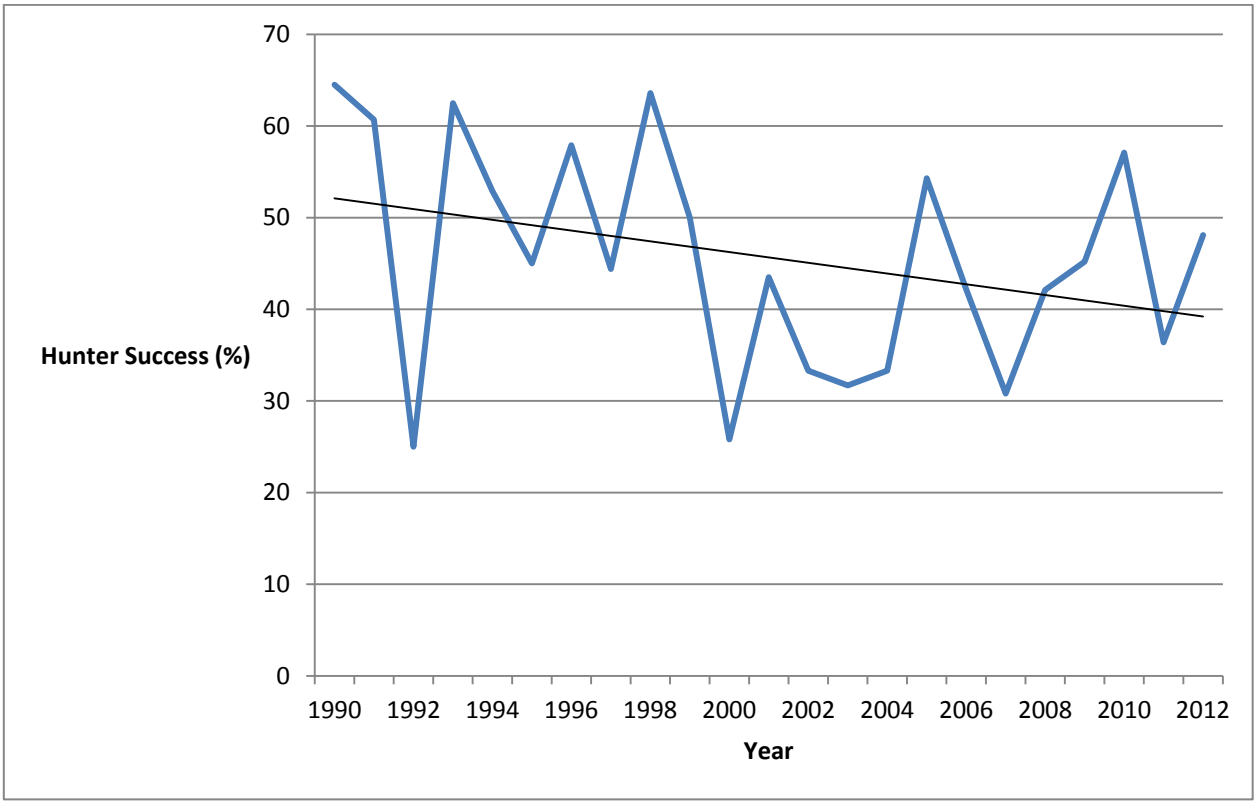


Figure 4. Moose hunting success on the Coleen and Old Crow Rivers, 1990-2012 (ADF&G 2013).

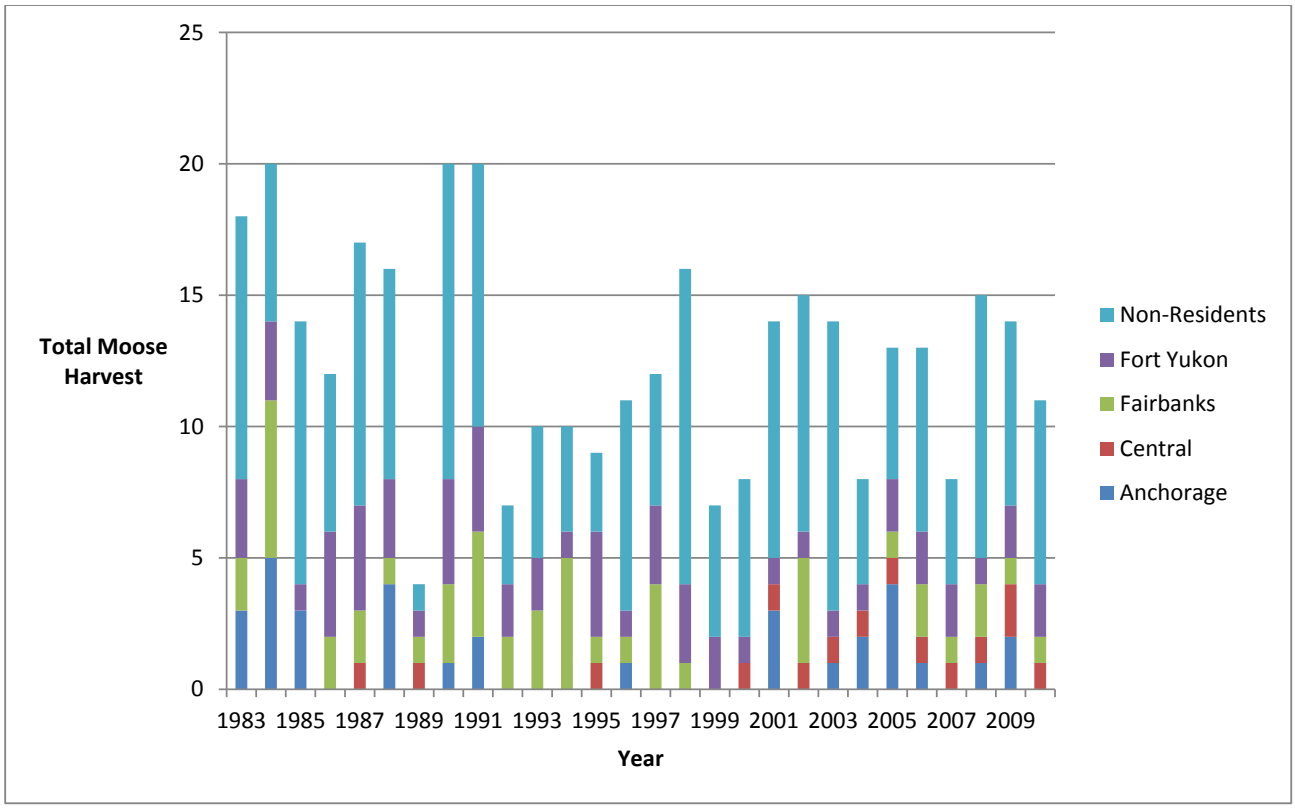


Figure 5. Mooose harvest by residency for the Sheenjek, Colleen and Old Crow River drainages within Unit 25A, 1983-2010.

Section 804 Analysis

An analysis based on Section 804 of ANILCA shall be conducted whenever a proposal to change Federal regulations requests a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource. In this case, such an analysis is required because of the small harvestable surplus of animals in the proposed hunt area: the portion of Unit 25A consisting of the drainage of Sheenjek River upstream from and including Monument Creek, and the drainages of the Coleen River and Old Crow River (including Bilwaddy Creek) (see **Map 1**). The proponent requests that the distribution of harvest permits be limited to 5 permits. Ultimately, the number of available permits would be determined based on several biological parameters. Further, the proponent requests that residents of only 4 villages be eligible to hunt moose in the proposed hunt area: Arctic Village, Chalkyitsik, Fort Yukon, and Venetie. The customary and traditional use determination for moose in the hunt area is for rural residents of Units 25A and 25D, which includes the villages of Arctic Village in Unit 25A and Beaver, Birch Creek, Chalkyitsik, Circle, Fort Yukon, Stevens Village, and Venetie in Unit 25D. If the closure in the proposed hunt area is adopted by the Board, this Section 804 analysis would determine which of the 8 villages, as well as which rural residents not living in a community but residing in Units 25A and 25D, would be eligible to harvest moose in the proposed hunt area, in the event a harvest opportunity is provided by the Board.

Section 804 of ANILCA provides a subsistence priority for the taking of fish and wildlife on Federally administered lands and waters. A subsistence priority will be implemented through appropriate limitations whenever it is necessary to restrict the taking of populations of fish and wildlife on these lands for subsistence uses in order to protect the continued viability of fish and wildlife populations, or to continue such uses. These limitations are based on the application of three criteria: 1) customary and direct dependence upon the populations as the mainstay of livelihood, 2) local residency, and 3) the availability of alternative resources. The following section addresses these criteria as they relate to rural residents with a customary and traditional use determination for moose in the proposed hunt area.

1. Customary and Direct Dependence upon the Populations as a Mainstay of Livelihood

Eight villages, roughly 1,269 people, are included in the customary and traditional use determination for moose in the proposed hunt area: Arctic Village, Beaver, Birch Creek, Chalkyitsik Circle, Fort Yukon, Stevens Village, and Venetie (**Table 2**, see Unit 25 Map). None of the villages lie within the area that is the focus of this proposal.

Descriptions of the customary and traditional uses of moose in the proposed hunt area include: Braund and Associates (2007), Caulfield (1983), Holen et al. (2012), Kofinas et al. (2010), Nelson (1973), Osgood (1936, 1970), Stevens and Maracle (2011), Sumida and Alexander (1985), Sumida (1988, 1989), Sumida and Andersen (1990), and Van Lanen et al. (2012). The 8 villages are commonly referred to as the Yukon Flats Region. The 8 villages and Rampart are the entire membership of the Council of Athabascan Tribal Governments. Residents of the villages are primarily Gwich'in Athabascan, related culturally and linguistically. Beaver, Stevens Village, and Fort Yukon also contain residents of Koyukon ancestry, and Beaver contains residents of Inupiaq Eskimo ancestry (Holen et al. 2012 and Van Lanen et al. 2012). Historical and contemporary Gwich'in Athabascan territories encompass Unit 25A including the proposed hunt area (Caulfield 1983, Slobodin 1981, and Van Lanen 2012). Gwich'in Athabascan territory extends beyond Arctic Village to the north and westward into Canada. Moose and caribou are important components of the diet (Slobodin 1981). Van Lanen et al. (2012: 20) explain the contemporary importance of moose to Yukon Flats villages this way:

> In terms of effort, use, and social significance, moose is the single most important game resource for Yukon Flats villages. Both ethnographic research and harvest assessments demonstrate that for many Yukon Flats residents, moose hunting is the primary fall hunting activity and moose provides the primary source of wild meat (Thomas and Fleener 2003, Thomas 2004, Thomas and Fleener 2004, Stephen R. Braund & Associates 2007, Thomas and Fleener 2007, Thomas 2008, Caulfield 1983, and Sumida 1989). Moose hunting in the Yukon Flats has been described as "deliberate and sustained" throughout the fall season (Sumida 1988) and moose meat "the one meat they [Chalkyitsik residents] could least think of doing without" (Nelson 1973:85). Similarly, ethnographic respondents during this study from Beaver, Chalkyitsik, Fort Yukon, and Venetie echoed this sentiment, that moose meat is critical for long-term survival. An elder from Beaver recalled that the community's interest in moose hunting and dependence upon moose meat as a food source has never diminished over the course of his life [*brackets as seen in the original*].

Another source of information is the Alaska Department of Fish and Game/U.S. Fish and Wildlife Service (ADF&G/FWS) harvest reporting database (FWS 2013). It should be noted that many rural interior Alaska villages have low compliance with harvest ticket systems (see the discussions in Van Lanen et al. 2012 and Anderson and Alexander 1992 for an understanding). The harvest report rate to ADF&G and FWS as compared to estimates from household harvest surveys during the same or similar years ranges from 0% to 64% for the 8 villages, which means some residents of the villages did not report their moose hunting activities to ADF&G or FWS (see **Table 3** and **Table 4**). For example, no one from Arctic Village reported harvesting a moose to ADF&G or FWS between 1983 and 2010. Because of the potential for underreporting, conventional ADF&G and FWS harvest reporting systems do not always reflect the true level of harvest. Harvest ticket data for the time period from 1983 to 2010 indicate that residents of Fort Yukon reported harvesting moose in the proposed hunt area (**Table 3**). Fort Yukon residents reported harvesting 61 moose from the proposed hunt area, out of their total reported harvest of 558 moose from 1983 to 2010. According to the ADF&G/FWS database, a range of other units and areas, primarily areas in Unit 25D, were used to harvest moose by residents of Unit 25D (FWS 2013). Additional information from a household harvest survey indicates that residents of Fort Yukon reported harvesting moose in the proposed hunt area, an estimated 2 moose in 2009 (see Stevens and Maracle 2011).

In summary, the proposed hunt area was used in historical and contemporary times by Gwich'in. Gwich'in reside in the 8 villages that are in the customary and traditional use determination for moose. Since 1983 there is evidence of use by residents of Fort Yukon (FWS 2013, Stevens and Maracle 2011, Van Lanen et al. 2012), and it is likely that residents of other villages have used the area but have not reported their harvests. Additionally, based on ethnographic descriptions (Osgood 1936, 1970; Slobodin 1981), residents of the 8 villages have cultural and social ties to the hunt area. They are eligible to be considered under the "customary and direct dependence" criterion.

2. Local Residency

As mentioned previously, residents of Units 25A and 25D, including 8 villages, are in the customary and traditional use determination for moose in the proposed hunt area. None are located in the proposed hunt area. From the point of view of customary and traditional use determinations for moose, all of these people may be considered to have local residency. Additionally, "proximity" may be subject to local cultural values of accessibility relative to the cultural significance of a population of animals and constrained by the economic wherewithal to travel to that population. Physical distance is always experienced in terms of the technology used to get from point A to point B. As a practical matter, distance is greater if you walk, less if you ride a snow machine, and even less if you fly in an airplane. Based on the available evidence, it appears that residents of Units 25A and 25D, including residents of the 8 villages, are eligible for consideration under the "local residency" criterion.

