Federal Subsistence Board

Wildlife Meeting Materials
January 17–20, 2012

USFWS

Egan Center,
555 West 5th Avenue,
Anchorage, Alaska

DRAFT
FEDERAL SUBSISTENCE BOARD
PUBLIC MEETING AGENDA

January 17–19, 2012
8:30 a.m.– 5:00 p.m. Daily
Egan Center, 555 West 5th Avenue
Anchorage, Alaska

Note: *The Board may extend its meeting to January 20th, in which case the Board will meet at the U.S. Fish and Wildlife Service, Gordon Watson Conference Room, 1011 E. Tudor Rd., Anchorage, Alaska. Photo identification, such as a driver's license, must be presented at the building reception desk.*

1. **Call to Order and Introductions**
2. **Corrections/Additions to the Agenda**
3. **Information Sharing**
4. **Board Discussion of Council Topics with Regional Advisory Council Chairs or their Designees**
5. **Public Comment Period on Non-Agenda Items** *(This opportunity is available at the beginning of each day)*
6. **Fisheries Resource Monitoring Plan for 2012** 7
7. **Tribal Consultation Protocol Status Report**
8. **Tribal Consultation on Wildlife Regulatory Proposals** *(Starting at 1:00 p.m., January 17)*
9. **Public Comment Period on Consensus Agenda Items** *(This opportunity is available at the beginning of each day)*
10. **2012–2014 Subparts C&D Proposals** *(Wildlife Regulations)*
    a. Announcement of Consensus Agenda *(see detailed agenda that follows)* 5
    b. Board deliberation and action on Non-Consensus Agenda items *(see detailed agenda that follows)* 3
    c. Adoption of Consensus Agenda
11. **Rural/Nonrural Determinations**
    a. Discussion of rural to nonrural determinations that become effective May 2012
    b. Procedures for decennial rural/nonrural determinations
12. **Other Business**
13. **Adjourn**

Note: *The meeting will be held daily from 8:30 a.m. to 5:00 p.m. or until the Board calls a recess for the day, or completes its work. The 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://*

alaska.fws.gov/asm/board.cfml) 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**
Statewide		
WP12-01	Brown Bear Handicrafts	174
WP10-02 (deferred) (deferred WP08-05)	Brown Bear Handicrafts	190
WP12-02	General Regulations	208
WP12-03	General Regulations	225
Region 10: North Slope		
WP12-82	Unit 26A, 26B / Brown Bear	237
Region 9: Eastern Interior Alaska		
WP12-62	Unit 25D / Brown Bear	245
WP12-65 & 66; combined with WP10-104 (deferred)	Units 12, 25 / Caribou	255
WP12-68	Unit 12 / C&T Caribou	276
WP12-69	Unit 25D / C&T Caribou	289
WP12-71 & 72	Unit 12 / Moose	313
WP12-75	Unit 20E / Moose	330
WP12-76	Unit 25A / Sheep	340
Region 7: Seward Peninsula		
WP12-61	Unit 22 / Wolf	358
Region 6: Western Interior Alaska		
WP10-69 (deferred until March, 2012, pending YKDRAC comments)	Unit 21E / C&T Moose	366
WP12-56	Unit 21B / Moose	393
WP12-57 & 58	Unit 24B / Moose	411

Proposal	Unit / Species	Page
Region 5: Yukon-Kuskokwim Delta		
WP12-42	Unit 18 / Caribou	431
WP12-43	Unit 18 / Lynx	441
WP12-47	Unit 18 / Moose	449
WP12-49	Unit 18 / Moose	467
WP12-50	Unit 18 / Moose	483
WP12-51	Unit 18 / Ptarmigan	494
WP12-53	Unit 18 / Ungulates	509
Region 4: Bristol Bay		
WP10-45 (deferred WP08-30), 46 (deferred WP08-31), 47, 48, 49, 50 & 52 (all deferred)	Unit 9B, 9C, 9E / Moose	523
Region 3: Kodiak / Aleutians		
WP12-37	Unit 9D / Caribou	553
WP12-38	Unit 10 / Wolf	566
Region 2: Southcentral Alaska		
WP12-24	Unit 11 / Caribou	575
WP12-25	Unit 13 / Caribou	588
WP12-26	Units 7,15 / Fox	604
WP12-28	Units 6B, 6C / Moose	611
WP12-29	Unit 7 / Moose	616
Region 1: Southeast Alaska		
WP12-04 & 05	Units 1–4 & 1–5 / Coyote	624
WP12-06	Unit 4 / Deer	636
WP12-10	Units 1–5 / Deer, Moose	644
WP12-11	Units 1–5 / Goat	656
WP12-13	Units 1B, 3 / Special Provisions	669
WP12-15	Units 1, 2 / Special Provisions	679
Multi-Region Crossover		
SC / KA		
WP12-22a	Units 8, 15A, 15B / C&T Brown Bear	691
WP12-22b	Units 15A, 15B / Brown Bear	718
SC / EI		
WP12-32	Units 11, 12 / Sheep	730
WP12-70 & 73	Units 11,12 / Moose	747

FEDERAL SUBSISTENCE BOARD
CONSENSUS AGENDA PROPOSALS

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

Proposal	Unit / Species	Recommendation	Page
Region 10: North Slope			
WP12-83	Unit 26 / Wolf	Oppose	766
Region 9: Eastern Interior Alaska			
WP10-91 (deferred)	Unit 25 / Black Bear	Oppose (State is neutral)	775
WP10-92 (deferred)	Unit 25 / Black Bear	Support with modification	786
WP12-63	General Regulations / Caribou, Moose	Support	792
WP12-67 & 74	Unit 20E / Caribou	No action on 67 / Support 74	802
WP12-77, 78, 79 & 81	Units 12, 20A, 25A / Wolf	Oppose	814
WP12-80	Unit 25 / Wolf	Support	831
Region 6: Western Interior Alaska			
WP12-59 & 60	Unit 19B, 19C / Wolf	Oppose	839
Region 5: Yukon-Kuskokwim Delta			
WP12-44 & 48	Unit 18 / Moose	No action on 44 / Support 48	849
WP12-45	Unit 18 / Moose	No action	467
WP12-46	Unit 18 / Moose	Support	860
WP12-54	Unit 18 / Wolf	Support	868
WP12-55	Unit 18 / Wolverine	Support	876
Region 4: Bristol Bay			
WP12-39	Unit 17B, 17C / Moose	Support	885
WP12-40	Unit 17A / Special Provision	Support	896
Region 2: Southcentral Alaska			
WP12-23	Unit 11 / Caribou	Oppose	903
WP12-27	Unit 11 / C&T Goat	Support	916
WP12-34, 35 & 36	Units 13D, 14C / Wolf	Oppose	932
Region 1: Southeast Alaska			
WP12-07	Unit 1C / Deer	Oppose	944

Proposal	Unit / Species	Recommendation	Page
Region 1: Southeast Alaska (Continued)			
WP12-08	Unit 2 / Deer	Support	953
WP12-12	Unit 1C / Moose	Oppose	958
WP12-14	Unit 1–5 / Special Provisions	Support	969
WP12-16, 17, 20 & 21	Units 1,3,4,5 / Wolf	Oppose	977
WP12-18	Unit 2 / Wolf	Oppose	991
WP12-19	Unit 2 / Wolf	Support	999
Multi-Region Crossover			
SC / EI			
WP12-33	Units 11,12 / Wolf	Oppose	1005
YKD / WI / EI			
WP12-52	Yukon River Drainage / Special Provision	Oppose	1016

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2012 FISHERIES RESOURCE MONITORING PLAN

EXECUTIVE SUMMARY

A total of 38 projects ($4.01 million) previously approved by the Federal Subsistence Board will be funded in 2012. After accounting for these prior funding commitments, $2.70 million should be available for the 2012 Monitoring Plan.

A Request for 2012 Proposals was issued in November 2010. The Office of Subsistence Management and the Technical Review Committee utilized strategic plans and input from managers and Regional Advisory Councils to identify priority information needs for each region. Many of the projects being considered for 2012 funding specifically address priority information needs identified in the Request for Proposals.

In response to the Request for Proposals, 60 proposals ($5.69 million) were received in January 2011. These were evaluated by the Office of Subsistence Management and then reviewed by the Technical Review Committee using four ranking factors: Strategic Priority, Technical-Scientific Merit, Investigator Ability and Resources, and Partnership-Capacity Building. Of the 60 proposals, 39 ($3.28 million) were recommended for investigation plan development by the Technical Review Committee in March 2011.

Of the 39 investigation plans requested, seven were withdrawn and 32 ($2.67 million) were received for consideration in May 2011. Of these 32 projects, 22 are stock status and trends and 10 are harvest monitoring or traditional ecological knowledge projects. The Technical Review Committee recommends funding 29 ($2.10 million) of these investigation plans. Most of these funds would go to Alaska Native organizations (28%) and State agencies (47%), while the remainder would go to other non-government organizations (11%) and Federal agencies (14%). Recommendations made by Regional Advisory Councils and the Interagency Staff Committee agreed with those made by the Technical Review Committee. Therefore, there are no Non-Consensus Agenda projects, while the Consensus Agenda includes the 29 projects recommended for funding as well as the three projects not recommended for funded by the Technical Review Committee, Regional Advisory Councils, and Interagency Staff Committee.

TECHNICAL REVIEW COMMITTEE MEMBERSHIP

Stephen Fried (Chair)	U.S. Fish and Wildlife Service, Office of Subsistence Management
Rod Simmons	U.S. Fish and Wildlife Service
Dave Nelson	National Park Service
Daniel Sharp	Bureau of Land Management
Pat Petrivelli	Bureau of Indian Affairs
Cal Casipit	U.S. Forest Service
Eric Volk	Alaska Department of Fish and Game, Division of Commercial Fisheries
Robert Clark	Alaska Department of Fish and Game, Division of Sport Fish
James Fall	Alaska Department of Fish and Game, Division of Subsistence

CONTINUATION PROJECTS

Northern Alaska

10-102 Unalakleet River Chinook Salmon Assessment
10-104 Selawik Lake and Hotham Inlet Sheefish Genetic Analysis
10-151 Bering Strait Non-Salmon Fish Local Ecological Knowledge
10-152 Northwest Alaska Climate Change and Subsistence Fisheries

Yukon

10-200 Yukon River Chinook Salmon Run Reconstruction
10-201 Yukon River Chinook Salmon ASL Data
10-202 East Fork Andreafsky River Salmon Assessment
10-205 Yukon River Chum Salmon Mixed-Stock Analysis
10-207 Gisasa River Chinook and Summer Chum Salmon Assessment
10-209 Yukon Delta Bering Cisco Mixed-Stock Analysis
10-250 Yukon Climate Change Impacts on Subsistence Fisheries

Kuskokwim

10-300 Kanektok and Goodnews River Salmon Assessment
10-303 Kuskokwim River Salmon Age Sex Length Assessment
10-304 Tatlawiksuk River Salmon Assessment
10-306 Kwethluk River Salmon Assessment
10-307 Tuluksak River Salmon Assessment
10-352 Kuskokwim Salmon Postseason Harvest Monitoring
10-353 Kuskokwim Salmon Working Group Support
10-354 Kuskokwim Salmon Inseason Harvest Monitoring

Southwest Alaska

10-401 Afognak Lake Sockeye Salmon Smolt and Adult Assessment
10-402 Togiak River Chinook Salmon Adult Assessment
10-403 Buskin River Sockeye Salmon Adult Assessment

Southcentral Alaska

10-502 Tanda Creek Salmon Assessment
10-503 Copper River Chinook Salmon Assessment
10-505 Long Lake Salmon Assessment
10-552 Copper River Subsistence Harvest Validation

Southeast Alaska

10-600 Karta River Sockeye Salmon Assessment
10-601 Hatchery Creek Sockeye Salmon Assessment
10-603 Yakutat Eulachon Surveys
10-604 Klag Lake Sockeye Salmon Assessment
10-605 Sitkoh Lake Sockeye Salmon Assessment
10-606 Hetta Lake Sockeye Salmon Assessment
10-607 Kanalku Lake Sockeye Salmon Assessment
10-609 Falls Lake Sockeye Salmon Assessment
10-610 Kook Lake Sockeye Salmon Assessment
10-611 Redoubt Lake Sockeye Salmon Assessment
10-612 Neva Lake Sockeye Salmon Assessment

Multi-Regional

08-701 Temperature Monitoring

TECHNICAL REVIEW COMMITTEE, REGIONAL ADVISORY COUNCIL, AND INTERAGENCY STAFF COMMITTEE RECOMMENDATIONS

Consensus Recommendation: Fund

Northern Alaska

12-100 Selawik River Inconnu Assessment
12-103 Kobuk River Sheefish Assessment
12-104 Noatak River Dolly Varden Assessment
12-153 Northwest Alaska Fisheries Harvest Surveys
12-154 North Slope Salmon Fishery Traditional Ecological Knowledge
12-155 North Slope Climate Change and Subsistence Use of Whitefish

Yukon

12-200 Alatna River Inconnu Population Structure
12-202 Henshaw Creek Salmon Weir
12-204 Avnik River Sonar
12-205 Kaltag Chinook Salmon Sampling
12-207 Yukon river Bering Cisco Spawning Origins Telemetry Investigation
12-251 Inseason Salmon Harvest Teleconferences

Kuskokwim

12-302 Lower Kuskokwim River Chinook Salmon Harvest ASL
12-303 George River Salmon Weir (Option B)
12-304 Takotna River Salmon Escapment Monitoring
12-309 Kwethluk River Weir Video Salmon Escapement Enumeration
12-312 Highpower Creek Sheefish Status and Upper Kuskokwim River
12-313 Kuskokwim River Bering Cisco Spawning Origins
12-352 Upper Kuskokwim River Whitefish Climate Change Trends

Southwest Alaska

12-450 Aleutian Islands Salmon and Other Subsistence Harvests
12-452 Lake Clark Whitefish Climate Change Trends
12-453 Kodiak Salmon Fishery Changing Patterns

Southcentral Alaska

12-500 Copper River Chinook Salmon RFID Feasibility
12-550 Upper Copper River Changing Environments & Subsistence

Southeast Alaska

12-600 Eek Lake Sockeye Salmon Stock Assessment
12-601 Hoktaheen Lake Sockeye Salmon Stock Assessment
12-602 Lake Leo Sockeye Salmon Stock Assessment (Option 2)
12-651 Changing Use Patterns in Subsistence Salmon Fisheries

Multi-Regional

12-700 Yukon and Kuskokwim Inconnu Genetic Baseline

Consensus Recommendation: Do Not Fund

Northern Alaska

12-102 Kuk River Rainbow Smelt Assessment

Yukon

12-203 Chinook Salmon Untrasound Evaluation of Reproductive Biology

Kuskokwim

12-308 McGrath Broad Whitefish Spawning Population

Table 1. Number of Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

	IPs			TRC			RAC			ISC		
Geographic Region	SST	HMTEK	Total	SST	HMTEK	Total	SST	HMTEK	Total	SST	HMTEK	Total
Northern Alaska	4	3	7	3	3	6	3	3	6	3	3	6
Yukon	6	1	7	5	1	6	5	1	6	5	1	6
Kuskokwim	7	1	8	6	1	7	6	1	7	6	1	7
Southwest Alaska	0	3	3	0	3	3	0	3	3	0	3	3
Southcentral Alaska	1	1	2	1	1	2	1	1	2	1	1	2
Southeast Alaska	3	1	4	3	1	4	3	1	4	3	1	4
Multiregional	1	0	1	1	0	1	1	0	1	1	0	1
Total	22	10	32	19	10	29	19	10	29	19	10	29

Table 2. Total cost of Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

	SST Studies				HMTEK Studies				All Studies				
Geographic Region	IPs	TRC	RAC	ISC	IPs	TRC	RAC	ISC	Guideline	IPs	TRC	RAC	ISC
Northern Alaska	$402	$95	$95	$95	$290	$290	$290	$290	$459	$692	$384	$384	$384
Yukon	$469	$338	$338	$338	$25	$25	$25	$25	$783	$494	$363	$363	$363
Kuskokwim	$721	$599	$599	$599	$70	$70	$70	$70	$783	$792	$669	$669	$669
Southwest Alaska	$0	$0	$0	$0	$182	$182	$182	$182	$405	$182	$182	$182	$182
Southcentral Alaska	$76	$76	$76	$76	$82	$82	$82	$82	$135	$158	$158	$158	$158
Southeast Alaska	$269	$269	$269	$269	$61	$61	$61	$61	$0	$330	$330	$330	$330
Interregional	$17	$17	$17	$17	$0	$0	$0	$0	$135	$17	$17	$17	$0
Total	$1,954	$1,393	$1,393	$1,393	$711	$711	$711	$711	$2,700	$2,665	$2,104	$2,104	$2,104

Table 3. Northern Alaska Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK)..

		Funding Recommendation					Requested Budget ($000)			
			RACs							
Project No.	Title	TRC	NS	NWA	SP	ISC	2012	2013	2014	2015
	Stock Status and Trends									
12-100	Selawik River Inconnu Spawning Population Abundance	Yes	Yes	Yes	Yes	Yes	$78.7	$124.3	$104.8	$68.7
12-102	Kuk River Rainbow Smelt Stock Assessment	No	No	No	No	No	$307.1	$286.6	$31.4	$0.0
12-103	Kobuk River Sheefish Spawning Frequency, Location, and Run Timing	Yes	Yes	Yes	Yes	Yes	$13.8	$13.8	$13.8	$0.0
12-104	Noatak River Dolly Varden Evaluation of Overwintering Populations	Yes	Yes	Yes	Yes	Yes	$2.3	$142.4	$76.2	$2.5
	Harvest Monitoring and Traditional Ecological Knowledge									
12-153	NW AK Key Subsistence Fisheries Harvest Monitoring Program	Yes	Yes	Yes	Yes	Yes	$106.4	$117.4	$119.8	$98.5
12-154	NS Salmon Fishery Harvest Monitoring Traditional Ecological Knowledge	Yes	Yes	Yes	Yes	Yes	$48.5	$42.3	$44.8	$30.6
12-155	NS Climate Change Traditional Ecological Knowledge Whitefish and Cisco	Yes	Yes	Yes	Yes	Yes	$134.7	$52.5	$0.0	$0.0
	Total						$691.5	$779.3	$390.8	$200.3
	2012 Board Guideline						$459.0			
	Technical Review Committee Recommendation						$384.4	$492.7	$359.4	$200.3
	Regional Advisory Council Recommendation						$384.4	$492.7	$359.4	$200.3
	Interagency Staff Committee Recommendation						$384.4	$492.7	$359.4	$200.3

Table 4. Yukon region Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

		Funding Recommendation					Requested Budget ($000)			
			RACs							
Project No.	Title	TRC	Y-K	WI	EI	ISC	2012	2013	2014	2015
	Stock Status and Trends									
12-200	Alatna River Inconnu Population Structure	Yes	Yes	Yes	Yes	Yes	$32.5	$0.0	$0.0	$0.0
12-202	Henshaw Creek Salmon Weir	Yes	Yes	Yes	Yes	Yes	$137.0	$131.4	$0.0	$0.0
12-203	Chinook Salmon Ultrasound Evaluation of Reproductive Biology	No	No	No	No	No	$131.3	$133.6	$77.1	$0.0
12-204	Anvik River Sonar	Yes	Yes	Yes	Yes	Yes	$93.4	$97.0	$0.0	$0.0
12-205	Kaltag Chinook Salmon Sampling	Yes	Yes	Yes	Yes	Yes	$4.0	$4.0	$4.0	$4.0
12-207	Yukon River Bering Cisco Spawning Origins Telemetry Investigation	Yes	Yes	Yes	Yes	Yes	$71.1	$77.6	$10.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge									
12-251	Inseason Salmon Harvest Teleconferences	Yes	Yes	Yes	Yes	Yes	$24.9	$72.5	$72.9	$54.7
	Total						$494.2	$516.1	$164.0	$58.7
	2012 Board Guideline						$783.0			
	Technical Review Committee Recommendation						$362.9	$382.5	$86.9	$58.7
	Regional Advisory Council Recommendation						$362.9	$382.5	$86.9	$58.7
	Interagency Staff Committee Recommendation						$362.9	$382.5	$86.9	$58.7

Table 5. Kuskokwim region Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

		Funding Recommendation				Requested Budget ($000)			
			RACs						
Project No.	Title	TRC	Y-K	WI	ISC	2012	2013	2014	2015
	Stock Status and Trends								
12-302	Lower Kuskokwim River Chinook Salmon Harvest ASL	Yes	Yes	Yes	Yes	$100.3	$93.8	$96.9	$82.4
12-303	George River Salmon Weir (Option B)	Yes	Yes	Yes	Yes	$171.1	$175.3	$0.0	$0.0
12-304	Takotna River Salmon Escapment Monitoring	Yes	Yes	Yes	Yes	$116.1	$115.3	$0.0	$0.0
12-308	McGrath Broad Whitefish Spawning Population	No	No	No	No	$122.6	$66.8	$0.0	$0.0
12-309	Kwethluk River Weir Salmon Escapement Enumeration	Yes	Yes	Yes	Yes	$36.2	$0.0	$0.0	$0.0
12-312	Highpower Creek Sheefish Status and Upper Kuskokwim River	Yes	Yes	Yes	Yes	$100.8	$45.8	$24.4	$0.0
12-313	Kuskokwim River Bering Cisco Spawning Origins	Yes	Yes	Yes	Yes	$74.1	$56.9	$17.1	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge								
12-352	Upper Kuskokwim River Whitefish Climate Change Trends	Yes	Yes	Yes	Yes	$70.4	$63.0	$42.1	$0.0
	Total					$791.6	$616.9	$180.5	$82.4
	2012 Board Guideline, by Data Type					$783.0			
	Technical Review Committee Recommendation					$669.0	$550.1	$180.5	$82.4
	Regional Advisory Council Recommendation					$669.0	$550.1	$180.5	$82.4
	Interagency Staff Committee Recommendation					$669.0	$550.1	$180.5	$82.4