3. Availability of Alternative Resources

This section concerns alternative moose populations that are available to hunters (see Memorandum of Decision *Bobby v State of Alaska*, 1989, on file at OSM). The customary and traditional use determination for moose in the proposed hunt area is for residents of Units 25A and 25D, including 8 villages. All of the villages are situated in the Yukon Flats area. The villages are known to harvest moose throughout the region, primarily in Unit 25D (FWS 2013, Stevens and Maracle 2011, Van Lanen et al. 2012). Based on available evidence, it appears that residents of Units 25A and 25D, including residents of the 8 villages, are eligible for consideration under this criterion.

Conclusion of Section 804 Analysis

Due to the customary and traditional use determination in the proposed hunt area, people eligible to hunt moose in the proposed hunt area is already restricted to only residents of Units 25A and 25D. Additionally, the communities that are situated in the management units are primarily Gwich'in Athabascan villages, and historical and contemporary Gwich'in territories encompass the proposed hunt area. Therefore, when limiting the number of permits available to hunt moose in the hunt area, all residents of the management units are eligible to receive permits.

Distribution of Permits

The U.S. Fish and Wildlife Service, Arctic National Wildlife Refuge, would be the Federal agency responsible for distributing Federal permits for the moose hunt.

Table 2. The human population of communities in the customary and traditional use determination for moose in the proposed hunt area.

Community	U.S. CENSUS POPULATION						
	1960	1970	1980	1990	2000	2010	
	Number of People						Number of Households
Arctic Village	110	85	111	96	152	152	65
Beaver	101	101	66	103	84	84	36
Birch Creek	32	45	32	42	28	33	17
Chalkyitsik	57	130	100	90	83	69	24
Circle	41	54	81	73	100	104	40
Fort Yukon	701	448	619	580	595	583	246
Stevens Village	102	74	96	102	87	78	26
Venetie	107	112	132	182	202	166	61
Total	**1,251**	**1,049**	**1,237**	**1,268**	**1,331**	**1,269**	**515**

Table 3. The harvest of moose, based on the ADF&G/FWS reporting system, in communities included in the customary and traditional use determination for moose in the proposed hunt area, 1983-2010 cumulative.

Community	MOOSE HARVEST 1983-2010 cumulative	
	Proposed hunt area	Statewide
	Number of moose harvested	Number of moose harvested
Arctic Village	0	0
Beaver	0	218
Birch Creek	0	44
Chalkyitsik	0	59
Circle	0	73
Fort Yukon	61	558
Stevens Village	0	92
Venetie	0	9

Source: FWS 2013

Table 4. The harvest of moose, based on household surveys, at communities in the customary and traditional use determination for moose in the proposed hunt area.

HOUSEHOLD HARVEST SURVEY					
Community	Study Year	MOOSE HARVEST			
		Estimated Harvest (number)	Lower Estimate (number)	Higher Estimate (number)	Per Capita (pounds)
Beaver	2011	16	16	16	118
	2010	6	3	9	NA
	2009	9	8	10	140
	2008	2	2	3	20
	1985	15	13	17	127
Birch Creek	2010	5	1	9	NA
	2009	5	5	5	113
	2008	5	5	6	92
Chalkyitsik	2010	19	2	36	NA
	2009	7	6	10	162
	2008	8	7	10	75
Circle	2010	22	22	23	NA
	2009	10	5	16	103
	2008	5	5	5	28
Fort Yukon	2010	36	31	41	NA
	2009	64	49	79	103
	2008	61	43	79	76
	1987	150	119	181	168
Stevens Village	2010	2	1	3	NA
	2009	5	4	6	56
	2008	1	1	3	12
	1984	7	7	7	54
Venetie	2010	5	4	7	NA

	2009	24	17	39	86
	2008	22	21	24	80

Source: ADF&G 2013b, Van Lanen et al. 2012, Stevens and Maracle 2011.
NA=not available

Effects of the Proposal

If this proposal is adopted, it would have a minimal impact on Federally qualified users as historical harvest by local users has been low. This proposal would implement a Federal registration permit which would allow managers to better monitor and manage the hunt on this small migratory moose population. Non-local hunters including guides would be eliminated through closure of Federal lands to moose hunting except by residents of Units 25A and 25D, including residents of Arctic Village, Beaver, Birch Creek, Chalkyitsik, Circle, Fort Yukon, Stevens Village, and Venetie. Commercial guiding for moose would be eliminated by the closure but might benefit in the long-term if the moose population is built up as a result of the closure to non-residents. Since the Federal moose season opens almost two weeks prior to the State season, it is unlikely that nonlocal resident hunting has been impacting Federally qualified subsistence users.

Moose numbers have declined in the Coleen and Sheenjek River drainages over the last 20 years, but closure of the area to non-Federally qualified users is unlikely to result in larger numbers of moose for harvest since bull:cow ratios indicate that hunting is not the cause of the observed declines. Without more data on moose numbers, managers should be cautious about moving forward with a hunting closure.

If adopted, this proposal would designate a portion of Unit 25A open to moose hunting to Federally qualified subsistence users only. This would result in a boundary change and designation of the remaining portions of the unit as Unit 25A remainder.

OSM CONCLUSION

Oppose Proposal WP14-48.

Justification

Moose populations on the Sheenjek and Coleen Rivers in Unit 25A have experienced declines over the last 20 years and have remained at a low but stable level for the past 10 years. The moose in this area are a migratory population moving between Alaska and Canada during summer and winter with high fidelity to migration routes, rutting areas and winter ranges, making them highly susceptible to harvest. However, composition surveys show that there is a surplus of bulls for harvest, so hunting is unlikely to be a limiting factor to population growth. Hunter success has declined in both drainages over the last 20 years and guided hunting has remained low, while the majority of successful hunters have been nonresidents. However, decreases in hunting success are most likely related to more hunters in the field rather than a decline in the number of legal animals available for harvest. The current earlier Federal season should help to minimize any potential impact on local hunters by nonlocal and nonresident hunters. Moose habitat in the area is limited and predation may be serving to maintain moose numbers at low densities. The moose found on the Coleen and Sheenjek River drainages are thought to be part of a larger overall population that

includes animals in the Firth, Mancha, and Kongakut River drainages in Unit 26, where recent surveys have shown increased numbers of moose. Management of the species should be based on these biological realities rather than by management units. More data on moose numbers in the affected areas is needed prior to managers moving forward with a hunting closure as requested by the proponent.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Oppose WP14-48. The council concurred with the OSM preliminary conclusion after receiving a full briefing on the analysis. The Council also requested a presentation on the latest State and Federal moose data for the area prior to deliberation. The Council received extensive public testimony from communities in the hunt area and tribal comments as well as a presentation on the position of CATG wildlife department. The council discussed the data and public comments and did not see a need to restrict all non-federally qualified hunters at this time. The Council thought other less restrictive conservation actions could be attempted first before closing the area. The Council noted they had submitted a proposal to the Board of Game that was an attempt to address some of the conservation concerns in a less restrictive way. Overall the Council felt closure to all non-qualified users was not warranted at this time based on the latest data provided for the moose population in this area.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP14-48: Not-support. As presented to the Eastern Interior RAC spring 2013 meeting the moose in this area travel over 300 miles between ranges. These moose should be further studied before a season and bag limit is set.

Donald Woodruff, Eagle

Support Proposal WP14-48: The Gwichyaa Zhee Gwich'in Tribal Government is in support of this proposal as it addresses a conservation concern that is shared by many people in the Yukon Flats, Arctic National Wildlife Refuge and Venetie Tribal Lands. Many of these concerns originate from the lands we use and the common resources that we as local users have access too as Federally Qualified Subsistence Users and caretakers of the land for a millennia.

The area in question is a natural migratory route for moose populations in the area; add the openness of the terrain, and it results in a high success rate for moose hunters in these areas. Due to that equation and lack of survey data, and other factors leading to a lack of information we would like to see this proposed permit system implemented until a time in the future more information could be gathered to determine that a healthy moose population is sustainable in the area. At such a time the harvest quota can be adjusted accordingly.

There is a similar proposal in to the State Board of Game that will only place an antler restriction on hunters during the state season. This is supported by Federal Users to show that we are concerned about this population and that we would like to practice conservation when necessary.

Gwichyaa Zhee Gwich'in Tribal Government, Natural Resources Department – Fort Yukon

Support Proposal WP14-48: I am writing in support of WP14-48 because it would limit the harvest of moose in the upper Sheenjek, Coleen and Old Crow river drainages where populations have significantly declined. I am opposed to WP14-55 because it would increase hunting pressure on the same population. This is a critical conservation concern that warrants appropriate actions by the Federal Subsistence Board in order to restore a unique migratory moose population that is especially vulnerable to harvest pressure.

During the period of 1981to 2002, I worked as a wildlife biologist with the Arctic National Wildlife Refuge where I was responsible for studies and monitoring of caribou, Dall sheep, and moose populations. From 1995 to 1999 I led a study of moose movements within the area addressed by WP14-48 and WP14-55. Results of the study revealed that most moose inhabiting

this area migrate to Old Crow Flats in Canada where they give birth, remain through the summer season, and return to the upper drainages of the Coleen, Sheenjek rivers in Game Management Unit (GMU) 25A, and the Firth and Kongakut rivers in GMU 26C where they rut and spend the winter (Mauer 1998). These migrations are the longest that have been reported for moose in North America.

Moose numbers in the upper Sheenjek, Coleen, Kongakut and Firth drainages have been monitored by consistent aerial survey methods since 1977. From 1977 to 1991, moose numbers were relatively stable; however, a significant decline was detected in 2000 when overall numbers for these areas were down by 57%. This decline coincided with a widespread decline in moose throughout northern Alaska. The Alaska Board of Game closed all of GMU 26 (including the Kongakut and Firth areas) to moose harvest in 1996. Moose hunting in the upper Sheenjek and Coleen river drainages, however, has remained open. Results of surveys conducted since 2000 show that moose numbers in the upper Sheenjek have remained very low during the past 13 years (21to 26 moose counted). This represents an 84% decline from previous levels. For the Coleen area, the number of moose counted has dropped from a previous average of 229 during 1977 to 1991, to 79 in 2012, representing a decline of 65%. During this same period, moose counts in the Kongakut and Firth areas, where hunting has remained closed, show increases of 53% and 92% respectively.

There has been a steady increase in hunting pressure in the Sheenjek and Coleen areas that is having a significant negative influence on recovery of the moose population. A long-time local resident to the Coleen area reported increasing numbers of hunters and decreasing numbers of moose. Since 2000 I have had the opportunity to visit the Sheenjek, Coleen and Firth areas on several occasions during the summer season and have observed evidence of moose abundance such as intensity of browsing, shed antlers, and pellet groups that are consistent with the low moose counts for the Sheenjek and Coleen areas, and the higher counts of moose in the Firth and Kongakut areas.

I am concerned that some may claim that action on WP14-48 should be postponed due to uncertainties and variability of the survey data. I would like to point out that the aerial survey methodology that has been applied in this region was developed during the 1970's by biologists of both the Alaska Department of Fish and Game (ADF&G) and the Arctic Refuge working under the guidance of Dr. William Gasaway, a renowned moose research scientist at ADF&G. Further refinements were provided by Dr. Roy Nowlin (ADF&G) and Dr. Gerald Garner (Arctic Refuge) in the 1980's, which resulted in the survey trend areas that are currently used. Because of the sparse forest and open tundra environments found here, moose are highly visible under favorable snow conditions. I have reviewed all moose survey reports for the period of 1977 to 2012 and find a high degree of consistency and therefore conclude that the data is sufficiently reliable to base management decisions. Confidence in the reliability of this multi-year data set

has been significantly enhanced by moose movement studies completed during 1995- 1998 and more recently with studies conducted by the Yukon Renewable Resources Department using GPS technology (2007- 2009). Both studies verified that most moose of this region are migratory, and that individuals demonstrate a very high degree of fidelity to seasonal ranges and migratory routes. Therefore, changes in moose count data in the trend areas are not likely due to shifts in moose from one area to another in different years, but are indicative changes in moose numbers.

Within the area addressed by WP14-48 we have a unique situation where moose are predominately migratory, a strategy that enables moose to optimize the use of seasonal habits and achieve significantly higher population density that would be afforded by a non-migratory strategy. Prior to the decline of moose during the 1990's,a minimum number of moose that wintered in the upper Sheenjek, Coleen, Kongakut and Firth river areas was over 800 animals. Aerial surveys of neighboring areas to the south, where no migratory strategy has been detected, found much lower densities of moose.

It is imperative to consider that while the moose migration that has been documented is capable of attaining relatively high densities, they are extremely vulnerable to hunting pressure due to the open nature of the landscape, and the highly predictable movement of moose during the hunting season. Studies have shown that moose consistently move along the same trails and migration routes every fall when hunters are present. Thus, it is possible for hunting to continue to show relatively high success rates even when the number of moose are declining, as is the case for moose destined for the Sheenjek and Coleen areas. As these moose populations dwindle, the possibility of extermination of moose having the migratory tradition becomes greater.