Table 6. Southwest Alaska region Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

		Funding Recommendation				Requested Budget ($000)			
			RACs						
Project No.	Title	TRC	BB-AP	K-A	ISC	2012	2013	2014	2015
	Harvest Monitoring and Traditional Ecological Knowledge								
12-450	Aleutian Islands Salmon and Other Subsistence Harvests	Yes	Yes	Yes	Yes	$44.2	$160.1	$100.0	$0.0
12-452	Lake Clark Whitefish Climate Change Trends	Yes	Yes	Yes	Yes	$138.2	$93.3	$53.4	$0.0
12-453	Kodiak Salmon Fishery Changing Patterns	Yes	Yes	Yes	Yes	$0.0	$86.3	$86.3	$0.0
	Total					$182.4	$339.7	$239.7	$0.0
	2012 Board Guideline					$405.0			
	Technical Review Committee Recommendation					$182.4	$339.7	$239.7	$0.0
	Regional Advisory Council Recommendation					$182.4	$339.7	$239.7	$0.0
	Interagency Staff Committee Recommendation					$182.4	$339.7	$239.7	$0.0

Table 7. Southcentral Alaska region Investigation Plans (IPs) received for funding consideration in 2012, and number of IPs recommended for funding by the Technical Review Committee (TRC), the Regional Advisory Councils (RAC), and the Interagency Staff Committee (ISC). Project types are stock status and trends (SST) and harvest monitoring and traditional ecological knowledge (HMTEK).

		nding Recommendat						
			RAC		Requested Budget ($000)			
Project No.	Title	TRC	SC	ISC	2012	2013	2014	2015
	Stock Status and Trends							
12-500	Copper River Feasibility of Remote Streambed Readers	Yes	Yes	Yes	$76.4	$74.5	$0.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge							
12-550	Copper River Changing Environments and Contemporary Sub Fisher	Yes	Yes	Yes	$82.0	$86.6	$0.0	$0.0
	Total				$158.4	$161.1	$0.0	$0.0
	2012 Board Guideline				$135.0			
	Technical Review Committee Recommendation				$158.4	$161.1	$0.0	$0.0
	Regional Advisory Council Recommendation				$158.4	$161.1	$0.0	$0.0
	Interagency Staff Committee Recommendation				$158.4	$161.1	$0.0	$0.0

Table 8. Southeast Alaska region stock status and trends proposals submitted for Fisheries Resource Monitoring Program funding consideration in 2012. Funding recommendations for Investigation Plan development by the Technical Review Committee (TRC).

		Funding Recommendation			Requested Budget ($000)			
			RAC					
Project No.	Title	TRC	SE	ISC	2012	2013	2014	2015
	Stock Status and Trends							
12-600	Eek Lake Sockeye Salmon Stock Assessment	Yes w/mod	Yes	Yes	$84.5	$68.5	$68.5	$68.5
12-601	Hoktaheen Lake Sockeye Salmon Stock Assessment	Yes	Yes	Yes	$152.5	$130.6	$135.1	$140.1
12-602	Lake Leo Sockeye Salmon Stock Assessment (Option 2)	Yes	Yes	Yes	$31.5	$32.9	$30.0	$31.4
	Harvest Monitoring and Traditional Ecological Knowledge							
12-651	Changing Use Patterns in Subsistence Salmon Fisheries	Yes	Yes	Yes	$61.2	$35.1	$0.0	$0.0
	Total				$329.7	$267.1	$233.6	$240.0
	2012 Board Guideline				$0.0			
	Technical Review Committee Recommendation				$329.7	$267.1	$233.6	$240.0
	Regional Advisory Council Recommendation				$329.7	$267.1	$233.6	$240.0
	Interagency Staff Committee Recommendation				$329.7	$267.1	$233.6	$240.0

Table 9. Multi-regional Alaska region stock status and trends proposals submitted for Fisheries Resource Monitoring Program funding consideration in 2012. Funding recommendations for Investigation Plan development by the Technical Review Committee (TRC).

		Funding Recommendation					Requested Budget ($000)			
			RACs							
Project No.	Title	TRC	Y-K	WI	EI	ISC	2012	2013	2014	2015
	Stock Status and Trends									
12-700	Yukon and Kuskokwim Rivers Inconnu Genetic Baseline	Yes	Yes	Yes	Yes	Yes	$16.8	$49.9	$23.3	$0.0
	Total						$16.8	$49.9	$23.3	$0.0
	2012 Board Guideline						$135.0			
	Technical Review Committee Recommendation						$16.8	$49.9	$23.3	$0.0
	Regional Advisory Council Recommendation						$16.8	$49.9	$23.3	$0.0
	Interagency Staff Committee Recommendation						$16.8	$49.9	$23.3	$0.0

DRAFT 2012 FISHERIES RESOURCE MONITORING PLAN INTRODUCTION

BACKGROUND

Since 1999, under the authority of Title VIII of ANILCA, the Federal government has assumed expanded management responsibility for subsistence fisheries on Federal public lands in Alaska. Expanded subsistence fisheries management has imposed substantial new informational needs for the Federal system.

Section 812 of ANILCA directs the Departments of the Interior and Agriculture, cooperating with the State of Alaska and other Federal agencies, to undertake research on fish and wildlife and subsistence uses on Federal public lands, and to seek data from, consult with, and make use of the special knowledge of local residents engaged in subsistence uses. To increase the quantity and quality of information available for management of subsistence fisheries, the Fisheries Resource Monitoring Program (Monitoring Program) was established within the Office of Subsistence Management. The Monitoring Program was envisioned as a collaborative interagency, interdisciplinary approach to enhance existing fisheries research, and effectively communicate information needed for subsistence fisheries management on Federal public lands.

Although all proposals addressing subsistence fisheries on Federal lands will be considered, the 2012 Request for Proposals was focused on priority information needs developed either by strategic planning efforts or by expert opinion, followed by review and comment by the Subsistence Regional Advisory Councils. The Monitoring Program is administered by region, and strategic plans sponsored by this program were developed by workgroups of fisheries managers, researchers, Federal Subsistence Regional Advisory Council members and other stakeholders for three of the six regions: Southeast, Southcentral (excluding Cook Inlet Area), and Southwest Alaska. These plans identify prioritized information needs for each major subsistence fishery and can be viewed on or downloaded from the Office of Subsistence Management's website: http://alaska.fws.gov/asm/index.cfml. Independent strategic plans were completed for the Yukon and Kuskokwim regions for salmon in 2005. For the Northern Region and the Cook Inlet Area, assessments of priority information needs were developed from the expert opinions of the Regional Advisory Councils, the Technical Review Committee, Federal and State managers and staff from the Office of Subsistence Management. Additionally, a strategic plan for research on whitefish species in the Yukon and Kuskokwim river drainages was completed in spring 2011 as a result of efforts supported through Monitoring Program project 08-206.

Cumulative effects of climate change will likely fundamentally affect subsistence fishery resources, their uses, and how they are managed. Therefore, all investigators were asked to consider examining or discussing climate change effects as part of their project. Investigators conducting long-term projects were encouraged to participate in a standardized air and water temperature monitoring program for which the Office of Subsistence Management will provide calibrated temperature loggers and associated equipment, analysis and reporting services, and access to a temperature database. The Office of Subsistence Management has also specifically requested research proposals that would focus on effects of climate change on subsistence fishery resources and uses, and that would describe management implications.

> *The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands, for rural Alaskans, through a multidisciplinary, collaborative program.*

To implement the Monitoring Program, a collaborative approach is utilized in which five Federal agencies (Fish and Wildlife Service, Bureau of Land Management, National Park Service, Bureau of Indian Affairs, and U.S. Forest Service) work with the Alaska Department of Fish and Game, Regional Advisory Councils, Alaska Native organizations, and other organizations. An interagency Technical Review Committee provides scientific evaluation of proposals and investigation plans. The Regional Advisory Councils provide review and recommendations, and public comment is invited. The Interagency Staff Committee also provides recommendations. The Federal Subsistence Board takes into consideration recommendations and comments from the process, and approves the final monitoring plan.

PROJECT EVALUATION PROCESS

The Technical Review Committee evaluates proposals, and subsequently full investigation plans, and makes recommendations for funding. The committee is chaired by the Fisheries Division Chief of the Office of Subsistence Management and is composed of representatives from each of the five Federal agencies and three representatives from the Alaska Department of Fish and Game. Fisheries and Anthropology staff from the Office of Subsistence Management provide support for the committee.

Four factors are used to evaluate studies:

1. **Strategic Priority**

   Proposed projects should address the following and must meet the first criteria to be eligible for Federal subsistence funding.

   Federal Jurisdiction—Issue or information needs addressed in projects must have a direct association to a subsistence fishery within a Federal conservation unit as defined in legislation, regulation and plans.

   Conservation Mandate—Risk to the conservation of species and populations that support subsistence fisheries, and risk to conservation unit purposes as defined in legislation, regulation and plans.

   Allocation Priority—Risk of failure to provide a priority to subsistence uses.

   Data Gaps—Amount of information available to support subsistence management (higher priority given where a lack of information exists).

   Role of Resource—Contribution of a species to a subsistence harvest (e.g., number of villages affected, pounds of fish harvested, miles of river) and qualitative significance (e.g., cultural value, unique seasonal role).

   Local Concern—Level of user concerns over subsistence harvests (e.g., upstream vs. downstream allocation, effects of recreational use, changes in fish abundance and population characteristics).

2. **Technical-Scientific Merit**

   The project must meet accepted standards for design, information collection, compilation, analysis, and reporting. Projects should have clear study objectives, an appropriate sampling design, correct statistical analysis, a realistic schedule and budget, and appropriate products, including written reports. Projects must not duplicate work already being done.

3. Investigator Ability and Resources

Investigators must have the ability and resources to successfully complete the proposed study. This will be evaluated considering ability in terms of education and training, related work experience, publications, reports, presentations, and past or ongoing work on Monitoring Program studies; and considering resources in terms of office and laboratory (if relevant) facilities, technical and logistic support, and personnel and budget administration.

4. Partnership-Capacity Building

Partnerships and capacity building are priorities of the Monitoring Program. ANILCA mandates that the Federal government provide rural residents a meaningful role in the management of subsistence fisheries, and the Monitoring Program offers tremendous opportunities for partnerships and participation of local residents in monitoring and research. Investigators are requested to include a strategy for integrating local capacity development in their investigation plans. Investigators must complete appropriate consultations with local villages and communities in the area where the project is to be conducted. Letters of support from local organizations add to the strength of a proposal. Investigators and their organizations should demonstrate their ability to maintain effective local relationships and commitment to capacity building.

POLICY AND FUNDING GUIDELINES

Several policies have been developed to aid in implementing funding.

- Proposals of up to four years duration may be considered in any year's monitoring plan.
- Studies must be non-duplicative with existing projects. Most Monitoring Program funding is dedicated to non-Federal sources.
- Activities not eligible for funding under the Monitoring Program include: a) habitat protection, restoration, and enhancement; b) hatchery propagation, restoration, enhancement, and supplementation; c) contaminant assessment, evaluation, and monitoring; and d) projects where the primary objective is capacity building (e.g., science camps, technician training, intern programs). These activities would most appropriately be addressed by the land management agencies.
- When long-term projects can no longer be funded by agencies, and the project provides direct information for Federal subsistence fisheries management, the Monitoring Program may fund up to 50% of the project cost.

Finances and Guideline Model for Funding

The Monitoring Program was first implemented in 2000, with an initial allocation of $5 million. Since 2001, a total of $6.25 million has been annually allocated for the Monitoring Program. In 2010, the total funding was reduced to $6.05 million. The Department of the Interior, through the U.S. Fish and Wildlife Service, has provided $4.25 million. The Department of Agriculture, through the U.S. Forest Service, provided $1.80 million annually, but amount of 2012 funds available for new projects is uncertain. The U.S. Forest Service anticipates having sufficient funds for ongoing projects in 2012, but would not be able to fund any of the 2012 project investigation plans submitted for the Southeast Alaska Region unless additional Department of Agriculture funding becomes available.

The Monitoring Program budget funds continuations of existing projects (year-2, 3 or 4 of multi-year projects), and new projects in the biennial year. The Office of Subsistence Management issued

requests for proposals on an annual basis until 2008, and then shifted to a biennial basis. Therefore, the next request for proposals after 2012 will be for 2014 proposals. Budget guidelines are established by geographic region and data type, and for 2012, $2 million is projected to be available for new starts. Proposals are solicited according to the following two data types:

5. **Stock Status and Trends Studies (SST)**.

   These projects address abundance, composition, timing, behavior, or status of fish populations that sustain subsistence fisheries with linkage to Federal public lands. The budget guideline for this category is two-thirds of available funding.

6. **Harvest Monitoring and Traditional Ecological Knowledge (HM-TEK)**.

   These projects address assessment of subsistence fisheries including quantification of harvest and effort, and description and assessment of fishing and use patterns. The budget guideline for this category is one-third of available funding.

2012 FISHERIES RESOURCE MONITORING PLAN

For 2012, a total of 32 investigation plans are under consideration for funding (**Table 1**). Of these, 22 are SST projects and 10 are HM-TEK projects. The Technical Review Committee recommends funding 29 of these investigation plans.

Table 1. Number of investigation plans received for funding consideration in 2012, and number recommended for funding by the Technical Review Committee. Data types are stock status and trends (SST), and harvest monitoring and traditional ecological knowledge (HM-TEK).

	Investigation Plans			Technical Review Committee		
Geographic Region	**SST**	**HM-TEK**	**Total**	**SST**	**HM-TEK**	**Total**
Northern Alaska	4	3	7	3	3	6
Yukon	6	1	7	5	1	6
Kuskokwim	7	1	8	6	1	7
Southwest Alaska	0	3	3	0	3	3
Southcentral Alaska	1	1	2	1	1	2
Southeast Alaska	3	1	4	3	1	4
Multi-Regional	1	0	1	1	0	1
Total	22	10	32	19	10	29

Total funding available for new projects in 2012 is $2.70 million, while the proposed cost of funding all 32 projects submitted would be $2.67 million. The 29 projects recommended for funding by the Technical Review Committee have a total cost of $2.10 million. In making their recommendations, the committee weighed the importance of funding new projects in 2012 with the knowledge that the next request for proposals will be issued in 2014. As has been done in past years, any unallocated Monitoring Program funds from the current year will be used to fund subsequent years of new and ongoing projects so that more of the funds available in 2014 can be used to fund new projects.

The 2012 draft Monitoring Plan recommended by the Technical Review Committee would provide 28% of the funding to Alaska Native organizations, 47% to State agencies, 14% to Federal agencies, and 11% to other non-government organizations.

NORTHERN ALASKA REGION OVERVIEW

Issues and Information Needs

The 2012 Request for Proposals for the Northern Region identified seven priorities:

- Baseline harvest assessment and monitoring of subsistence fisheries in the Northwest Arctic and North Slope regions.
- Historic trends and variability in harvest locations, harvests and uses of non-salmon fish.
- Iñupiaq taxonomy of fish species, Iñupiaq natural history of fish, land use, place name mapping, species distribution, and methods for and timing of harvests. Species of interest include sheefish, northern pike, or other subsistence non-salmon fish in the Northwest Arctic region.
- Harvest and use of fish species by residents of Shishmaref.
- Spawning distribution, timing, and stock structure of Selawik River whitefish species.
- Spawning distribution, timing, and stock structure of Meade River whitefish species.
- Spawning distribution, timing, and stock structure of Kuk River smelt.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 29 projects have been funded in the Northern Region; four of these will still be operating during 2012 (**Tables 1 and 2**). Two of these projects concern sheefish assessment Selawik (projects 10-100, and 10-104) drainages, one concerns Chinook salmon assessment in the Unalakleet River (project 10-102), one concerns local ecological knowledge of non-salmon fishes in Bering Strait (project 10-151), and one concerns effects of climate change on Northwest Alaska subsistence fisheries (project 10-152).

Projects Forwarded for Investigation Plan Development

Eleven proposals for research in the Northern Region were submitted to the Office of Subsistence Management in response to the 2012 Request for Proposals. In March 2011, the Technical Review Committee reviewed the proposals and recommended eight for investigation plan development. Of these, one was withdrawn by the investigators. Investigators for the other seven proposals responded to Technical Review Committee review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (**Tables 3 and 4**).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon further review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and the Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $459,000 is available for funding new projects in the Northern Region.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Northern Alaska since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, AJ=Anore Jones, AKP=City of Anaktuvuk Pass, KI=Kawarek Inc., KIC=Kaktovik Inupiat Corp., MQ=Maniilaq, NPS=National Park Service, NVK=Native Village of Kotzebue, NVU=Native Village of Unalakleet, NSB=North Slope Borough, STB=Stebbins IRA, UAF=University Alaska Fairbanks, USFWS=U.S. Fish and Wildlife Service, and USGS=U.S. Geological Survey.

Project Number		Project Title	Investigators
		North Slope	
00-002		Eastern NS Dolly Varden Spawning and Over-wintering Assessment	ADFG, USFWS
01-113		Eastern NS Dolly Varden Genetic Stock ID Stock Assessment	ADFG, USFWS
01-101		Eastern NS (Kaktovik) Subsistence Fish Harvest Assessment	ADFG, KIC
02-050		NS (Anaktuvuk Pass) Subsistence Fish Harvest Assessment	ADFG, NSB, AKP
03-012		SST of Arctic Cisco and Dolly Varden in Kaktovik Lagoons	USFWS
04-103		North Slope Dolly Varden Sonar Feasibility	USFWS
06-108		North Slope Dolly Varden Aerial Monitoring	ADFG
07-105	[a]	North Slope Dolly Varden Genetic Baseline Completion	USFWS
07-107	[a]	Hulahula River Dolly Varden Sonar Enumeration	USFWS
		Northwest Arctic	
00-001		Northwestern Dolly Varden and Arctic Char Stock Identification	ADFG, USFWS
00-020		Hotham Inlet Kotzebue Winter Subsistence Sheefish Harvest	ADFG
01-136		Northwestern Alaska Dolly Varden Genetic Diversity	ADFG, USFWS
01-137		Northwestern Alaska Dolly Varden Spawning Stock Assessment	ADFG
02-023		Qaluich Nigingnaqtuat: Fish That We Eat	AJ
02-040		Kotzebue Sound Whitefish Traditional Knowledge	ADFG, MQ
03-016		Selawik River Harvest ID, Spring and Fall Subsistence Fisheries	USFWS
04-101		Selawik River Inconnu Spawning Abundance	USFWS
04-102	[a]	Selawik Refuge Whitefish Migration and Habitat Use	USFWS
04-109	[a]	Wulik River Dolly Varden Wintering Stocks	USFWS
04-157		Exploring Approaches to Sustainable Fisheries Harvest Assessment	ADFG, MQ
07-151		Northwest Alaska Subsistence Fish Harvest Patterns and Trends	ADFG, MQ
08-103	[a]	Kobuk River Sheefish Spawning and Run Timing	ADFG, USFWS
10-100	[a]	Selawik Drainage Sheefish Winter Movement Patterns	UAF, USGS, USFWS, NVK
		Seward Peninsula	
01-224		Nome Sub-district Subsistence Salmon Survey	ADFG, KI
02-020		Pikmiktalik River Salmon Site Surveys and Enumeration	USFWS, NPS, STB, KI
04-105		Pikmiktalik River Chum and Coho Salmon Enumeration	KI
04-151		Customary Trade of Fish in the Seward Peninsula Area	ADFG, KI
05-101		Unalakleet River Coho Salmon Distribution and Abundance	ADFG, NVU
06-101		Pikmiktalik River Chum and Coho Salmon Enumeration	KI

[a] Final Report in preparation.

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in Northern Alaska. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, KI=Kawerak, Inc., NSEDC=Norton Sound Economic Development Corporation, UAF=University Alaska Fairbanks, USFWS=U.S. Fish and Wildlife Service, .