It is also important to consider that the State of Alaska is recommending that the current wildlife closure of moose hunting in the upper Kongakut and Firth areas be lifted by the Federal Board (WP14-55). Moose movement studies have documented that many of the migratory moose that

WP14-52 Executive Summary	
General Description	Proposal WP14-52 requests that the requirement for a State registration permit to harvest brown bears in Unit 26A be eliminated. *Submitted by the North Slope Subsistence Regional Advisory Council.*
Proposed Regulation	**Unit 26A—Brown Bear** *Unit 26A—1 bear ~~by State registration permit only~~ July 1–June 30* *__.26(n)(26)(iii)~~You may hunt brown bear in Unit 26A by State registration permit in lieu of a resident tag if you have a State registration permit prior to hunting.~~ You may not use aircraft in any manner for brown bear hunting ~~under the authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bears. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements.~~*
OSM Conclusion	**Support with modification** to insert the word "subsistence" and to clarify the permit requirements. The modified language should read: **Unit 26A—Brown Bear** *Unit 26A—1 bear by State **subsistence** registration permit only July 1–June 30* *__.26(n)(23)(iii) ~~You may hunt brown bear in Unit 26A by State registration permit in lieu of a resident tag if you have obtained a State registration permit prior to hunting.~~ Aircraft may not be used in any manner for brown bear hunting, ~~under authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements~~.*
North Slope Regional Advisory Council Recommendation	**Support with OSM modification**

WP14-52 Executive Summary	
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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support with OSM Modification**
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP14-52

ISSUES

Proposal WP14-52, submitted by the North Slope Subsistence Regional Advisory Council, requests that the requirement for a State registration permit to harvest brown bears in Unit 26A be eliminated.

DISCUSSION

The proponent requests eliminating the requirement for a State registration permit to harvest brown bears in Unit 26A in order to align State and Federal regulations. Additionally, the proponent states that removing the permit requirement would ease confusion about hunting regulations for communities that hunt on Federal lands in the unit, allowing for more opportunistic harvest without having to possess a State permit for such harvest.

Note: Removal of the State registration permit requirement for subsistence harvest of brown bears in Unit 26A would cause Federal and State regulations to become misaligned as harvest under State subsistence regulations requires the use of a State registration permit.

Existing Federal Regulation

Unit 26A—Brown Bear

Unit 26A—1 bear by State registration permit only	*July 1–June 30*

__.26(n)(26)(iii)You may hunt brown bear in Unit 26A by State registration permit in lieu of a resident tag if you have a State registration permit prior to hunting. You may not use aircraft in any manner for brown bear hunting under the authority of a brown bear State registration permit, including transportation of hunters, bear, or parts of bears. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. .

Proposed Federal Regulation

Unit 26A—Brown Bear

Unit 26A—1 bear ~~by State registration permit only~~ *July 1–June 30*

__.26(n)(26)(iii)~~You may hunt brown bear in Unit 26A by State registration permit in lieu of a resident tag if you have a State registration permit prior to hunting.~~ You may not use aircraft in any manner for brown bear hunting ~~under the authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bears. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements.~~

Existing State Regulation

Unit 26A—Brown Bear

Residents and Nonresidents – one bear every regulatory year *No closed season*

The following information compares the requirements of subsistence versus general State regulations*:

Subsistence hunting	**General hunting**
▪ *Meat must be salvaged for human consumption*	▪ *Meat need not be salvaged*
No tag required but you must register to hunt	*See units for seasons*
▪ *Hide and skull need not be sealed unless removed from subsistence area or presented for commercial tanning; if sealing is required, it must be completed by an authorized sealing agent; at the time of sealing, the skin of the head and front claws are removed and kept by ADF&G.*	▪ *Hide and skull must be sealed by an authorized sealing agent statewide*
▪ *No use of aircraft for subsistence hunting in Units 21D, 22, 23, 24, and 26A. See units for season dates.*	▪

*From page 28 of the 2013 – 2014 Alaska Hunting Regulations

Extent of Federal Public Lands

Approximately 73% of the lands in Unit 26A are comprised of Federal public lands consisting of 66% Bureau of Land Management (BLM) managed lands, 6.6% National Park Service (NPS) managed lands, and 0.1% U.S. Fish and Wildlife Service (USFWS) managed lands.

Customary and Traditional Use Determinations

Rural residents of Unit 26 (except the Prudhoe Bay–Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope have a positive customary and traditional use determination for brown bear in Unit 26A.

Regulatory History

At its April 1992 meeting, the Federal Subsistence Board (Board) adopted regulation mirroring the State's regulations with regard to the use of subsistence registration permits for brown bear in Unit 26A. The Alaska Board of Game established two brown bear management areas in the state, one in western Alaska and one in northwestern Alaska, which included Unit 26A (FSB 1992). These were areas of the state where the use of brown bears for human consumption had been found to occur at significant levels. Regulations adopted by the State provided subsistence users a liberalized harvest limit of one bear per year, an extended season and elimination of the resident brown bear tag requirement. All edible meat was required to be salvaged. Sealing requirements were eliminated if the skin and skull of a harvested bear were not taken from the designated hunt area. An additional prohibition precluding the use of aircraft to hunt or take brown bears under subsistence regulations was also adopted for the northwestern bear hunting area.

In 2007, the Board adopted Proposal WP07-60 which requested the Federal brown bear harvest season in Unit 26A be changed from Sept. 1 –May 31 to July 1 – May 31, which aligned the State and Federal regulations. In 2012, the Board adopted a similar Proposal WP12-82 requested an extension to allow for a year-round hunt from July 1 to June 30, again aligning State and Federal regulations. The State subsistence registration permit requirement was retained in each case to allow managers to track and monitor harvests and prevent future conservation concerns.

Biological Background

Brown bear populations that were reduced during the 1960s by guided sport hunting are slowly increasing or are stable (Carroll 2011). The highest densities of brown bears occur in the foothills of the Brooks Range and lowest in the northern portion of Unit 26A (Carroll 2011).

State management goals and objectives for brown bear are as follows (Carroll 2011):

- Maintain the existing brown bear population.
- Maintain a brown bear population of approximately 800 bears or greater.

- Monitor the harvest rate of brown bears.
- Minimize adverse interactions between brown bears and the public.

In the late 1980s, Reynolds (1989) estimated the brown bear population in Unit 26A to be between 900 and 1,120. No current estimates of the sex ratio, composition, or productivity have been conducted since the early studies conducted by Reynolds in the 1980s and Carroll in 1995. The Alaska Department of Fish and Game (ADF&G) conducted periodic surveys to assess the density of brown bears in Unit 26A in the early 1990s and 2000s (Carroll 2011). In 1992, the estimated density from a survey conducted in the western foothills of the Utukok and Kokolik river drainages was 29.5 bears/1,000 km^2. The density estimate from surveys conducted in 2000, 2001, and 2003 between 1,500 and 4,000 ft. elevation in the eastern portion of Unit 26A, Unit 26B, and western portion of Unit 26C was 18.3 bears/1,000 km^2. Carroll (1995) estimated densities in Unit 26A were 0.25–2 bears/1,000 km^2 in the coastal plain, 10–30 bears/1,000 km^2 in the foothills, and 10–20 bears/1,000 km^2 in the mountains (Carroll 1995). The 1995 population estimate, using the mid-range of these density estimates, was 81 in the coastal plain, 666 bears in the foothills, 260 bears in the mountains and a total of 1,007 bears in Unit 26A (Carroll 1995). Recent reports by pilots and hunters and increased number of reported bear encounters on the coastal plain suggest that bears have probably increased in all these areas in Unit 26A (Carroll 2011).

Harvest History

An average of 23 bears, which includes estimates of unreported harvest, were taken per regulatory year in Unit 26A between 2000-2001 and 2010-2011 (**Table 1**). The sex ratio of the harvest from 2000 to 2010 is approximately 2:1 (M:F) (**Table 1**). In the past, unreported harvest and noncompliance with the bear hunting regulations was related to bears causing damage to remote cabins and other bear/human conflicts (Carroll 2011). To accommodate rural hunting practices and because the sealing certificate system was not proven effective to determine the actual harvest, the hunting season is now year round. In addition, waivers for tag fees were established and the requirement for resident tags was eliminated (Carroll 2007, Carroll 2011). The estimated number of harvested bears that are not reported was determined by comparing data from the North Slope Borough and other community-based harvest assessments with the number of known bears that have been harvested. Even with the documented levels of under-reporting, the total harvest is well below the estimated allowable sustained yield of 51 bears for Unit 26A (Carroll 2011).

Other Alternative Considered

An alternative considered was to replace the State subsistence registration permit with a Federal registration permit as a way to track bear harvest to prevent conservation concerns from overharvest. However, this would require some hunters to have both a State and Federal permit, depending upon the land status of the area in which they are hunting. Such a requirement would only serve to add more regulatory complexity for Federally qualified users, which goes against the intent of the proponent and therefore was not given further consideration.

Table 1 Brown Bear harvest in Unit 26A from 2000-2011 (Carroll 2011, 2013; OSM 2013).

Year	Male	Female	Estimate of Unreported Harvest[a]	Estimated Total
2000/2001	14	4	6-12	24-30
2001/2002	10	3	6-12	19-25
2002/2003	10	4	6-12	20-26
2003/2004	12	4	6-12	22-28
2004/2005	11	4	6-12	21-27
2005/2006	2	0	6-12	8-14
2006/2007	9	4	6-12	18-25
2007/2008	6	3	6-12	15-21
2008/2009	14	6	6-12	26-32
2009/2010	13	6	6-12	24-30
2010/2011	10	2	6-12	18-24

[a] Estimates based upon comparisons or the reported harvest with data from the North-Slope and other community–based harvest assessments.

Effects of the Proposal

If the proposal is adopted it would not provide for a brown bear harvest reporting mechanism in Unit 26A. Eliminating the requirement for a State subsistence registration permit for Federally qualified subsistence users would effectively eliminate the ability of either State or Federal wildlife managers to track the harvest of brown bears. Maintaining a reporting requirement is an important tool for documenting population trends and helps ensure the long-term conservation of bears in the region. In addition, removal of the State registration permit would result in misalignment of State and Federal regulations, adding to regulatory complexity.

Currently, the bear population in Unit 26A appears to be stable to increasing. However, eliminating the State subsistence registration permit requirement could potentially result in increased harvest because hunters would no longer be required to report whether or not they were successful. In addition, village residents who have indicated difficulty in obtaining permits in the past, would not be compelled to contact State personnel to report their harvest if permits were not required. Currently there is no sealing requirement for bear hides or skulls that stay within Unit 26A. If the permit requirement were dropped, there would be no way to track Federal subsistence brown bear harvest. Without these data there would be no way to track the number of bears harvested, or population trends.

OSM PRELIMINARY CONCLUSION

Support Proposal WP14-52 **with modification** to insert the word "subsistence" and to clarify the permit requirements.

The modified regulation should read:

Unit 26A—Brown Bear

Unit 26A—1 bear by State ***subsistence*** *registration permit only* *July 1–June 30*

__.26(n)(23)(iii) ~~*You may hunt brown bear in Unit 26A by State registration permit in lieu of a resident tag if you have obtained a State registration permit prior to hunting.*~~ *Aircraft may not be used in any manner for brown bear hunting,* ~~*under authority of a brown bear State registration permit*~~*, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports.* ~~*See page 20 for bear sealing requirements*~~*.*

Justification

Maintaining a harvest reporting mechanism is essential to the sound management of brown bears in Unit 26A. The State subsistence registration permit requirement provides both State and Federal wildlife managers with valuable harvest and population trend information necessary to properly manage brown bears. Currently, there is no practical alternative to the State registration permit for monitoring brown bear harvest, hunter success or population trends as a separate Federal permit would only add regulatory complexity for the user. State Permits can be obtained relatively easily by calling the local ADF&G biologist in Barrow who will mail them out to villages if vendors are not available.

Under current regulations, qualified rural residents have two options when hunting brown bear on Federal lands in Alaska. They can harvest an animal under the State's general harvest regulations, which does not require a registration permit, but does require sealing of the hide and skull, or they can hunt under State/Federal subsistence regulations, which require a State subsistence registration permit and salvage of all edible meat. Under this option, sealing is only required if the animal is removed from the unit.

Clarification of registration permit requirements is needed given past regulatory history. The proponent states that removal of the permit requirement is needed to align State and Federal brown bear populations, but this is not the case. A State subsistence registration permit has been required for Federally qualified

users hunting under subsistence regulations since the early 1990s. Removal of the permit requirement would result in misalignment of State and Federal regulations, not the other way around. Previous language under special provisions for brown bear in Unit 26A made it appear as if subsistence hunters could use either a general hunting tag or a registration permit for subsistence harvest of brown bear when only the latter option is legal for those interested in hunting brown bear for food without the need for sealing.

Amending the language under the special provisions section for Unit 23 brown bear hunting to more accurately reflect the requirement for hunters to have a State subsistence registration permit will clarify regulations as it pertains to the subsistence harvest of brown bears. As it reads now, the use of the phrase "you may hunt brown bear by State registration permit in lieu of a resident tag in Unit 26A if you have a State registration permit prior to hunting" gives the appearance that use of a State registration permit for subsistence hunting of brown bears is optional for subsistence harvest of brown bear when in fact it is not and never has been since the regulation was adopted by the Federal Subsistence Board in 1992.

Eliminating the requirement for a State subsistence registration permit would result in Federally qualified users only being able to hunt brown bears in Unit 26A under the State's general brown bear hunting regulations, which would require the hide and skull to be sealed. Such a requirement would add an unwwanted reporting burden on Federally qualified users, which goes against the intent of the proponent.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

North Slope Subsistence Regional Advisory Council

Support WP14-52 **with OSM modification** to insert the word "subsistence" and clarify permit requirements. After receiving the OSM briefing on this proposal (submitted by the NSRAC) and further discussion at the meeting with other State and Federal biologists the Council noted they better understood the confusing overlap of regulation requirements. Subsequently the Council voted to support the OSM conclusion to maintain both the State and Federal brown bear permits but requested the modification of specifying "subsistence" and clarify the permit requirements so that the communities and federal subsistence hunters understand they can to choose to hunt under either permit – whichever one works best in their situation. The Council requested that outreach effort help make clear what the permitting requirements are so that it actually does offer flexibility and not confusion.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14–40 Executive Summary	
General Description	Proposal WP14-40 requests that the requirement for a State registration permit to harvest brown bears in Unit 23 be eliminated. *Submitted by the Northwest Arctic Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 23— Brown Bear** Unit 23-1 bear ~~by State registration permit~~ Aug. 1 – May 31 __.26(n)(23)(iii)~~You may hunt brown bear by State registration permit in lieu of a resident tag in Unit 23 if you have a State registration permit prior to hunting.~~ Aircraft may not be used in any manner for brown bear hunting ~~under the authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements~~.
OSM Conclusion	**Support** Proposal WP14-40 **with modification** to insert the word "subsistence" and to clarify the permit requirements.
Northwest Arctic Regional Council Recommendation	**Support** Proposal WP14-40 **with modification** as described in OSM conclusion
Western Interior Regional Council Recommendation	**Support** Proposal WP14-40 **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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support with modification** to retain the requirement of a State registration permit
Written Public Comments	**None**

ISSUES

Proposal WP14-40, submitted by the Northwest Arctic Subsistence Regional Advisory Council, requests that the requirement for a State registration permit to harvest brown bears in Unit 23 be eliminated.

DISCUSSION

The proponent requests eliminating the requirement for a State registration permit to harvest brown bears in Unit 23 in order to align State and Federal regulations. Additionally, the proponent states that removing the permit requirement would ease confusion about hunting regulations for communities that hunt on Federal lands in the unit, allowing for more opportunistic harvest without having to possess a State permit for such harvest.

Note: Removal of the State registration permit requirement for subsistence harvest of brown bears in Unit 23 would cause Federal and State regulations to become misaligned as harvest under State subsistence regulations requires the use of a State registration permit.

Existing Federal Regulation

Unit 23—Brown Bear

Unit 23-1 bear by State registration permit	*Aug. 1 – May 31*

__.26(n)(23)(iii)You may hunt brown bear by State registration permit in lieu of a resident tag in Unit 23 if you have a State registration permit prior to hunting. Aircraft may not be used in any manner for brown bear hunting under the authority of a brown bear State registration permit, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. See page 20 for bear sealing requirements.

Proposed Federal Regulation

Unit—Brown Bear

Unit 23-1 bear ~~by State registration permit~~ *Aug. 1 – May 31*

__.26(n)(23)(iii)~~You may hunt brown bear by State registration permit in lieu of a resident tag in Unit 23 if you have a State registration permit prior to hunting.~~ Aircraft may not be used in any manner for brown bear hunting ~~under the authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements~~.

Existing State Regulation

Unit 23 – Brown Bear

Residents- one bear every regulatory year *Aug. 1 – May 31*

Nonresidents- one bear every regulatory year by drawing permit *Sept. 1 – Oct. 31*

Or

Nonresidents- one bear every regulatory year by drawing permit *Apr. 15 – May 31*

In addition to other regulations, subsistence regulations apply to the following "Residents Only" hunt:

Residents- one bear every regulatory year by permit available in Kotzebue and Unit 23 license vendors beginning July 2 *Aug. 1 – May 31*

Subsistence hunting	General hunting
▪ *Meat must be salvaged for human consumption*	▪ *Meat need not be salvaged*
Subsistence hunting	**General hunting**
▪ *No tag required but you must register to hunt*	▪ *See units for seasons*
▪ *Hide and skull need not be sealed unless removed from subsistence area or presented for commercial tanning; if sealing is required, it must be completed by an authorized sealing agent; at the time of sealing, the skin of the head and front claws are removed and kept by ADF&G.*	▪ *Hide and skull must be sealed by an authorized sealing agent statewide*
▪ *No use of aircraft for subsistence hunting in Units 21D, 22, 23, 24, and 26A. See units for season dates.*	

*From page 28 of the 2013 – 2014 Alaska Hunting Regulations

Extent of Federal Public Lands

Federal public lands comprise approximately 69% of Unit 23 and consist of 42% National Park Service managed lands, 17% Bureau of Land Management managed lands and 10% US Fish and Wildlife Service managed lands (**Unit 23 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 21 and 23 have a positive customary and traditional use determination for brown bear in Unit 23.

Regulatory History

At its April 1992 meeting, the Federal Subsistence Board (Board) adopted regulations mirroring the State with regard to the use of subsistence registration permits for brown bear in Unit 23. The Alaska Board of Game (BOG) adopted regulations establishing two brown bear management areas in the state, one in western Alaska and one in northwestern Alaska, which included Unit 23 (FSB 1992). These were areas of the state where the use of brown bears for food had been found to occur at significant levels. Regulations adopted by the State provided subsistence users a liberalized harvest limit of one bear per year, an extended

season and elimination of the resident brown bear tag requirement. All edible meat was required to be salvaged. Sealing requirements were eliminated if the skin and skull of a harvested bear was not taken from the designated hunt area. An additional prohibition precluding the use of aircraft to hunt or take brown bears under subsistence regulations was also adopted for the northwestern bear hunting area. Resident sport hunting differs from subsistence registration permit hunts in several ways: only one bear every four years may be harvested; the salvage of meat is not required; a brown bear tag must be purchased; and sealing of the skull and hide is required. In Unit 23 with the exception of the Baldwin Peninsula north of the Arctic Circle, individuals may harvest brown bears using a subsistence registration permit (FSB 1992).

In 1992, Proposals 74-76, 78, 86 and 167 all requested changes in Unit 23 Federal brown bear regulations and were addressed concurrently by the Board. The Board adopted the proposals with the following modifications: the brown bear harvest limit was set at one bear per year, with a season of Sept. 1 – May 31, and Federally qualified users did not have to seal the hide and skull unless they were transported outside of Unit 23 (FSB 1992).

In 2005, Proposal WP05-17 requested the brown bear season be lengthened in Unit 23 and the requirement to use the State subsistence registration permit be eliminated, due to the reported abundance of brown bears in the unit. It was suggested that the proposed changes would provide subsistence users additional opportunity to harvest brown bears and align State and Federal regulations. The Board adopted the proposal with modification to remove the exclusion of the Baldwin Peninsula area north of the Arctic Circle and to retain the State subsistence registration permit requirement. Retention of the subsistence registration permit requirement was considered necessary to allow managers to track and monitor harvests to prevent future conservation concerns. It should be noted that while the State non-subsistence hunt was not a registration hunt, brown bear harvests were sealed and therefore the harvest was recorded. In the State subsistence hunt, brown bear harvests were not sealed and therefore, a registration permit was needed to make the sure the harvest was recorded.

In 2007, Proposal WP07-50 requested elimination of the State subsistence registration permit for brown bear hunting in Unit 23. The proposal was withdrawn by the proponent.

Biological Background

State management objectives for brown bear are as follows (Westing 2011):

- Conduct a brown bear population estimate for some portion on Unit 23 in cooperation with the Department of Interior (DOI) staff at least once every reporting period.
- Continue community-based assessments to collect brown bear harvest information from residents of Unit 23.
- Seal bear skins and skulls, determine sex, and extract a tooth for aging.
- Monitor harvest data (age, sex, and skull size) for changes related to selective pressure.

The first Unit 23 brown bear population estimate was made in 1987 using a mark-recapture method (Ballard et al. 1993). A density of 15.6 adult brown bears 2.5+ years of age /1000 km^2 was calculated for a 1,862 km^2 area in the vicinity of the Red Dog Mine (**Table 1**). In a more recent survey in 2007, a stratified random sampling method was used to estimate the brown bear population in the Upper Noatak River in Unit 23 (Shults pers. comm. 2013). Shults estimated an adult (2.5+ years of age) brown bear density of 18/1000 km^2. An estimate for the Lower Noatak conducted in 2008 found an adult brown bear density of 24/1000km^2, while another estimate of brown bears in Gates of the Arctic National Park in 2010 found an adult bear density of 20/1000km^2 (Shults, pers. comm. 2013). By comparison, a study in the Western Brooks Range estimated the brown bear density to be 24.3 adult brown bears/1000 km^2 (**Table 1**) (Reynolds 1992).

Residents of Unit 23 report brown bear numbers have increased since the 1940s or 1950s. The numbers of moose, caribou and muskox in the region have increased substantially since the 1950s, providing a stable prey base for large predators like brown bears. Increases in the number of prey species led to a decrease in the subsistence harvest of brown bear in the unit, and with the decline of the commercial salmon fishery in Kotzebue Sound, more salmon have been allowed to reach spawning areas further inland, thereby increasing this food source for bears (Westing 2011).

Changes in hunting regulations may have also contributed to increases in brown bear numbers in Unit 23. Until the early 1990s, brown bear hunting regulations were mainly geared towards sport hunting rather than subsistence hunters who were not interested in dealing with sealing requirements, but rather, were interested in brown bears as a source of meat. In addition, prior to statehood and the implementation of hunting regulations, subsistence hunters commonly harvested bears in dens, especially in areas where bears provided the only reliable source of terrestrial hides, meat and fat to local peoples (Stoney as cited in Westing 2011). Regulations prohibiting the harvest of sows with cubs have precluded this method of hunting and the strong selection of large male bears by non-subsistence hunters may have also helped to increase cub survival (Westing 2011).

Harvest History

Local residents in Unit 23 hunt for brown bear primarily in the spring and fall, with the largest portion of reported harvest occurring during the month of September. Between 2000 and 2010, 61% of the total harvest of brown bears in Unit 23 occurred in September (Westing 2011). Brown bear are commonly used for food and raw materials in inland communities, whereas coastal communities seldom use brown bear for food (Loon and Georgette 1989). Trophy hunting by villagers for brown bear is rare, although the practice is relatively common in the Kotzebue area and among non-Natives in the region (Loon and Georgette 1989).

Reported brown bear harvest in the unit has increased over the last 20 years, however the number of bears harvested varied substantially between years (**Figure 1**). Since 1992, State brown bear hunting

Table 1. Quantitative estimates of brown bear abundance in northwest Alaska (Ballard et al. 1993, Reynolds 1992, ADF&G 1994, Shults 2013).

Survey Area	Year	Estimation Method	Estimation Area (km^2)	Point Estimate Total Adults	Adult Bear Density/1000km^2	Total Bears/1000km^2
Red Dog Mine Area[1]	1987	Mark-Recapture	1,862		**15.6** 95% CI (13.4-19.3)	**17.9** 95% CI (15.6-21.0)
Utukok Kokolik Rivers Brooks Range[2]	1992	Mark-Recapture	2,228		**24.3** 95% CI (23.1-26.0)	**29.5** 95% CI (28.1-31.7)
NE GAAR, ANWR[3]	2004	Line Transect	20,220			**18.3** 95% CI ±34%
Upper Noatak[4]	2005	Stratified Random Sampling	17,871	**171** 80% CI (73-132)	**8**	
BELA[4]	2006	Stratified Random Sampling	23,007	**96** 80% CI (14-179)	**4**	
Upper Noatak River	2007	Stratified Random Sampling	17,871	**326** 80% CI (232-420)	**18**	
Lower Noatak River[4]	2008	Stratified Random Sampling[5]	20,774	**504** 95% CI (402-609)	**24**	
GAAR[4]	2010	Stratified Random Sampling[5]	17,314	**346** 95% CI (230-463)	**20**	

[1] Ballard et al. 1993
[2] ADF&G 1994
[3] ADF&G, NPS Unpublished data
[4,5] NPS Unpublished Data; Estimates Preliminary.

bears being harvested annually. With the exception of Kotzebue, the highest estimate of reported brown bear harvested in a given year was 6 bears from the village of Kobuk in 2009. The average annual harvest is estimated at 2.1 bears for all years and villages combined, though interpretation of these numbers is difficult given the sporadic nature of data collection (**Table 2**).

Although use of the State subsistence registration permit (RB700) has likely increased the proportion of harvest being reported, there is probably some amount of underreporting occurring. Between 2000 and 2010, the average number of brown bears harvested under RB700 was 3.3 animals, but the subsistence registration hunt has never accounted for more than 13% of the total brown bear harvest since 2000 and it is unlikely that it has had an effect on the long-term trend of increasing harvest since the hunt was established in 1992 (Westing 2011).

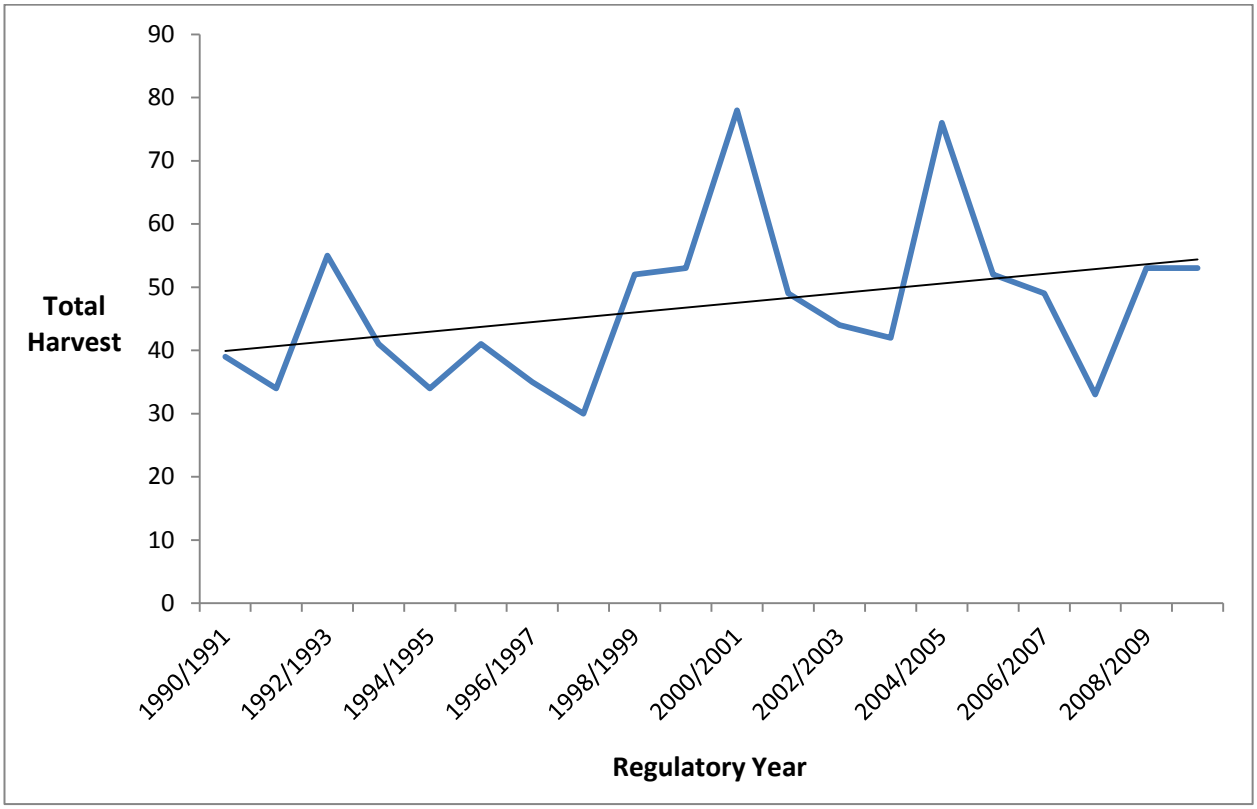

Figure 1. Total reported harvest of brown bears in Unit 23, 1990-2010.