Project Number	Project Title	Investigators	Budget ($1000) 2012	2013
	Stock Status and Trends			
10-102	Unalakleet River Chinook Salmon Assessment	ADFG, NSEDC	$94.7	$96.7
10-104	Selawik Lake and Hotham Inlet Sheefish Genetic Analysis	USFWS, ADFG, NVK	$115.3	$83.8
	Harvest Monitoring and Traditional Ecological Knowledge			
10-151	Bering Strait Non-Salmon Fish Local Ecological Knowledge	KI	$119.5	$29.3
10-152	Northwest Alaska Climate Change and Subsistence Fisheries	UAF	$54.4	$0.0

Table 3. Northern Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Stock Status and Trends				
12-100	Selawik River Inconnu Assessment	$10.5		$68.2	
12-102	Kuk River Rainbow Smelt Assessment				$307.1
12-103	Kobuk River Sheefish Assessment		$13.8		
12-104	Noatak River Dolly Varden Assessment		$2.3		
	Harvest Monitoring and Traditional Ecological Knowledge				
12-153	Northwest Alaska Fisheries Harvest Surveys	$31.9	$74.6		
12-154	North Slope Emerging Salmon Fishery Traditional Ecological Knowledge		$47.5		
12-155	North Slope Climate Change and Subsistence Use of Whitefish				$142.7

Table 4. Northern Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG=Alaska Department of Fish and Game, KI=Kawerak Inc., SWCS=SWCA Environmental Consultants, UAF=University of Alaska, Fairbanks, USFWS=U.S. Fish and Wildlife Service, and WNR=Wild North Resources, LCC.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends		
12-100	USFWS	Selawik River Inconnu Assessment	$3.6	$110.0
12-102	WNR	Kuk River Rainbow Smelt Assessment	$0.0	$42.0
12-103	ADFG	Kobuk River Sheefish Assessment	$0.0	$18.5
12-104	ADFG	Noatak River Dolly Varden Assessment	$0.0	$46.9
		Harvest Monitoring and Traditional Ecological Knowledge		
12-153	ADFG	Northwest Alaska Fisheries Harvest Surveys	$0.0	$0.0
12-154	ADFG	North Slope Salmon Fishery Traditional Ecological Knowledge	$0.0	$0.0
12-155	SWCA	North Slope Climate Change and Subsistence Use of Whitefish	$15.0	$0.0

program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the seven investigation plans, the Technical Review Committee recommended funding six of the proposed projects (**Table 5**):

12-100	Selawik River Inconnu Assessment	$	78,680
12-103	Kobuk River Sheefish Assessment	$	13,800
12-104	Noatak River Dolly Varden Assessment	$	2,280
12-153	Northwest Alaska Fisheries Harvest Surveys	$	106,421
12-154	North Slope Emerging Salmon Fishery Traditional Ecological Knowledge	$	48,493
12-155	North Slope Climate Change and Subsistence Use of Whitefish	$	134,703
	Total	$	384,377

The six projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each project recommended for funding in the Northern Alaska region in 2012 is summarized below (see Executive Summaries for more details on all projects).

12-100 Selawik River Inconnu Assessment. A large permafrost slump located about 40 km upstream from the sheefish spawning area in the Selawik River began emitting large amounts of sediment into the river in 2004. The investigators are requesting four years of funding to monitor the annual abundance and age structure of the Selawik River inconnu (also referred to as sheefish) spawning population to determine whether the sediment emitted from the slump have had an identifiable impact on abundance trends over time. The investigators propose using a DIDSON sonar system to estimate inconnu abundance as they migrate downstream from their spawning grounds and angling gear to apportion sonar counts among species. The proposed work would address an important subsistence inconnu fishery associated with Selawik National Wildlife Refuge and would build upon several Fisheries Resource Monitoring Program projects (02-020, 02-040, 03-016 and 04-101). U.S. Fish and Wildlife would provide matching funds averaging $50,250 per year.

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Northern Alaska 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC		Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends						
12-100	Selawik River Inconnu Assessment	Yes		$78.7	$124.3	$104.8	$68.7
12-102	Kuk River Rainbow Smelt Assessment	No		$307.1	$286.6	$31.4	$0.0
12-103	Kobuk River Sheefish Assessment	Yes		$13.8	$13.8	$13.8	$0.0
10-104	Noatak River Dolly Varden Assessment	Yes		$2.3	$142.4	$76.2	$2.5
	Harvest Monitoring and Traditional Ecological Knowledge						
12-153	Northwest Alaska Fisheries Harvest Surveys	Yes		$106.4	$117.4	$119.8	$98.5
12-154	North Slope Salmon Fishery Traditional Ecological Knowledge	Yes	*	$48.5	$42.3	$44.8	$30.6
12-155	North Slope Climate Change and Subsistence Use of Whitefish	Yes	*	$134.7	$52.5		
	Total			$691.5	$779.3	$390.8	$200.3
	Funding Guideline			$805.0			
	TRC Recommendation			$249.7	$440.2	$359.4	$200.3

* = Yes with modification

12-103 Kobuk River Sheefish Assessment. This three-year project would build upon Monitoring Program project 08-103 by allowing continued tracking of radio-tagged sheefish (also referred to as inconnu) in the Kobuk River. Sheefish radio-tagging during project 08-103 occurred in 2008 and 2009. Providing additional funding for tracking these tags would allow collection of five years of sheefish migratory data. Results from this work would describe run timing and spawning frequency, giving fishery managers a better context in which to interpret previously completed stock abundance work. This project would address an important subsistence sheefish fishery associated with Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness, and Kobuk Valley National Park. Continuing this work would allow more information to be gleaned from already deployed radio tags at a very modest cost to the Monitoring Program. In addition, Alaska Department of Fish and Game would provide matching funds of $18,500 per year, which is more than the requested funding.

12-104 Noatak River Dolly Varden Assessment. This project would address an important subsistence Dolly Varden fishery in Northwest Alaska associated with Gates of the Arctic National Preserve and the Noatak National Reserve. Dolly Varden annual subsistence harvests have ranged from 15,000 to 30,000 fish. Most subsistence fishers target mixed-stock populations both in the fall, as Dolly Varden migrate into freshwater, and in the spring, as they move seaward. This project would use radiotelemetry to document overwintering locations of Dolly Varden in the Noatak River during the winters of 2012/2013 and 2013/2014, and DIDSON sonar, if feasible, to estimate abundance of Dolly Varden migrating seaward during June 2014. The investigators would use a logical stepwise approach to deploy the DIDSON sonar component of the project and described how they would address cold weather challenges. Information gained from this project would allow fishery managers to evaluate the importance of the Noatak River Dolly Varden population in comparison to the Kivalina and Wulik rivers populations. Alaska Department of Fish and Game would provide matching funds averaging $59,000 per year.

12-153 Northwest Alaska Fisheries Harvest Surveys. This four-year project would fill gaps in available data concerning salmon and non-salmon species harvests in the Northern Region. Annual harvest assessments are not conducted in Kotzebue Area communities. This project would obtain data on harvests as well as contextual information on fisheries in the communities of Kivalina, Noatak, Noorvik, Selawik, Kiana, Ambler, Shungnak, and Kobuk. The information would also be used to better understand how increased mining and development in the region as well as climate related changes have and will affect trends in subsistence harvests, uses, and distribution of resources. Information would be collected through annual harvest surveys, semi-structured key respondent interviews, and participant observation.

12-154 North Slope Emerging Salmon Fishery Traditional Ecological Knowledge. This four-year project would document baseline ethnographic data regarding salmon and non-salmon fisheries in two North Slope communities: Point Lay and Wainwright. The investigator would document several aspects of salmon and non-salmon fisheries including traditional ecological knowledge, ecology, life-histories, climate change related observations, trends in resource abundance, and socio-economic factors. Additionally, the investigator would provide baseline subsistence fishing harvest estimates by species and harvest location. The investigator would work with the study communities to create educational materials and employ harvest calendars to collect harvest data.

12-155 North Slope Climate Change and Subsistence Use of Whitefish. This two-year project would gather traditional ecological knowledge on subsistence uses of broad whitefish (Aanaakjiq), Arctic cisco (Qaaqtag), and least cisco (Iqalusaaq) in the communities of Atqasug and Kaktovik. Information collected would document changes in harvest locations, changes in harvest timing, and changes in preservation methods. The investigators would examine a twenty-year history of harvests in the region by comparing current local knowledge about subsistence resources with that of knowledge of the past. Information

would be collected through flexible conversational interviews, participant observation, and subsistence mapping.

Project Number: 12-100
Project Title: Selawik River Inconnu Spawning Population Abundance and Age Structure Evaluation
Geographic Region: Northwest Alaska
Information Type: Stock Status and Trends
Principal Investigator: Raymond Hander, U.S. Fish and Wildlife Service
Co-Investigators: Mary Beth Loewen, U.S. Fish and Wildlife Service
Randy J. Brown, U.S. Fish and Wildlife Service

Project Cost: **2012:** $78,680 **2013:** $124,299 **2014**: $104,818 **2015:** $68,749

Recommendation: Fund

Issue

The Selawik National Wildlife Refuge (Refuge) has a congressional mandate through ANILCA to conserve inconnu (sheefish) *Stenodus leucichthys* populations. This project addresses two priority issues identified for the Northern Region in the 2012 Fisheries Resource Monitoring Program: "spawning distribution, timing, and stock structure of Selawik River whitefish species"; and "identify and characterize critical factors affecting population dynamics of Selawik River inconnu". This project benefits from information provided by FIS projects 02-020, 02-040, 03-016, and 04-101.

There are two known populations of inconnu in Northwest Alaska, one that spawns in the upper Kobuk River and the other that spawns in the upper Selawik River. Both populations are subject to intensive fisheries throughout the region. A large permafrost thaw slump (thaw slump) located about 40 km upstream from the inconnu spawning area on the Selawik River began emitting large amounts of sediment into the river in 2004. Since then the normally clear Selawik River has flowed extraordinarily turbid during the summer months transporting huge quantities of sediment downstream, potentially destroying the habitat for stream-spawning fish. Similar slumps in the upper Yukon River drainage have been emitting sediment into the Stewart River for over 40 years so we must assume that the Selawik River slump will continue for the foreseeable future. Habitat qualities of the inconnu spawning area in the Selawik River have undoubtedly changed because of the dramatically increased sediment exposure. These changes will probably reduce the proportion of fertilized eggs that develop successfully and produce young. If production is reduced but not eliminated the inconnu population would be expected to decline over time. If production is eliminated the population would be expected to become extinct as existing fish gradually die off, or possibly to become established in another suitable location. The increased sediment in the upper Selawik River is an environmental factor that will have a profound effect on the inconnu population that spawns there.

Objectives

1. Collect inconnu age structure data from male inconnu from the Selawik and Kobuk River spawning populations in 2012, 2013, and 2014;
2. Identify possible recruitment failures and missing age classes based on Chi-square test of six age class bins;
3. Determine the spawning population abundance of Selawik River inconnu in 2012, 2013, and 2014; and

4. Determine whether age structure and spawning population abundance data support the null hypothesis that sediment deposition from the slump does not affect recruitment over time caused by reduced egg survival.