Cultural Knowledge

Many Alaska Native cultures have strong traditional and spiritual beliefs centered on the hunting of wildlife, and bears in particular are seen to possess magical or supernatural powers. Bears are the most feared and respected of all animals and are known to have a prominent physical and symbolic role in the

lives of Northwest Eskimos (FSB 1992). Hunters followed certain prescribed practices to show the bear respect, including speaking carefully about bears, being humble about one's bear hunting activities, and removing the hyoid bone and/or leaving the skull in an appropriate place so as not to upset the bears spirit (Georgette 2001). Many taboos still exist with regard to bear hunting which are present even before a hunt commences. For instance, discussing the intent to hunt bears prior to a hunt is considered bragging and is discouraged. It is believed that the animals "allow" themselves to be taken, and if they "hear" an individual say they are going hunting or bragging about their abilities, the hunter will not be successful. Such beliefs may play a role in underreporting of harvest due to the strong taboos against discussing bear hunting in general.

Table 2. The harvest of brown bear by communities included in the customary and traditional use determination for brown bear in Unit 23, based on household surveys (ADF&G 2013).

Community	Study Year	Brown Bear Harvest			
		Reported (Number)	Expanded to Households Not Surveyed (Number)	Lower Estimate (Number)	Higher Estimate (Number)
Ambler	2003	1	1	1	2
	2009	3	4	3	6
Buckland	2009	2	3	2	4
Kiana	1999	1	2	0	3
	2006	0	0	0	0
	2009	0	0	0	0
Noatak	1994	1	1	0	2
	1999	3	3	2	5
	2002	1	1	0	2
	2007	2	3	2	4
	2010	3	4	3	8
Noorvik	2002	3	5	3	8
	2008	2	2	2	4
Selawik	1999	1	1	1	2
	2006	1	1	1	1
	2011	0	0	0	0
Shugnak	1998	1	1	1	1
	2002	1	1	1	2
	2008	2	2	2	3
Kobuk	2004	4	4	4	4
	2009	5	6	5	8
Kotzebue	1986		9		
	1991	1	8	1	23

Blank cell = question not asked or information not available.

Other Alternative(s) Considered

Another alternative considered was to replace the State subsistence registration permit with a Federal registration permit as an alternative way to track bear harvest to prevent conservation concerns from

overharvest. However, this would require some hunters to have both a State and Federal permit, depending upon the land status of the area in which they are hunting. Such a requirement would only serve to add more regulatory complexity for Federally qualified users, which goes against the intent of the proponent and therefore was not given further consideration.

Effects of the Proposal

If the proposal is adopted it would not provide for a brown bear harvest reporting mechanism in Unit 23. Eliminating the requirement for a State subsistence registration permit for Federally qualified subsistence users would effectively eliminate the ability of either State or Federal wildlife managers to track the harvest of brown bears. Maintaining a reporting requirement is an important tool for documenting population trends and helps ensure the long-term conservation of bears in the region. In addition, removal of the State subsistence registration permit would result in misalignment of State and Federal regulations, adding to regulatory complexity.

Brown bears in this area of Alaska occur at low densities and their productivity is low; it is important to monitor harvest to maintain a healthy bear population. Eliminating the State subsistence registration permit requirement could potentially result in increased harvest because hunters would no longer be required to report whether or not they were successful. In addition, village residents who have indicated difficulty in obtaining permits in the past would not be compelled to contact State personnel to report their harvest if permits were not required. Currently there is no sealing requirement for bear hides or skulls that stay within Unit 23. If the permit requirement were dropped, there would be no way to track Federal subsistence brown bear harvest. Without these data there would be no way to track the number of bears harvested, or population trends.

Finally, without the use of a subsistence registration permit, Federally qualified users would only be able to harvest brown bears in Unit 23 under the State's general brown bear hunting regulations. This would entail the use of a harvest ticket and require sealing of the hide and skull, adding a reporting requirement on Federally qualified users which would go against the intent of the proponent.

OSM CONCLUSION

Support Proposal WP14-40 **with modification** to insert the word "subsistence" and to clarify the permit requirements.

The modified regulation should read:

Unit 23 —Brown Bear

Unit 23-1 bear by State ***subsistence*** *registration permit* *Aug. 1 – May 31*

__.26(n)(23)(iii)~~You may hunt brown bear by State registration permit in lieu of a resident tag in Unit 23 if you have a State registration permit prior to hunting.~~ Aircraft may not be used in any manner for brown bear hunting ~~under the authority of a brown bear State registration permit~~, including transportation of hunters, bear, or parts of bear. However, this does not apply to transportation of bear hunters or bear parts by regularly scheduled flights to and between communities by carriers that normally provide scheduled service to this area, nor does it apply to transportation of aircraft to or between publicly owned airports. ~~See page 20 for bear sealing requirements~~.

Justification

Maintaining a harvest reporting mechanism is essential to the sound management of brown bears in Unit 23. Brown bears in this area of Alaska occur at low densities and their productivity is low; it is important to monitor harvest to maintain a healthy bear population. The State subsistence registration permit requirement provides both State and Federal wildlife managers with valuable harvest and population trend information necessary to properly manage brown bears. Currently, there is no practical alternative to the State registration permit for monitoring brown bear harvest, hunter success or population trends as a separate Federal permit would only add regulatory complexity for the user. Permits can be obtained relatively easily by calling the local ADF&G biologist in Kotzebue who will mail them out to villages if vendors are not available.

Under current regulations, qualified rural residents have two options when hunting brown bear on Federal lands in Alaska. They can harvest an animal under the State's general harvest regulations, which does not require a registration permit, but does require sealing of the hide and skull, or they can hunt under State/Federal subsistence regulations, which require a State subsistence registration permit and salvage of all edible meat. Under this option, sealing is only required if the animal is removed from the unit.

Clarification of registration permit requirements is needed given past regulatory history. The proponent states that removal of the permit requirement is needed to align State and Federal brown bear populations, but this is not the case. A State subsistence registration permit has been required for Federally qualified users hunting under subsistence regulations since the early 1990s. Removal of the permit requirement would result in misalignment of State and Federal regulations, not the other way around. Previous language under special provisions for brown bear in Unit 23 made it appear as if subsistence hunters could use either a general hunting tag or a registration permit for subsistence harvest of brown bear when only the latter option is legal for those interested in hunting brown bear for food without the need for sealing.

Amending the language under the special provisions section for Unit 23 brown bear hunting to more accurately reflect the requirement for hunters to have a State subsistence registration permit will clarify regulations as it pertains to the subsistence harvest of brown bears. As it reads now, the use of the phrase "you may hunt brown bear by State registration permit in lieu of a resident tag in Unit 23 if you have a State

never has been since the regulation was adopted by the Federal Subsistence Board in 1992.

Eliminating the requirement for a State subsistence registration permit would result in Federally qualified users only being able to hunt brown bears in Unit 23 under the State's general brown bear hunting regulations, which would require the hide and skull to be sealed. Such a requirement would add an unwanted reporting burden on Federally qualified users, which goes against the intent of the proponent.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Northwest Arctic Subsistence Regional Advisory Council

Support Proposal WP14-40 **with modification** as described in the OSM Conclusion. The Council does not see a need to change from the current requirements to hunt brown bears and supports the OSM recommendation to clarify the existing regulation by adding the word "subsistence".

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-40 **with modification** as described in the OSM Conclusion. This action alleviates a burden of sealing the hid and skull for subsistence users when taking a brown bear.

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 recommendation and Federal Subsistence Board action on the proposal.

WP14-24/25 Executive Summary	
General Description	Proposal WP14-24 request requests that the boundary for Unit 18, 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 be changed to include the Kashunuk River and the North Fork of the Andreafsky River. *Submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council* Proposal WP14-25 requests that the boundary for Unit 18, 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 be revised to include the south bank of the Kashunuk River for its entire length. It would also liberalize moose harvest for a small area upriver of Mountain Village that would be included in the lower Yukon hunt area instead of Unit 18 remainder. *Submitted by the Asa'Carsarmiut Tribal Council*
Proposed Regulation	**WP14-24** **Unit 18 – Moose** Unit 18—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~~ **the Yukon River, then north of the Yukon River downstream to, and including the North Fork of the Andreafsky River drainage**- 2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30. — Aug. 1 – the last day of February **WP14-25** **Unit 18—Moose** Unit 18—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~~ — Aug. 1 – the last day of February

WP14-24/25 Executive Summary	
	~~Chakaktolik, west of a line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village~~ **continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Kashunuk River to the confluence of the south bank of Driftwood Slough, continuing upriver to the confluence of the Yukon river, across, ending the ½ mile buffer, then following the north bank of the Yukon River to Pitkas Point and excluding all Yukon River drainages upriver from Pitkas Point**- 2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.
OSM Conclusion	**Support** Proposals WP14-24 and WP14-25 **with modification** to combine the regulatory language to make a single area descriptor. The modified language would read: **Unit 18 – Moose** **That portion north and west of the Kashunuk River continuing upriver along a line a ½ mile south and east of, and paralleling a line along the southerly bank of the Kashunuk River to the confluence of the south bank of Driftwood Slough, continuing upriver to the confluence of the Yukon River, across, continuing the ½ mile buffer, then following the north bank of the Yukon River to the North Fork of the Andreafsky River drainage** - 2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30. *Aug. 1 – the last day of February*
Yukon-Kuskokwim Delta Regional Advisory Council Recommendation	**Support** Proposal WP14-24/25 **with modification** as described in OSM conclusion.
Western Interior Regional Advisory Council	**Support** Proposal WP14-24/25 **with modification** as described in OSM conclusion.

WP14-24/25 Executive Summary	
Recommendation	
Seward Peninsula Regional Advisory Council Recommendation	**Support** Proposal WP14-24/25 **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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support with modification** to align bag limits and seasons with those recently adopted by the Board of Game (January 2014).
Written Public Comments	**1 support**

ISSUES

Proposal WP14-24, submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council, requests that the boundary for Unit 18, 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 be changed to include the Kashunuk River and the North Fork of the Andreafsky River (**Map 1**).

Proposal WP14-25, submitted by the Asa'Carsarmiut Tribal Council, requests that the boundary for Unit 18, 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 be revised to include the south bank of the Kashunuk River for its entire length. It would also liberalize moose harvest for a small area upriver of Mountain Village that would be included in the lower Yukon hunt area instead of Unit 18 remainder (**Map 1**).

DISCUSSION

The proponent for Proposal WP14-24 states that the requested boundary change should be made so that recognizable landmarks are used to designated Unit borders. It was suggested that using a drainage for a boundary line was more ideal than using straight line designations since most subsistence users either do not have a GPS needed to locate such a line or do not know how to use one.

The proponent for Proposal WP14-25 states that requested boundary change would serve to clear up user concerns about which bank of the Kashunuk River is legal for the taking of moose and that using the entire length of the Kashunuk instead of straight line GPS points would make navigation easier for subsistence users that do not own a GPS.

Existing Federal Regulation

Unit 18—Moose

Unit 18—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—2 moose, only one of which may be antlered. Antlered bulls	*Aug. 1 – the last day of February*

may only be harvested from Aug. 1 through Sept. 30.