Methods

This project will involve three distinct components that together will reveal whether the Selawik River thaw slump is impacting egg development and subsequent recruitment of the inconnu population in the drainage. The first component will be a series of annual age distribution profiles of spawning male inconnu collected from the Selawik River spawning area. We have chosen to focus on males because they will provide the recruitment data we are seeking without reducing the number of fertilized eggs on the spawning grounds each year. The earliest age distribution profiles will be dominated by cohorts that were spawned prior to the thaw slump and will be unaffected by the sediment released into the river. These early age distribution profiles will serve as baselines for comparison with later profiles. The second component will be a series of annual age distribution profiles of spawning male inconnu from the Kobuk River population. If recruitment failure is observed in both sample collections, it would indicate an effect in their shared rearing environment and not necessarily in the Selawik River spawning area. If recruitment failure is observed only in the Selawik River sample collection it would indicate an effect from the Selawik River spawning area. The Alaska Department of Fish and Game operates an annual chum salmon *Oncorhynchus keta* test fishery on the Kobuk River near the community of Kiana during July and August. Incidental catches of inconnu from 2003 to 2008 have ranged from 375 to 880. During 2010, otoliths and gonosomatic index data were collected from Kobuk River inconnu and preliminary analysis suggest that inconnu caught in the test fishery are preparing to spawn and would provide commensurate age distribution data. The third component of the project will be a complimentary series of annual spawning population estimates for the Selawik River inconnu population. Age distribution data is proportional to the sample so one could see identical profiles from a population at radically different population levels. Brown found that individuals in the first seven age classes of a Yukon River inconnu spawning population made up 80% to 90% of his sample. If the Selawik River inconnu population is similarly skewed to the younger age classes, which is common for coregonid populations in general, then the spawning population should decline dramatically with even modest declines in recruitment. Modeling exercises suggest that our ability to identify large declines in recruitment (80% or greater) with age distribution data will be substantial, but modest declines in recruitment (50% or less) will be difficult to detect with statistical certainty. Annual spawning population estimates will allow us to identify modest declines in recruitment. These three components will permit detection of modest to high recruitment failure resulting from reduced egg survival caused by sediment from the Selawik River thaw slump.

Partnerships and Capacity Building

Project logistics and partnership would be a collaborative effort between the U.S. Fish and Wildlife Service and the Native Village of Selawik. Residents of Selawik will be sought after to assist with collecting otoliths. Specific training to address project specific sampling procedures and protocols will be conducted for individuals prior to initiating sampling. Selawik residents will also be sought for logistical support for camp gear transportation logistics. Discussions with the Selawik IRA Council regarding the project are planned during one of their monthly meetings.

Justification

The proposed work is technically sound and addresses an important subsistence sheefish fishery associated with Selawik National Wildlife Refuge. This project builds upon several Fisheries Resource Monitoring Program projects (02-020, 02040, 03-016 and 04-101). The investigators responded to the

Technical Review Committee's comments by providing details concerning trend detection and DIDSON sonar application. If the Fisheries Resource Monitoring Program were to provide support for the proposed work, it would need to be understood that no commitment is made beyond the four year funding cycle. Investigators would need to consider alternative funding sources for additional future study years as a contingency.

Project Number: 12-102
Project Title: Kuk River Rainbow Smelt Stock Assessment
Geographic Region: Northern Alaska
Information Type: Stock Status and Trends
Principal Investigator: Melissa Cunningham, Wild North Resources, LLC
Co-Investigator(s): Blair Flannery, U. S. Fish and Wildlife Service
Olgoonik Corporation

Project Cost: **2012:** $307,124 **2013:** $286,644 **2014:** $31,403

Recommendation: Do Not Fund

Issue

This study will address one of the priority needs for fisheries information in the Northern geographic area by the Regional Advisory Council. Rainbow smelt *Osmerus mordax* inhabit the Kuk River and are an important part of the subsistence diet for residents of the Wainwright area. They are the most harvested fish species in the area; however, general biological information is lacking. One study conducted along the coastal waters of the Beaufort Sea indicated that rainbow smelt were the most abundant fish collected in the winter fishery. Beyond this study, detailed information on Pacific-Arctic populations of rainbow smelt does not exist.

Kuk River rainbow smelt spawning distribution, timing, and baseline stock assessment data will be determined and will aid in identify potential affects from climate change. Biomass estimates of the smelt spawning population in the Kuk River will provide an index of the overall run strength. This information will help managers monitor long term population trends. To manage rainbow smelt as an important subsistence resource, managers require necessary baseline biological information to make informed decisions on the population for sustainability.

Objectives:

1. Obtain smelt general biological information from Wainwright fishermen to assist with the field sample plan, and document knowledge of potential climate changes affecting the Kuk River smelt;
2. Document smelt spawning distribution and timing in the Kuk River for 2012 and 2013;
3. Identify the age, fork length, weight, sex ratio, genetic composition and fecundity of smelt in the Kuk River during the spawning run and compare to the winter subsistence fishery for 2012 and 2013;
4. Estimate biomass of the smelt spawning population for 2012 and 2013

Methods

Objective 1 - General smelt life history information will be obtained by regular consultations over the phone and face to face with Wainwright smelt fishermen during winter sampling in 2012, and 2013. Information obtained will include fishing techniques used, run timing and spawning areas observed. Notable changes in the population over time such as movements, timing, abundance, size, disease or habitat will also be discussed.

Objective 2 – Spatial and temporal documentation of the Kuk River spawning population will be conducted over two years. Sampling will occur in the Kuk River Proper from a boat from ice break up until catch rates decline. Smelt will be collected by dip net primarily, but also gill and fyke net dependant on the conditions. General habitat characterization will be assessed at concentrated spawning locations. Confirmed spawning areas will be recorded by GPS and delineated and mapped with Arc View software.

Objective 3 – Eighty smelt will be collected randomly throughout the week during the spawning run to determine the age, sex, length, weigh and genetic composition of the Kuk River smelt population. Fifty pre-spawned female will be analyzed for fecundity (number of eggs/female). All samples will be analyzed for age by reading circuli on both ear bones (otoliths). Each smelt will be measured by weight (g), fork length (mm) and sexed (observed reproductive characteristics – nuptial tubercles on males). One hundred smelt will be sampled from the Kungok, Ivisaruk and Kuk River Proper during the spawning run annually to compare genetic diversity within the watershed. Blair Flannery with the Conservation Genetics Lab will conduct this analysis. Two hundred smelt will be collected annually and measured for the same parameters during the winter subsistence harvest, and compared to the spring spawning data to determine changes in demographics.
Objective 4 - Biomass (eggs and larvae) sampling will occur approximately three weeks after spawning has commenced, and will extend for approximately four weeks. Data collection will include sampling the entire water column with a plankton net at two locations along the Kuk River during the day and at night. Nine samples will be collected per site to obtain a representation of vertical and horizontal distribution of biomass during the period of sample.

Partnerships and Capacity Building

One individual from Wainwright will be hired through Olgoonik Corporation to help assist with field operations throughout the season. Local hire will assist with collection of biological data, logistics and transportation needs. Promoting local involvement of resource users as active participants in this scientific study will educate individuals on the management process of their important fisheries resources. This experience may also initiate an interest to obtain a secondary education in the sciences. Individuals will be trained on all field procedures and safety protocols to collect data safely and accurately. Olgoonik Corporation is proposing to match funds for successful completion of this study and will be listed as Co-Investigator.

General biological information of the Kuk River smelt will be obtained from prominent fisher people within the Wainwright village through consultations. This information will be utilized to aid in determining the field sampling plan including sample locations and timing of spawning smelt. At the end of the two years of study, a summary of results will be presented to the Wainwright community through a PowerPoint presentation and a poster will be produced and will remain in Wainwright at a public location.

Justification

While this work is timely, has local importance and is accompanied by an impressive match, the details provided in the investigation plan are lacking and not fully developed. The overall funding requested of $625,171 is excessive given the lack of direct application to Federal management. The investigators are encouraged to narrow their focus to one or two of the objectives, reduce the budget, clearly articulate how the objectives will be achieved and develop a clear link to Federal subsistence management. Kuk River Smelt is an important resource to the community of Wainwright and little is known about the population The Technical Review Committee would encourage a resubmission of this project in the 2014 funding cycle.

Project Number: 12-103
Project Title: Spawning location, run timing, and spawning frequency of Kobuk River sheefish.
Geographic Region: Northern Alaska
Information Type: Stock Status and Trends
Principle Investigator: James Savereide, Alaska Department of Fish and Game
Co-Investigator(s): Randy J. Brown, U.S. Fish and Wildlife Service

Project Cost: **2012:** $13,800 **2013:** $13,800 **2014**: $13,800

Recommendation: Fund

Issue

The Kobuk River sheefish *Stenodus leucichthys* population supports substantial inriver subsistence fisheries and winter subsistence fisheries that occur in Hotham Inlet and Selawik Lake. Inriver fisheries utilize gillnets, beach seines, and hook and line techniques to capture migrating sheefish during their upstream (mid-June through August) and downstream (late September through mid-October) spawning migrations, whereas the winter fishery mainly utilizes under-ice gillnets and hand-held jig lines. Sheefish harvested in Hotham Inlet and Selawik Lake are from a mixed population comprised of the only two known spawning stocks in the region, the Selawik and Kobuk River stocks. Stock assessments are only feasible within the individual rivers, when the stocks are separated into spawning aggregations; however, estimates of spawning frequency are needed to determine the total stock size because mature sheefish can spawn more than once and in sequential and/or non-sequential years. Even though sheefish in the Northern Region are not identified as a priority need, an understanding of total exploitable stock size would allow researchers to determine sustainable harvest levels for an important subsistence fishery. In 2008, a four-year radiotelemetry project (08-103) was funded by the Fisheries Monitoring Program to estimate the spawning frequency, spawning locations, and migratory timing of sheefish in the Kobuk River.

The spawning locations, estimates of migratory timing (up and downstream), and spawning frequency have been determined annually since 2008, and will continue through the fall of 2011 as part of project 08-103. At that time, 3 years of information will be available to estimate the spawning frequencies of sheefish tagged in 2008, and two years will be available for sheefish tagged in 2009. However, the potential for a more complete and descriptive database is available because the minimum life expectancy of the radio transmitters deployed is five years. To obtain more detailed and precise estimates of spawning frequency, spawning locations, and migratory timing and to maximize the potential of the radio transmitters already purchased, three more years of data from aerial tracking surveys and the stationary tracking stations should be collected. This would provide five years of spawning information for each year transmitters were deployed.

Objectives

1. Document spawning locations within the Kobuk River upstream of the village of Kobuk;
2. Describe the timing of spawning migrations (upstream and downstream past the village of Kobuk) for mature sheefish within the Kobuk River drainage;

3. Estimate the proportion of the sheefish spawning population in 2008 and 2009 that returned annually to spawning areas upstream of the village of Kobuk from 2012 to 2014 such that each annual proportion is within 10% percentage points 90% of the time; and,
4. Identify and characterize different spawning frequency strategies used by adult sheefish in the Kobuk River, estimate the proportion of adults using each strategy, and estimate the potential variation in the proportion of adult sheefish spawning in any given year.

Methods

Spawning frequency, spawning locations, and migratory timing of mature sheefish in the Kobuk River stock will be determined by assessing spawning status of individually radiotagged sheefish over 3 consecutive years (2012–2014). The radio transmitters will be operable each year from July through October. Combined with the results from project 08-103, this will provide a total of 5 annual assignments of spawning status to categorize and estimate spawning frequency. This approach will serve to provide precise estimates of spawning frequency (sequential, non-sequential, or combination thereof) expressed by the stock.

Spawning migrations, frequency, and locations of radiotagged sheefish will be deciphered using a combination of aerial tracking surveys and stationary tracking stations. Two tracking stations located just upstream from the village of Kobuk will be used to record upstream and downstream migrations of radiotagged fish. Replicate aerial surveys conducted by U.S. Fish and Wildlife Service and Selawik National Wildlife Refuge will be conducted annually during July and August to document their locations throughout the river during their upstream migration, and during late September to mid-October to document their locations within the spawning area.

Partnerships and Capacity Building

One field technician was hired through the Kobuk IRA to assist with capture and sampling of fish, and this project extension will continue to utilize a local field technician and provide compensation for local logistical support (e.g., boat rentals, tracking station maintenance, and land leases). A rural outreach educational program on sheefish was carried out between the village of Kobuk, Kobuk Elementary School, and Alaska Department of Fish and Game; this program will continue through 2014. Additionally, progress reports will be presented to residents of the region at least once a year and written documents will be distributed to fisheries managers, researchers, local community groups and other interested parties.

Justification

This project will build upon Monitoring Program project 08-103 by allowing continue monitoring of radio-tagged sheefish in the Kobuk River. Combined with project 08-103, funding for this project will result in five years of sheefish migratory data. Results from this work will describe run timing and spawning frequency, giving fishery managers the context for understanding previously completed stock abundance work. This project is technically sound and addresses an important subsistence sheefish fishery associated with Gates of the Arctic National Preserve, Selawik National Wildlife Refuge, Kobuk Valley Wilderness and Kobuk Valley National Park. The investigators have the expertise needed to successfully conduct this ongoing project. Both investigators have worked on several successful Monitoring Program projects. Continuing this project would allow for a maximum amount of information to be gleaned from the deployed radio tags at a very modest cost. In addition, Alaska Department of Fish and Game is providing matching funds ($18,500 per year) greater than the requested funds.

Project Number: 12-104
Project Title: Evaluation of the overwintering Dolly Varden population in the Noatak River.
Geographic Region: Northern Alaska
Information Type: Stock Status and Trends
Principal Investigator: Brendan Scanlon, Alaska Department of Fish and Game
Co-Investigator(s): Marci Johnson, National Park Service

Project Cost: **2012:** $2,280 **2013:** $142,381 **2014:** $76,152 **2015:** $2,508

Recommendation: Fund

Issue

Many northwestern Alaska residents maintain a traditional subsistence lifestyle and rely greatly on the harvest of overwintering Dolly Varden *Salvelinus malma* from the Noatak River. These fish are captured with gillnets or beach seines during open water periods and with hook and line during winter, and in some communities they outrank salmon and whitefish in importance to the subsistence economy. Currently, fisheries managers have little defensible information relative to habitat and abundance for the overwintering population of Dolly Varden in the Noatak River, which is needed to identify sustainable subsistence harvest levels, evaluate the potential effects of habitat perturbations, and address regulatory proposals or climatic change.

Objectives

1. Document overwintering locations of Dolly Varden in the Noatak River during the winters of 2012/2013 and 2013/2014.
2. Assess the feasibility of using side-scan sonar (i.e. DIDSON) to estimate the abundance of outmigrating overwintering Dolly Varden following breakup on the Noatak River. This will be accomplished using a set of secondary objectives.
   a. Identify the location upstream of which 90% of the Dolly Varden overwinter (OW_{90}) during the winters of 2012/2013 and 2013/2014.
   b. Describe the onset and duration of the Dolly Varden outmigration at OW_{90} during late spring of 2013 and 2014.
   c. Evaluate physical characteristics of potential sonar sites near OW_{90} in June 2013 that could impact sonar detection of Dolly Varden such as channel profile (width, depth and substrate), debris load during break up, target range, target size, and aim/position of the sonar.
   d. Evaluate biological characteristics of potential sonar sites near OW_{90} in June 2013 that could impact sonar detection of Dolly Varden such fish density, swimming behavior (e.g. direction of movement), and relative abundance of Dolly Varden and non-target species.
   e. Based on conclusions from objectives 2a-d, enumerate all downstream targets at the selected OW_{90} site using a DIDSON sonar during the outmigration period of Dolly Varden during June of 2014.
   f. Determine the relative abundance of non-target species in the immediate vicinity of the OW_{90} site using methods identified in Objectives 2c and 2d during June of 2014.

Methods

Radiotelemetry will be employed to evaluate overwintering areas, and identify OW_{90} and downstream run timing past OW_{90} of Dolly Varden in the Noatak River. During each of the first two years (2012 and 2013) of the study, 125 Dolly Varden will be surgically implanted with programmable radio transmitters. Deploying transmitter during mid-September will ensure that only overwintering Dolly Varden will be tagged. Data related to run timing and overwintering locations will be collected using a combination of aerial tracking surveys and ground-based tracking stations. A minimum of four tracking flights will be conducted each year: early March, mid-April, early June, and early July.

Objective 2 reflects a stepwise approach toward assessing the feasibility of the sonar and the conditions that need to be satisfied to enumerate the downstream migration of overwintering Dolly Varden. Because species apportionment can be problematic, our expectation of project success will be that downstream targets can be accurately counted and the relative abundance of non-target species will be negligible (i.e. <5%). We expect that the downstream outmigration period for a vast majority of the overwintering Dolly Varden will be very brief (<one week) and that their abundance (e.g. 30,000–150,000 fish) will simply overwhelm other species of similar size (e.g. ≥200 mm TL) that may confound the sonar counts. This ideal scenario will provide a relatively accurate census even without having to rigorously account for species apportionment.

In 2013, investigation of the potential sonar site will start immediately after ice-out. Based on work conducted in the neighboring Wulik River and prior telemetry work, it is assumed that there will be a delay of about seven days after ice-out before fish begin their outmigration to sea. Recommended procedures for site selection, installation, and operation of the DIDSON sonar will be followed over a four-week period. A radio receiver in camp or tracking station in camp will provide data on the progression of outmigrating radio tagged Dolly Varden. Test fishing will be developed and conducted to evaluate whether Dolly Varden make up ≥90% of the total number of fish present in the ensonified field.

In 2014, the outmigration of Dolly Varden will be counted following breakup conditioned upon the results of the telemetry work and sonar investigations in 2013. All necessary equipment and personnel will be staged to ensure that the river can be ensonified immediately after ice-out and once the river can be safely navigated. Two DIDSON units will be operated, one on each bank of the river. Best practices for profiling the river channel, aiming, and testing of the sonar using targets will be repeated. The maximum attainable range window of an individual DIDSON unit on low frequency is 40 m and the window length of each sonar unit will be adjusted to maximize image resolution and avoid overlap. Sonar operations will be terminated after the outmigration period, which will be identified by telemetry and test fishing data. Test fishing results from 2013 will be used to develop a standardized protocol for determining the relative abundance of Dolly Varden and other species moving downstream through the ensonification field.

Partnership/Capacity Development

A letter of support will be solicited from the Northwest Arctic Regional Advisory Council at their August 2011 meeting in Kotzebue, and a portion of the requested funds will provide for a locally-hired technician from the village of Noatak to be recruited for approximately four weeks each year of this project to assist with operation of the DIDSON sonar. During the 2002-2003 Noatak River Dolly Varden telemetry experiment four individuals from Noatak were successfully hired each year to assist with weir and field camp operations in the upper Kugururok River. In addition, consultation with the Noatak/Kivalina Fish and Game Advisory Committee as well as the Noatak IRA will be conducted well before the start of the project to describe objectives and how the results will be used in management, and to inform fishers about

the tag-return program. Finally, educational outreach regarding Dolly Varden life history and the field methods used in this experiment will be conducted as the public school in Noatak in May 2013.

Presentations will also be made at other regional villages and schools, such as Ambler, Kiana, and Kotzebue as interest and resources allow. Project results will be presented at Federal Regional Advisory Councils, and State Advisory Committees, and in regional newspapers and radio shows.

Justification

This project addresses an important subsistence Dolly Varden fishery in Northwest Alaska. The investigators plan to use radiotelemetry to document overwintering locations of Dolly Varden in the Noatak River and DIDSON sonar to estimate the outmigrating Dolly Varden. The investigators developed a logical stepwise approach to deploying the DIDSON sonar component of the project and detailed how they will address cold weather challenges. Information gained from this project will allow fishery managers to evaluate the importance of the Noatak River Dolly Varden population as compared to the Kivalina and Wulik rivers populations. It will also provide baseline information on Noatak River Dolly Varden overwintering habitat.

Project Number: 12-153
Project Title: Northwest Alaska Key Subsistence Fisheries Harvest Monitoring Program
Geographic Region: Northern Alaska
Information Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Nicole M. Braem, Alaska Department of Fish and Game
Co-Investigator(s): James S. Magdanz, Alaska Department of Fish and Game
Enoch Shiedt, Maniilaq, Inc.

Project Cost: **2012:** $106,421 **2013:** $117,408 **2014:** $119,760 **2015:** $98,540

Recommendation: Fund

Issue

Substantial subsistence fisheries sustain eight small communities (Kivalina, Noatak, Noorvik, Selawik, Kiana, Ambler, Shungnak and Kobuk) within the Kotzebue Management Area, yet little information on the subsistence harvest and use of salmon, char, whitefish, and other non- salmon species has been collected since 2004, when the annual salmon harvest monitoring program was terminated due to lack of funding. The Kotzebue Area has, by far, the largest subsistence salmon fishery in Alaska lacking an annual harvest assessment program.

Several development projects related to mineral extraction may occur in the area: oil exploration in the Chukchi Sea, a road to the Ambler mining district that would link a remote region to the road system and likely lead to further mining development, and the extension of the road from Red Dog mine, among others. While little commercial exploitation of fish stocks currently occurs in the region, it is expected that interest in developing such fisheries will grow in coming decades as activity in and access to the Arctic increases. While chum are the predominant salmon species in the region, it is believed that more commercially valuable species such as sockeye, Chinook and coho will expand their ranges as the Arctic warms. In 2009, U.S. Secretary of Commerce Gary Locke approved a plan prohibiting the expansion of commercial fishing into federal arctic waters; however, this limitation is in place until "researchers gather sufficient information on fish and the Arctic marine environment to prevent adverse impacts of commercial harvesting or activity on the ecosystem." Among species identified in the plan as likely initial target species were Arctic cod, saffron cod and snow crab. Thus, state and federal fisheries regulatory bodies, including the Federal Subsistence Board, will require current and comprehensive data on the subsistence fisheries of this area in the near future.

The primary objective of this project is to gather *contextualized* harvest information in this region with an eye to future information needs. As time series data further accumulate, researchers may be able to detect an increasing trend in harvest of one species concurrent with a decline in another… but be unable to interpret the trends. It is hoped that traditional ecological and local knowledge can further inform and contextualize quantitative harvest data and information on factors affecting fishing during the study period.