Proposed Federal Regulation

WP14-24

Unit 18—Moose

Unit 18—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~~ ***the Yukon River, then north of the Yukon River downstream to, and including the North Fork of the Andreafsky River drainage-*** *2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.*	*Aug. 1 – the last day of February*

WP14-25

Unit 18—Moose

Unit 18—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~~ ***continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Kashunuk River to the confluence of the south bank of Driftwood Slough, continuing upriver to the confluence of the Yukon River, across, ending the ½ mile buffer, then following the north bank of the Yukon River to Pitkas Point and excluding all Yukon River drainages upriver from Pitkas Point-*** *2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.*	*Aug. 1 – the last day of February*

Unit 18—Moose

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, excluding all Yukon River drainages upriver from Mountain Village.	*Aug. 1 – Sept.30*
Residents – two moose, only one of which may be an antlered bull, taking cows accompanied by calves is prohibited	
OR	
Two antlerless moose	*Oct.1 – Feb.28*
Nonresidents, one antlered bull	*Sept.1 – Sept.30*

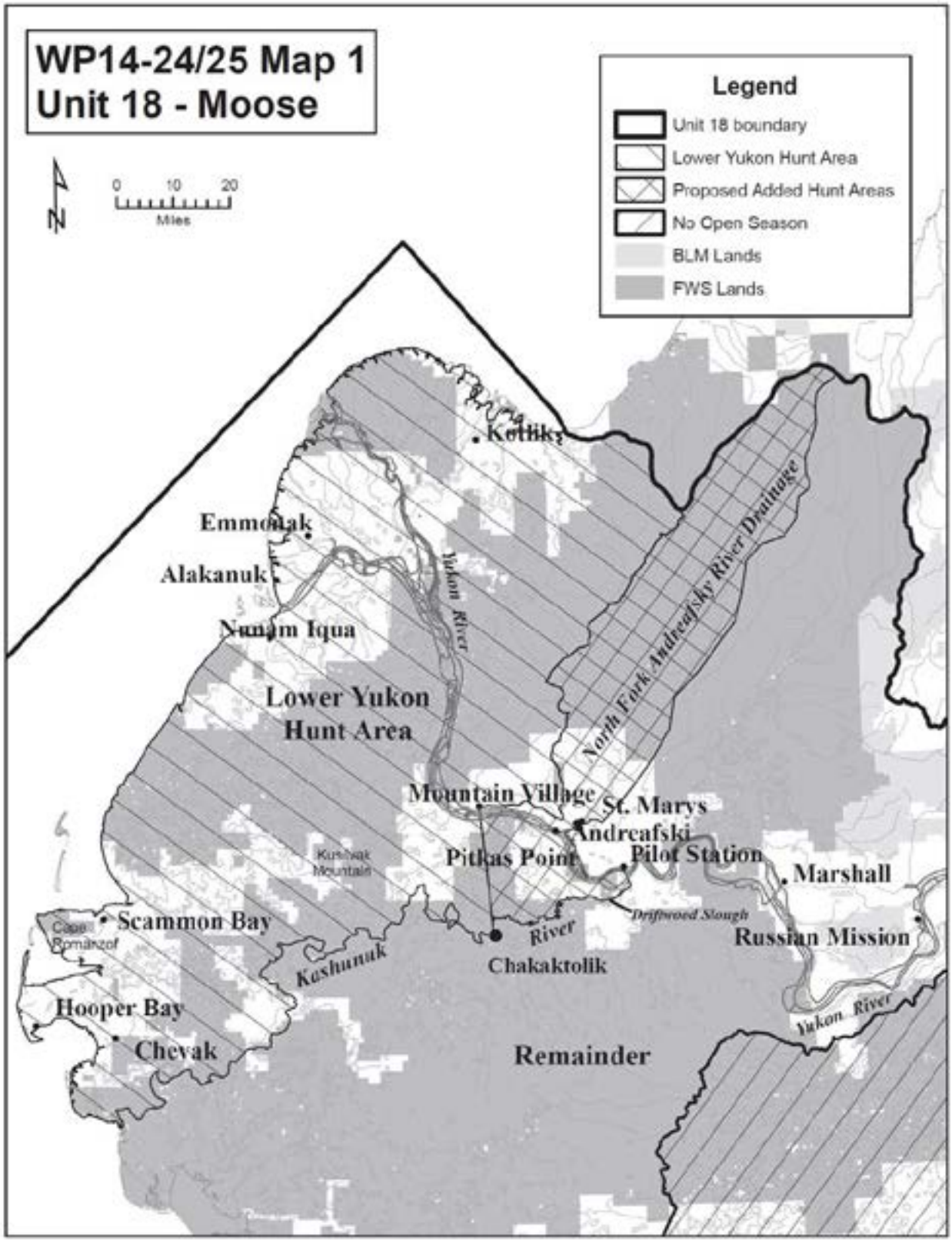
Extent of Federal Public Lands

Federal public lands comprise approximately 66% of Unit 18 and consist of 63% US Fish and Wildlife Service managed lands and 3% Bureau of Land Management managed lands (see **Unit 18 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 18, Upper Kalskag, Aniak and Chuathbaluk have a positive customary and traditional 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 (but excluding) the Tuluksak drainage.

Rural residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a positive customary and traditional determination for moose in Unit 18, that portion north of a line from Cape Romanzof to Kuzilvak Mountain to Mountain Village, and all drainages north of the Yukon River downstream from Marshall.


WP14-24/25 Map 1
Unit 18 - Moose
Legend
Unit 18 boundary
Lower Yukon Hunt Area
Proposed Added Hunt Areas
No Open Season
BLM Lands
FWS Lands
N
0 10 20
Miles
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Yukon River
North Fork Andreafsky River Drainage
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Kuskokwim Mountains
Driftwood Slough
Scammon Bay
Cape Romanzof
River
Russian Mission
Kashunuk
Chakaktolik
Hooper Bay
Chevak
Yukon River
Remainder

Regulatory History

The Alaska Board of Game, at its Nov. 13−16, 2009 meeting, adopted new regulations to extend the winter season from Jan. 20 to Feb. 28 and move the boundary between the lower Yukon and the remainder areas, south to a more discernible geographic land mark.

WP10-57, submitted by the Yukon Delta National Wildlife Refuge, requested 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. The proposal was supported by the Federal Subsistence Board with modification to remove the Cape Romanzof to Kusilvak Mountain section and replace with a descriptor for the Kashunuk River drainage.

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 (USFWS 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. Population composition data for lower Yukon moose collected in 2011 showed 30 bulls per 100 cows and 69 calves per 100 cows, with 55% of cows having calves (Rearden 2011, pers. comm.). This data most likely reflects a growing population since the 2008 surveys.

The Andreafsky survey area has been flown sporadically since 1995. Survey results between 1995 and 2012 have shown an increasing population with an estimate of 3170 moose with a SCF incorporated into the analysis (Rearden 2013, pers. comm.). Using the SCF population estimate on the Andreafsky survey area gives a resulting moose density estimate of 1.9 moose/mi.^{2} and a population that has grown substantially since 2002 (**Figure 2)**.

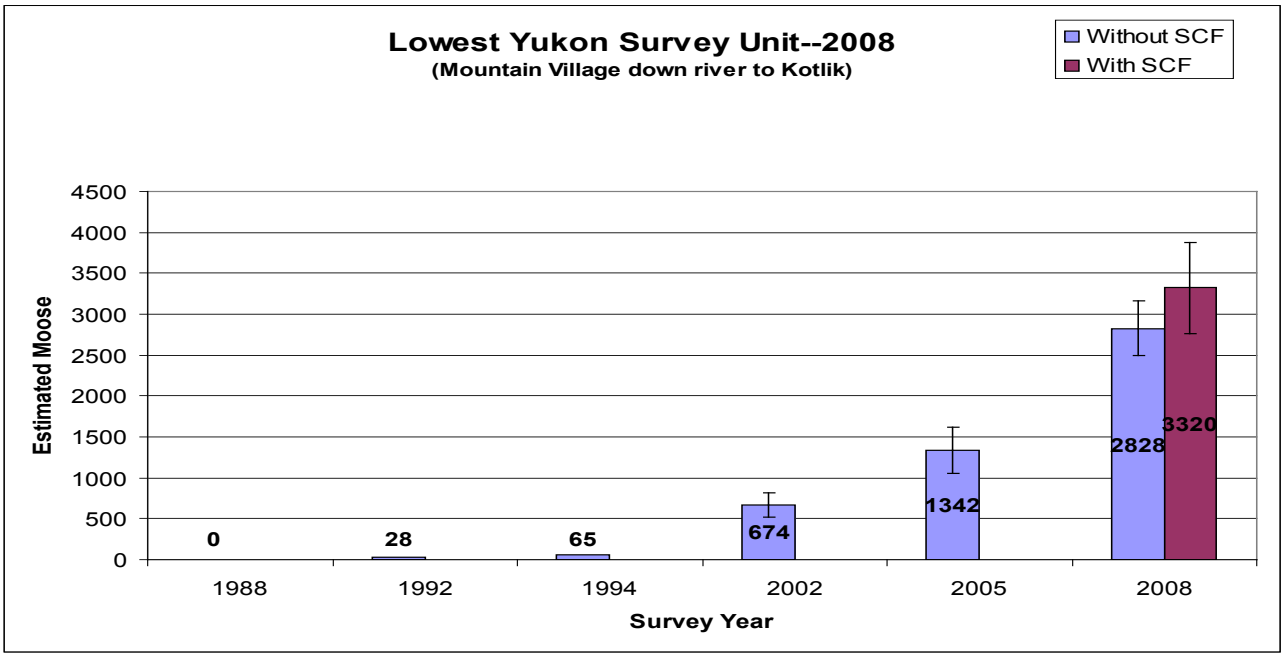


Figure 1. Moose population survey results from the lowest survey unit along the main stem of the Yukon River, 1988-2008 (USFWS 2008).

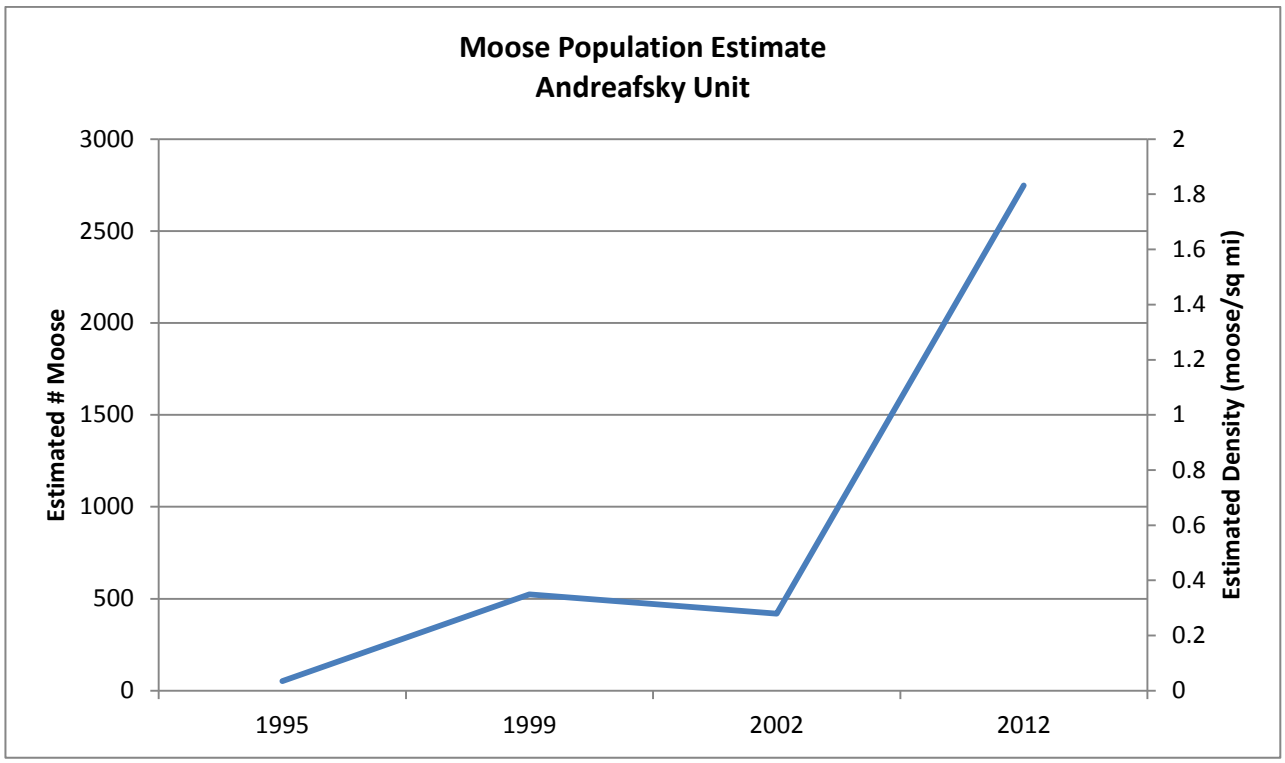


Figure 2. Andreafsky moose population 1995-2012 (Rearden, pers. comm. 2013).

Habitat

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 (FSB 2009). Given the quickly growing population within the Andreafsky survey area, similar habitat concerns should also be addressed.

Harvest History

Moose harvest has increased steadily in Unit 18 and local demand for moose meat is high (Perry 2010). In 2000, total harvest was 175 moose and in 2009 total harvest was 442 moose (**Table 1**). The majority of harvest takes place in the fall, with the majority of moose being harvested by Unit 18 residents. More than 90% of moose harvested in Unit 18 comes from the Yukon River drainage, with the remainder being taken in the Kanektok, Goodnews, and Kuskokwim River drainages (Perry 2010).

Table 1. Fall and winter moose harvest in Unit 18, 2000-2009 (Perry 2010).

Regulatory Year	Fall Harvest	Winter Harvest	Unknown Harvest	Total Harvest
2000-2001	166	5	4	175
2001-2002	140	9	13	162
2002-2003	202	10	11	223
2003-2004	220	13	0	233
2004-2005	189	36	1	226
2005-2006	253	64	0	317
2006-2007	256	70	4	330
2007-2008	370	86	2	458
2008-2009	350	81	11	442

Effects of the Proposal

If Proposals WP14-24 and WP14-25 are adopted, it could lead to an increase in moose harvested from the expanded hunt area. Currently, the harvest limit in Unit 18 remainder is one moose with a split season with a fall season ending on Sept. 30 and a winter season beginning on Dec. 20. If adopted, the proposals would increase the harvest limit to 2 moose, with one continuous season from Aug.1 to the last day of February, adding approximately 80 days of hunting. However, if the proposals are adopted, the hunt area boundaries will no longer be aligned under State and Federal regulations, which will add to the regulatory complexity in the unit. If adopted, this proposal would increase the size of the lower Yukon hunt area and remove a portion from the Unit 18 remainder hunt area.

The moose populations in the Andreafsky survey area indicate a growing moose population which could likely withstand the potential increase in harvest. In addition, using well known land marks such as river boundaries should help to minimize confusion for Federally qualified users when hunting in the expanded hunt area. The use of point to point locations for hunt boundary areas makes the use of a GPS necessary in order to ensure that hunters are in the correct hunt area. Since most local users do not possess or know how to use a GPS, the use of drainages for boundary lines is more practical.

OSM CONCLUSION

Support Proposals WP14-24 and WP14-25 **with modification** to combine the regulatory language to make a single area descriptor.

The modified regulation would read:

Unit 18 – Moose

That portion north and west of the Kashunuk River continuing upriver along a line a ½ mile south and east of, and paralleling a line along the southerly bank of the Kashunuk River to the confluence of the south bank of Driftwood Slough, continuing upriver to the confluence of the Yukon River, across, continuing the ½ mile buffer, then following the north bank of the Yukon River to the North Fork of the Andreafsky River drainage- *2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Aug. 1 through Sept. 30.*	*Aug. 1 – the last day of February*

Justification

Moose populations in Unit 18 have increased substantially in recent years. Both the lower Yukon and Andreafsky survey areas have experienced rapid growth of the moose population in the last 10 years. The proposed hunt area expansion could lead to an increase in moose harvest and additional subsistence hunting opportunities. The growing moose population in the affected area should be able to withstand the increased harvest pressure, as some populations along the Yukon having the potential to exceed carrying capacity. Hunting regulations in Unit 18 have been increasingly liberalized to reflect the growing moose population. Furthermore, the use of river boundaries rather than straight lines will help to minimize hunter confusion since few Federally qualified users own a GPS. However, adoption of this proposal would result in misalignment of State and Federal hunt area boundaries, which could lead to regulatory complexity for users.

FSB. 2009. Transcript of the Federal Subsistence Board work session. November 12, 2009. Pages 25-27. Office of Subsistence Management, USFWS. Anchorage, AK.

Perry, P. 2010. Unit 18 moose management report. Pages 271-285 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2007-30 June 2009. Alaska Department of Fish and Game. Project 1.0. Juneau, AK.

Rearden, S. 2013. Wildlife Biologist. Personal communication: email. Yukon Delta National Wildlife Refuge. Bethel, AK.

Rearden, S. 2011. Wildlife Biologist. Personal communication: email. Yukon Delta National Wildlife Refuge. Bethel, AK.

USFWS. 2008. Moose briefing document. Presented to the Yukon-Kuskokwim Federal Subsistence Regional Advisory Council. Bethel, AK. Yukon Delta National Wildlife Refuge. Bethel, AK. 1pg.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP14-24/25 **with modification** as described in the OSM Conclusion. The Council agreed with the OSM modifications and analysis.

Western Interior Subsistence Regional Advisory Council

Support Proposal WP14-24/25 **with modification** as described in the OSM Conclusion. Due to time limitations and scheduling conflicts resulting from the government shutdown in October 2013, the WIRAC is deferring action on this proposal to the YKDRAC.

Seward Peninsula Subsistence Regional Advisory Council

Support Proposal WP14-24/25 **with modification** as described in the OSM Conclusion. The Council expressed concerns about the impact of liberalized harvest on the population, and noted that the OSM modification would address those concerns. The Council also made comparisons to the Unit 22 moose population and its population decline.

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 recommendation and Federal Subsistence Board action on the proposal.

WRITTEN PUBLIC COMMENTS

Support Proposal 14-24: Like proposal WP14-23 this proposal will help the local hunters access to defined area that have traditionally been landmarks, the use of GPS is not Customary and Traditional methods of travel and hunting for the people.

Donald Woodruff, Eagle

March 18, 2014

Stikine River Federal Subsistence Fishery Management
And Summary of Current Events

Background

The Stikine River Federal subsistence sockeye salmon fishery was first implemented in 2004 after a lengthy process where the Federal Subsistence Board (Board) adopted regulations (36 CFR 242. 27(e) (13) (xiv) and 50 CFR 100. 27(e) (13) (xiv)) and the Pacific Salmon Commission included provisions for the fishery in Annex IV of the U.S./Canada Pacific Salmon Treaty (Treaty). Chinook and coho fisheries were subsequently approved in 2005.

2013 Subsistence Fishery In-season Management

Because the 2013 pre-season return estimate for the Stikine River was 22,400 Chinook salmon, the Board closed the subsistence Chinook salmon fishery prior to the start of the season. Once the in-season abundance estimate exceeded the amount necessary for an Allowable Catch, the fishery reopened at 12:01 a.m. Saturday, June 15, 2013 and continued through the end of the Chinook season on June 20.

There were no in-season management restrictions for either the subsistence sockeye or coho salmon fisheries and no subsistence fishery citations were issued.

2013 Subsistence Fishery Performance

During the 2013 season, 124 households harvested 2 large Chinook salmon during the Chinook salmon season, 1,457 sockeye salmon during the sockeye salmon season and 174 coho salmon during the coho salmon season.

2014 Subsistence Fishery Management

Chinook salmon: The 2014 preseason terminal run size forecast for large Stikine River king salmon is 26,000 fish. Because there is no Allowable Catch for either the U.S. or Canada, the in-season manager will submit a Special Action Request to the Federal Board to close the subsistence Chinook salmon fishery. If the Board closes the fishery, the in-season manager should be given authority to rescind the closure if the in-season abundance estimate results in an Allowable Catch.

Sockeye and coho salmon: The sockeye and coho salmon seasons will open according to regulation. If the in-season sockeye or coho salmon abundance estimates are less than the amount needed for a U.S. Allowable Catch, the in-season manager will coordinate with the ADF&G to restrict the fishery.

In-season monitoring: The in-season manager will maintain a dialog with subsistence fishers to understand fishery harvest issues including: accurate catch accounting, competition for prime fishing locations, gear sharing, retention of non-target species, and the efficient operation of set-nets.

Federal Regulatory Process

Southeast Alaska Subsistence Regional Advisory Council: At their March 12-14, 2013 meeting, the Southeast Alaska Subsistence Regional Advisory Council (Council) sent a letter to the Board asking for assistance in changing the catches from the Stikine River Chinook salmon subsistence

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fishery from a defined directed fishery to a component of the U.S. base level catch. The Council also considered a Federal regulatory proposal to change the guideline harvest limit for the subsistence sockeye salmon season (FP13-19); it recommended that the Board eliminate the guideline harvest limit because it serves no purpose. The Council will consider fishery proposals for this cycle during their October 21-13, 2014 meeting in Wrangell.

Federal Subsistence Board: The Board deferred action on subsistence fishery proposal (FP13-19) to raise or eliminate the guideline harvest level for sockeye salmon until April 15-17, 2014 to allow additional communication and coordination with the Transboundary Panel. The Board will meet in January 2015 to consider any new 2015-2017 fisheries-cycle proposals. It is anticipated there will be several regulatory proposals to change subsistence fishing regulations on the Stikine River including: changes to the sockeye salmon guideline harvest level, requiring net tending and establishing daily fishing schedules.

Transboundary Panel of the Pacific Salmon Commission

The post-season meeting of the U.S./Canada bilateral Transboundary Panel of the Pacific Salmon Commission occurred in Portland Oregon January 14-16, 2014; Robert Larson, USFS, represented the Federal Subsistence Program. This is an annual meeting to review the U.S. and Canadian fisheries that target salmon of Canadian origin in the transboundary rivers of the Southeast Region, i.e. the Alsek, the Taku and the Stikine Rivers. There is only a State managed personal use fishery on the Taku River, small Federal and State subsistence fisheries on the Alsek River, and only a Federal subsistence fishery on the Stikine River. The Canadian section's interest in the U.S. subsistence fishery consists entirely on harvest accountability (accurate estimates of fishing mortality). Domestic allocation between user groups is the exclusive right of each country and the Canadian Section of the Transboundary Panel does not care how the U.S. allowable catch is divided between users. The Canadian co-chair, Mr. Steve Gotch acknowledged that there is a high degree of validation and accuracy of the Federal subsistence fishery in-season and post-season harvest estimates. However, there is a continuing interest by the Panel (U.S. and Canadian Sections) in accounting for harvest by seals or fish lost through other means because the fishery is open at night and the nets may not being closely attended.

Tribal Consultation

The subsistence in-season manager and fisheries technical staff are scheduled to attend the Wrangell Tribe (Wrangell Cooperative Association) Tribal Council meeting on April 10, 2014 to hear concerns from the Tribe on Stikine River subsistence fishery concerns. In 2013, the Wrangell Tribe wrote a letter to the Board opposing the Federal action to close the subsistence Chinook salmon fishery. The Wrangell Tribe also submitted a letter to the Pacific Salmon Commission requesting the catches from the Stikine River subsistence Chinook salmon fishery be included as part of the base level catch. Dr. John H. Clark, U.S. Chair of the Transboundary Panel, responded by letter on February 20, 2014. In his response, Dr. Clark explained the Pacific Salmon Commission was unable to comply with the Tribes request because "harvest of Chinook salmon on the Stikine River is allowed only in directed fisheries or incidentally in fisheries targeting other species of salmon. No 'base level' fishery is recognized by the Treaty". Although there are no "base-level fisheries" there are "base level catches", a term used to refer to average historical incidental harvests of Stikine River origin Chinook salmon in other fisheries. The subsistence fisheries for Chinook, sockeye and coho salmon are directed fisheries. The letter concluded with a reminder that there will be an opportunity to pursue changes to Pacific Salmon Treaty language when the Treaty is re-

negotiated in 2017.

Recommendation

There does not seem to be any compelling reason to take final action on the deferred proposal FP13-19 during the April 2014 Board meeting. It would be reasonable to consider this proposal during the regular fisheries cycle in January 2015 since additional proposals addressing the same subsistence guideline harvest issue are anticipated. It is the opinion of the Transboundary Panel of the Pacific Salmon Commission that this issue would not be considered out-of-cycle by the Commission but instead would be considered as part of the U.S. position in re-negotiations of the Treaty with Canada in 2017. There is no urgency to protect subsistence uses as the subsistence sockeye salmon fishery is not expected to be restricted under current rules. The Federal program should continue dialog and cooperation with the Transboundary Panel. Next year's post-season meeting of the Pacific Salmon Commission is January 12-16, 2015.

Key Contacts:
Bob Dalrymple – USFS Wrangell District Ranger/In-season manager – 907-874-7500
Steve Kessler – USFS Subsistence Program Leader – 907-743-9461
Robert Larson – PSG/WRG Subsistence Biologist & SESRAC Coordinator – 907-772-5930
Gene Peltola, Jr. – USFWS Assistant Regional Director– 907-786-3888

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Stikine River Subsistence Salmon Fishery

2013 Season Summary

Robert Larson, U.S. Forest Service

Executive Summary

This report fulfills the commitment for the 2013 season Stikine River U.S. subsistence salmon fishery summary for the bilateral U.S.-Canada Pacific Salmon Commission (Commission). In 2013, 124 households harvested 2 large Chinook salmon during the Chinook salmon season, 1,457 sockeye salmon during the sockeye salmon season and 174 coho salmon during the coho salmon season.

Introduction

A subsistence fishery was established for sockeye salmon on the Stikine River in 2004 by the Federal Subsistence Board (Board), through coordination with the Transboundary River Panel (Panel) and the Commission. By action of the Board, and coordination with the Panel and Commission, fisheries for Chinook and coho salmon were added in 2005. Regulatory changes for the 2006 season included an increase in the mesh size of gillnets during the Chinook fishery (to 8 inch stretched mesh) and an earlier starting date for the sockeye fishery. There were no changes in subsistence fishing regulations or permit conditions for the 2007 fishing season. In 2008, subsistence fishing permits became valid for the length of the fishing season, May 15 through October 1 and the start date of the subsistence coho salmon fishery was changed from August 15 to August 1. Changing the coho fishery start date allowed continuous subsistence fishing between May 15 and October 1. There were no subsequent changes to the regulations for the 2009 through 2013 seasons. In 2013, there was an emergency closure of the Chinook salmon subsistence fishery prior to the season, due to a low forecast abundance estimate. The subsistence fishery was reopened on June 15 for the remainder of the season once the in-season return estimate provided for an allowable catch.

Eligibility for participation in the Federal subsistence fishery is limited to residents of Wrangell, Petersburg, Meyers Chuck, and the immediate vicinity through a positive customary and traditional use determination adopted by the Board.

Federal jurisdiction and prominent features of the Stikine River are shown in **Figure 1**.

Federal Subsistence Fishing Regulations

The Federal subsistence fisheries regulations are detailed in Subpart C and D of the Code of Federal Regulations (36 CFR part 242 and 50 CFR part 100). The sections relevant to the Stikine River are as follows:

§___.24 Customary and traditional use determinations.
(2) Fish determinations. The following communities and areas have been found to have a positive customary and traditional use determination in the listed area for the indicated species:
Southeastern Alaska Area:

> *District 8 and waters draining into that District: Salmon, Dolly Varden, trout, smelt, and eulachon. Residents of drainages flowing into Districts 7 & 8, residents of drainages flowing into District 6 north of the latitude of Point Alexander (Mitkof Island), and residents of Meyers Chuck.*

§___.27 Subsistence taking of fish.
(i) Fishery management area restrictions.
(13) Southeastern Alaska Area.

> *(xv) You may take Chinook, sockeye, and coho salmon in the mainstem of the Stikine River only under the authority of a Federal subsistence fishing permit. Each Stikine River permit will be issued to a household. Only dip nets, spears, gaffs, rod and reel, beach seine, or gillnets not exceeding 15 fathoms in length may be used. The maximum gillnet mesh size is 51/2 inches, except during the Chinook season when the maximum gillnet mesh size is 8 inches.*
> *(A) You may take Chinook salmon from May 15 through June 20. The annual limit is 5 Chinook salmon per household.*
> *(B) You may take sockeye salmon from June 21 through July 31. The annual limit is 40 sockeye salmon per household.*
> *(C) You may take coho salmon from August 1 through October 1. The annual limit is 20 coho salmon per household.*
> *(D) You may retain other salmon taken incidentally by gear operated under terms of this permit. The incidentally taken salmon must be reported on your permit calendar.*
> *(E) The total annual guideline harvest level for the Stikine River fishery is 125 Chinook, 600 sockeye, and 400 coho salmon. All salmon harvested, including incidentally taken salmon, will count against the guideline for that species.*

Pacific Salmon Treaty, Annex IV Direction

Provisions specific to the Stikine River subsistence fishery are contained within Annex IV of the Pacific Salmon Treaty and are very similar, but not exactly the same, as subsistence fishing regulations. For instance, the allowable sockeye salmon season in the Annex is two days longer than the sockeye salmon fishing season in subsistence fishing regulations.
(3)(a)(1) Sockeye Salmon:

> *(iv) Pursuant to this agreement, a directed U.S. subsistence fishery in U.S. portions of the Stikine River will be permitted, with a guideline harvest level of 600 sockeye salmon to be taken between June 19 and July 31. These fish will be part of the existing U.S. allocation of Stikine River sockeye salmon.*

The Annex also contains three conditions common to the subsistence Chinook, coho and sockeye salmon fisheries that are not included in subsistence fishing regulations. These conditions define the subsistence fishing area, require weekly and end of season fishing reports and specify that regulatory changes must be approved by the Pacific Salmon Commission.

> *(3)(a)(1,2,3) For this fishery:*
> *a. The fishing area will include the main stem of the Stikine River, downstream of the international border, with the exception that fishing at stock assessment sites identified prior to each season is prohibited unless allowed under specific conditions agreed to by both Parties' respective managers.*
> *b. Catches will be reported weekly, including all incidentally caught fish. All tags recovered shall be submitted to the Alaska Department of Fish and Game.*
> *c. A written report on the fishery summarizing harvests, fishing effort and other pertinent information requested by the Transboundary Panel will be submitted by the management agency for consideration by the Panel at its annual post season meeting.*
> *d. Any proposed regulatory changes to the fishery during the remaining years of this annex would need to be reviewed by the bilateral Transboundary panel and approved by the Pacific Salmon Commission.*

The Annex also contains directions for implementing the subsistence Chinook salmon fishery. The subsistence fishery is referenced as a directed fishery.

> *(3) Chinook salmon:*
> *(v) Pursuant to this agreement, a directed U.S. subsistence fishery in U.S. portions of the Stikine River will be permitted, with a guideline harvest level of 125 Chinook salmon to be taken between May 15 and June 20.*

The Annex provides instructions on how directed fisheries will be managed.

> *(x) Directed fisheries may be implemented based on preseason forecasts only if the preseason forecast terminal run size equals or exceeds the midpoint of the MSY escapement goal range plus the combined Canada, U.S. and test fishery base level catches (BLCs) of Stikine River Chinook salmon. The preseason forecast will only be used for management until inseason projections become available.*
> *(xi) For the purposes of determining whether to allow directed fisheries using inseason information, such fisheries will not be implemented unless the projected terminal run size exceeds the bilaterally agreed escapement goal point estimate (NMSY) plus the combined Canada, U.S. and test fishery BLCs of Stikine River Chinook salmon. The Committee shall determine when inseason projections can be used for management purposes and shall establish the methodology for inseason projections and update them weekly or at other agreed intervals.*

(xii) The allowable catch (AC) will be calculated as follows:
Terminal run = total Stikine Chinook run size minus the US troll catch of Stikine Chinook salmon outside District 108. base terminal run (BTR) = escapement target + test fishery BLC + U.S. BLC +Cdn BLC Terminal run – (BTR) = AC
(xiii) BLCs include the following:
a. U.S. Stikine BLC: 3,400 large Chinook;
b. Canadian Stikine BLC: 2,300 large Chinook;
c. Test fishery: 1,400 large Chinook.

Subsistence Fishery Management

Federal subsistence fishing rules are published in the Code of Federal Regulations (CFR) and in a regulatory handbook summary. The regulatory handbooks are available to the public through a number of license vendors, Alaska Fish and Game offices and local U.S. Forest Service offices. The CFRs and the handbook are also available online at the Office of Subsistence Management website at: http://www.doi.gov/subsistence. Subsistence fishing permits are required and are available from any U.S. Forest Service District Office on the Tongass National Forest. In 2013, Stikine River subsistence fishing permits were only issued by the Wrangell and Petersburg Forest Service Ranger District offices.

The 2013 subsistence fishery in-season harvest monitoring plan focused on tracking the number of fishermen and obtaining estimates of harvest through a random selection telephone interview process. Fishery performance data that included the total number of permits issued to date and Chinook, sockeye and coho salmon harvest estimates were reported to State fishery managers on a weekly basis. Field observations of the fishery were conducted by Federal Law Enforcement Officers and USFS staff.

2013 Season Fishery Performance

In-season monitoring of the subsistence fishery harvest consisted of catch-to-date estimates of Chinook, sockeye and coho salmon harvest from telephone interviews with a random subset of permit holders. In-season harvest estimates were compiled by calculating the average catch by species by permit to date and expanding by the total number of permits issued. Typically, 15 to 25 permit holders were randomly selected for interviews each week. Weekly harvest estimates from the first few weeks of the fishery and the last few weeks of the fishery are difficult to accurately estimate by this method because the proportion of fishermen that fished was small compared to the total number of permits issued. In those instances, fishery performance data from previous years was used to calculate an estimated catch. U.S. Forest Service staff from the Wrangell and Petersburg District offices and Law Enforcement officers maintained a regular presence on the river during the subsistence fishery for observation, education, communication and enforcement. No subsistence fishery citations were issued.

The 2013 pre-season Chinook salmon return estimate for the Stikine River was 22,400 large Chinook salmon. The U.S./Canada Pacific Salmon Treaty stipulates that a directed Chinook salmon subsistence fishery is not authorized if the pre-season run estimate is

less than 28,100 Chinook salmon. As a result, the Board closed the 2013 subsistence Chinook salmon fishery (Fisheries Special Action FSA13-01). The Board authorized the Wrangell District Ranger to reopen the season if the weekly in-season abundance estimate exceeded 24,500 Chinook salmon, as allowed in the Treaty. The Chinook salmon subsistence fishery was re-opened 12:01 a.m. Saturday, June 15, 2013 when the in-season abundance estimate was 24,635 Chinook salmon. The Chinook salmon subsistence season remained open during the last six days of the season; closing by regulation on June 20.

During the 2013 Chinook salmon fishery, June 15-June 20 a total of 2 Chinook, no coho and 32 sockeye salmon were harvested **(Table 1)**. During the sockeye salmon fishery, June 21 to July 31, a total of 49 Chinook, 6 coho and 1,457 sockeye salmon were harvested **(Table 2)**. Although the Treaty authorizes a June 19 start date of the sockeye fishing season, Federal subsistence fishing regulations specify a later June 21 sockeye salmon subsistence fishing season opening date. During the coho salmon fishery, August 1 through October 1, a total of no Chinook, 174 coho and 107 sockeye salmon were harvested **(Table 3)**.

In total, for the 2013 season including fish harvested incidentally outside of established fishing seasons, 124 permit holders harvested a total of 51 Chinook salmon greater than 28 inches, 78 chum salmon, 180 coho salmon, 113 pink salmon and 1,596 sockeye salmon. In addition, 47 Chinook salmon less than 28 inches, two steelhead, no cutthroat trout and 15 Dolly Varden char harvested **(Table 4**). The first Chinook salmon was harvested June 17, the first sockeye salmon was harvested on June 17 and the first coho salmon was harvested June 30 **(Table 5)**.

Petersburg residents comprised 44% of the permits issued in 2013 and residents of Wrangell held the other 56% of the permits. As of November 22, year-end harvest fishing reports were obtained from all except seven permitees.

2013 Management and Regulatory Issues

Due to a low pre-season return estimate the subsistence Chinook salmon season was closed by the Federal Subsistence Board between May 15 and June 14. The USFS Wrangell District Ranger re-opened the season on June 15 when the in-season return estimate indicated there was an allowable catch.

The subsistence sockeye fishery has exceeded the sockeye fishery annual guideline harvest level (GHL) as specified in Federal regulations and Treaty language in each of the last five years. A formal process to address the subsistence sockeye salmon fishery (GHL) was initiated when the Southeast Subsistence Regional Advisory Council (Council) submitted a regulatory proposal (FP13-19) to the Board to change the GHL. Following public testimony and deliberation, the Council recommended eliminating the GHL entirely. The Council's rationale was that the presence of any guideline harvest level is inconsistent with the management practices of the other fisheries targeting Stikine River origin sockeye salmon. Eliminating the subsistence sockeye salmon GHL would

allow the subsistence fishery to operate completely within the U.S. allocation; subject to the normal domestic allocation protocols. The Federal Subsistence Board has postponed action to on this proposal until April 15, 2014 to allow for coordination and concurrence with the U.S. section of the Pacific Salmon Commission and the U.S./Canada bilateral Transboundary Panel of the Pacific Salmon Commission. Staff from the Office of Subsistence Management, the U.S. Forest Service, plus a member of the Council will be available to discuss this issue at the post-season meeting of the Panel. During their March meeting, the Council wrote a letter to the Board recommending that the Board advocate for changing the Stikine River subsistence Chinook salmon fishery from a "directed" fishery to a "base-level" fishery within the Pacific Salmon Treaty, similar to the status provided to the Canadian food fishery, incidental harvests with the U.S. terminal area commercial fisheries, the test fishing program and the U.S. sport fishery.

There were no reported conflicts with the test fishing program.

The Federal subsistence fishery regulatory review cycle begins in 2014. The Southeast Alaska Subsistence Regional Advisory Council will meet March 11-13, 2014 to consider whether to make any proposals for changes to the Stikine River subsistence fishing regulations. Proposals by members of the public or agencies to change subsistence fishing regulation for the 2015 - 2016 regulatory years will be accepted by the Office of Subsistence Management January through March 2014.

Figure 1. Prominent geographic features of the Stikine River.

Table 1. Stikine River Chinook salmon subsistence fishery, seasonal harvest by year.

Stikine River Chinook Salmon Fishery Subsistence Harvest

Chinook Salmon Season (May 15 through June 20)

Year	Chinook	Chum	Coho	Dolly Varden	Pink	Trout	Sockeye	Steelhead
2004	No Chinook salmon season in 2004							
2005	13	0	0	2	4	0	18	0
2006	13	1	0	0	0	0	8	0
2007	24	0	0	0	0	0	61	0
2008	8	0	0	1	0	0	2	0
2009	9	0	0	2	0	1	17	2
2010	14	0	0	1	0	0	65	3
2011	16	0	0	0	0	0	64	0
2012	16	0	0	0	0	0	137	0
2013	2	0	0	0	0	0	32	0

Table 2. Stikine River sockeye salmon subsistence fishery, seasonal harvest by year.

Stikine River Sockeye Salmon Fishery Subsistence Harvest								
Sockeye Salmon Season (June 21 through July 31)								
Year	Chinook	Chum	Coho	Dolly Varden	Pink	Trout	Sockeye	Steelhead
2004	12	11	0	1	22	0	243	1
2005	2	22	1	2	65	0	233	0
2006	24	19	0	3	23	0	377	0
2007	12	11	0	1	57	0	178	1
2008	17	5	0	4	0	0	426	0
2009	22	46	0	18	66	0	706	0
2010	44	33	13	11	38	0	1,554	4
2011	48	64	1	3	189	0	1,686	0
2012	34	40	2	1	23	0	1,155	0
2013	49	75	6	15	106	0	1,457	2

Table 3. Stikine River coho salmon subsistence fishery, seasonal harvest by year.

Stikine River Coho Salmon Fishery Subsistence Harvest								
Coho Salmon Season (August 1 through October 1)								
Year	Chinook	Chum	Coho	Dolly Varden	Pink	Trout	Sockeye	Steelhead
2004	No Coho salmon season in 2005							
2005	0	0	52	0	0	0	1	0
2006	0	0	21	0	0	0	5	0
2007	0	0	23	0	2	0	5	1
2008	0	7	42	0	18	0	0	0
2009	0	0	21	0	0	0	0	0
2010	3	4	122	0	22	0	34	0
2011	2	10	39	0	0	0	5	5
2012	3	7	110	0	9	0	10	0
2013	0	3	174	0	7	0	107	0

Table 4. Stikine River subsistence fishery, total annual harvest.

Stikine River Total Subsistence Harvest by Year

Year	Permits	Chinook	Chum	Coho	Dolly Varden	Pink	Trout	Sockeye	Steelhead
2004	40	12	11	0	1	22	0	243	1
2005	35	15	22	53	4	69	0	252	0
2006	48	37	20	21	3	23	0	390	0
2007	44	36	11	23	1	59	0	244	2
2008	50	25	12	42	5	18	0	428	0
2009	80	31	46	21	20	66	1	723	2
2010	107	61	37	135	12	60	0	1,653	7
2011	129	66	74	40	3	189	0	1,741	5
2012	130	53	47	112	1	32	0	1,302	0
2013	124	51	78	180	15	113	0	1,596	2

Table 5. Stikine River total subsistence harvest by statistical week, 2013 season.

2013 Stikine River Subsistence Harvest by Statistical week

Week Ending	Catch week	Chinook	Chum	Coho	Dolly Varden	Pink	Sockeye	Steelhead
5/18	20	0	0	0	0	0	0	0
5/25	21	0	0	0	0	0	0	0
6/1	22	0	0	0	0	0	0	0
6/8	23	0	0	0	0	0	0	0
6/15	24	0	0	0	0	0	0	0
6/22	25	6	0	0	0	2	97	0
6/29	26	7	3	0	0	2	142	0
7/6	27	9	4	2	0	13	282	0
7/13	28	9	8	0	11	45	415	0
7/20	29	10	19	0	2	12	282	0
7/27	30	9	41	4	2	32	237	0
8/3	31	1	0	5	0	0	74	2
8/10	32	0	3	18	0	3	2	0
8/17	33	0	0	0	0	0	0	0
8/24	34	0	0	9	0	4	20	0
8/31	35	0	0	26	0	0	26	0
9/7	36	0	0	74	0	0	19	0
9/14	37	0	0	22	0	0	0	0
9/21	38	0	0	20	0	0	0	0
9/28	39	0	0	0	0	0	0	0
10/5	40	0	0	0	0	0	0	0