Interested parties need updated harvest information both for established state and federal management processes and for planning and impact assessment efforts. Both the Seward Peninsula and Northwest Arctic Regional Advisory Councils have identified salmon and char fisheries as the most important fisheries in their areas and have expressed concerns about the effects of climate change on subsistence fisheries resources. Baseline harvest assessment and monitoring of subsistence fisheries and historic

trends and variability in harvest location, harvests and use of non-salmon fish have been identified as priority information needs for the Northern Region.

Objectives

1. Estimate annual harvest and use patterns of salmon, char, whitefish and other key non-salmon species of fish used by residents of the study communities in 2012, 2013, and 2014. Assess whether subsistence needs for these species are being met and impacts.
2. Systematically collect contextual information on what factors influence harvest and use of salmon, char, whitefish, and other key species in each study year.
3. Conduct network analysis of harvest, processing, and distribution networks of subsistence caught fish.
4. Document traditional and local knowledge about salmon, char, whitefish and other key subsistence species with particular attention to observed changes over time. Explore how various factors are affecting harvest methods, species targeted, the organization of fishing, fishing locations, preservation techniques, and harvest timing.
5. Compare data collected to historic and contemporary information; interpret changes and trends in the subsistence harvest and use of salmon, char, whitefish and other key species.

Methods

Three methods of data collection will be used in order to meet the objectives of this study: an adapted harvest survey, key respondent interviews, and participant-observation. Of an estimated 812 total households (based on 2010 federal census data), we estimate that about 650 (80%) will be surveyed each year (in January 2013, 2014, and 2015). Sixteen key respondent interviews will be conducted with knowledgeable subsistence fishers and processors identified in collaboration with Maniilaq and tribal councils. Investigators will make one trip to a community for the purpose of participant observation each year. Trips will be time to coincide with an important fish harvest period, i.e. seining for whitefish in the fall, jigging for Dolly Varden in the spring, or during salmon fishing in the summer.

Partnerships and Capacity Building

Consultation with Maniilaq, Inc. is ongoing. This will be a collaborative project between Alaska Department of Fish and Game, Maniilaq, Inc., and the tribal governments of the study communities. To continue capacity building at the community level, project partners will hire and train local residents to conduct surveys within their communities.

Justification

The goal of this project is to re-establish data collection for subsistence salmon and nonsalmon fisheries in the Northern region, namely in eight communities in the Kotzebue area (Kivalina, Noatak, Noorvik, Selawik, Kiana, Ambler, Shungnak, and Kobuk). Harvest surveys have not occurred for a number of years and increasing impacts to subsistence fisheries may be felt by subsistence users in coming years stemming from factors such as resource development or climate change. Regional Advisory Councils and the Monitoring Program have requested harvest data on salmon and nonsalmon fish. Additionally, the research will provide much needed socio-environmental and economic contexts for understanding changes including trends in harvests, uses, and distribution of subsistence resources. Given the importance of salmon and nonsalmon fisheries in this region, the lack of an annual harvest assessment

program, and the changing socio-environmental conditions, this study will be timely and valuable. The investigators demonstrate a clear understanding of the importance of collecting not just harvest numbers, but also broader data on subsistence harvests, uses, distributions, knowledge, and conditions. The investigators seek to broaden managers' understandings of change as well as the contexts within which and why they are occurring. This project would provide valuable information for managers and the Monitoring Program. The investigation plan addresses a priority information need in the 2012 Request for Proposals. The technical and scientific merit is high. The objectives are clearly stated. The investigators are qualified to conduct the proposed research and the partnership and capacity building component of the research is rated as high.

Project Number: 12-154
Project Title: Traditional Ecological Knowledge and Harvest Monitoring of an Emerging North Slope Salmon Fishery
Geographic Region: Northern Alaska
Information Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Brittany Retherford, Alaska Department of Fish and Game

Project Cost: **2012:** $48,493 **2013:** $42,325 **2014:** $44,835 **2015:** $30,609

Recommendation: Fund

Issue

This project will document subsistence salmon and non-salmon fishery traditional ecological knowledge and harvest trends in two North Slope communities: Point Lay and Wainwright. Salmon in particular have been emerging as an increasingly used and harvested resource in these villages, yet baseline ethnographic information is lacking. Interviews conducted by Alaska Department of Fish and Game researchers in 2009 and 2010 in Wainwright and Point Lay found that local fishers have traditionally harvested and used salmon species, though largely opportunistically at hunting camps and fish camps established for targeting non-salmon species. This research responds to a unique opportunity to document what appears to be an emerging fishery for salmon (primarily pink and chum, but some Chinook as well), while simultaneously collecting baseline ethnographic and harvest data about select non-salmon fish. The communities of Point Lay and Wainwright both have linkage Federal subsistence management, in both the National Petroleum Reserve and the Alaska National Maritime Refuge. This research addresses priority needs identified by the Monitoring Program in its 2012 Request for Proposals and by the North Slope Regional Advisory Council.

Objectives

1. For each community, document and catalogue traditional ecological knowledge of subsistence salmon and non-salmon fishing, including historic abundance and trends, gear types used, seasonality, and harvest location information for each species.
2. Continue to synthesize existing data related to subsistence fisheries in Point Lay and Wainwright, including existing reports, Regional Advisory Council minutes, and other archival sources.
3. Develop an annotated bibliography that explores studies and themes related to change and resilience in culture, including topics such as emergence in nature, access issues as a result of environmental change, and human resilience and adaptation to changing surrounding environment.
4. Develop and implement an exploratory harvest monitoring program for salmon and non-salmon fisheries. Collect data on species harvest quantities, seasonality of harvest, and gear types for three study years: 2012, 2013, and 2014.
5. Map general areas where subsistence salmon and non-salmon fisheries take place for each community, including local place names and historic harvest locations to help establish patterns and trends.
6. Create a set of species identification educational materials to distribute to community members during organized outreach events and harvest calendar collection trips.

Methods

This research project will be conducted following basic procedures and policies characteristic of Alaska Department of Fish and Game Division of Subsistence research. Division staff will consult with regional and local governments and organizations with interests in fish and wildlife management and subsistence uses following the principles of informed consent, conducting research in the Arctic, and the Alaska Department of Fish and Game and Alaska Boards of Fisheries and Game's tribal consultation policy.

A three-year project is proposed. There are three components that are designed to address both research questions. The first component of the project will be primarily focused on a literature review and original archival research. A second component will be focused on building community participation and data collection as part of the proposed three-year exploratory harvest monitoring program. This component also includes the synthesis and analysis of collected data. The third component of the project is collecting and cataloging traditional ecological knowledge. The results of all three components will be summarized in a comprehensive final report.

Partnerships/Capacity Building

The principal investigator will build on earlier research efforts to contribute capacity building in study communities through research partnerships with local tribal or village councils in the identified study communities and will seek to hire local project assistants or community partners to help select key respondents, assist the investigators in all aspects of fieldwork, and administer the harvest monitoring program. Investigators will also regularly consult with the North Slope Wildlife Department and the Inupiat Community of the Arctic Slope to explore possibilities for collaborative efforts. Meetings will also be held annually to update study communities on project status, as well as, solicit ongoing feedback. This is particularly important due to the exploratory nature of this project.

Justification

This project aims to document baseline ethnographic data regarding salmon and nonsalmon fisheries in two North Slope communities, Point Lay and Wainwright. Given that the project is exploratory research of an emerging fishery, it has significant potential. Partnership and capacity building is ranked medium, and there is linkage to Federal subsistence management. The overall framework, questions, and objectives, the research methods and researcher ability, combined with the need for this investigation into an emerging fishery lead to a recommendation to fund this project.

Project Number: 12-155
Project Title: Climate Change and Traditional Ecological Knowledge of Subsistence Whitefish and Cisco on the North Slope of Alaska
Geographic Region: Northern Alaska
Information Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: George Weekley, SWCA Environmental Consultants
Co-Investigator(s): Liam Frink, University of Nevada-Las Vegas
Celeste Giordano, University of Nevada-Las Vegas
Mike Pederson, North Slope Borough
Leyla Arsan, SWCA Environmental Consultants
Brian Brettschneider, SWCA Environmental Consultants

Project Cost: **2012:** $134,703 **2013:** $52,453

Recommendation: Fund

Issue

This study will gather traditional ecological knowledge (TEK) on subsistence uses of broad whitefish (*Coregonus nasus*) [Aanaakjiq], Arctic cisco (*Coregonus autumnalis*) [Qaaqtaq], and least cisco (*Coregonus sardinella*) [Iqalusaaq]. This study will document the possible impacts to these three species as a result of the effects of climate change as measured by the changes in harvesting location and timing, as well as preservation and processing of these resources. The study will take place in the communities of Atqasuq and Kaktovik.

Objectives

Changes in Harvest Locations and Timing over the Past 20 Years

1) Identify traditional subsistence harvest locations of cisco and whitefish for each community.
2) Document place names for traditional cisco and whitefish harvest locations for each community.
3) Document duration of use at various subsistence harvest locations for cisco and whitefish for each community.
4) Document timing of subsistence harvest for cisco and whitefish for each community.
5) Identify perceived potential reasons for changes (if any) to subsistence harvest locations for cisco and whitefish, including perceived changes to climatic conditions.
6) Identify perceived potential reasons for changes (if any) to timing of subsistence harvest of cisco and whitefish, including perceived changes to climatic conditions.
7) Map changes to community subsistence harvest locations using subsistence mapping techniques.

Changes in Fish Preservation Methods over the Past 20 Years

1) Identify past methods used to prepare and preserve cisco and whitefish and investigate whether climate change is perceived to have affected those preparation and preservation methods.
2) Identify current fish preparation and preservation methods used in response to any perceived climate change.
3) Document any observed signs of fish pathogens (e.g., flesh texture changes due to *Ichthyophonus* and other parasites*)* in harvested whitefish that may have affected fish preservation methods and/or indicate changes in pathogen prevalence.

Methods

Data for this study will be collected by a combination of conversational interview, participant observation, and subsistence mapping. Conversational interviews will typically begin with an opening question and then free-flow into additional questions based on the participant's responses. The interviewer will use a digital voice recorder to accurately capture participant interviews. As a back-up, the interviewer will take notes to clarify information in digital recordings and to document information from participants who do not want to be recorded.

Areas identified by study participants as historic and/or contemporary subsistence harvesting locations will be documented on paper maps through subsistence mapping techniques. The interviewer will use GIS-generated 11x17 inch aerial photography maps showing known topographical identification points. Participants will be asked to circle locations where harvesting of the target subsistence resources occurs and to identify specific species harvested at those locations. Maps showing subsistence harvest locations will then be digitized into a shapefile for GIS use. At the end of the analysis, SWCA Environmental Consultants will produce a report that outlines data gathered from the study and an interpretation of these data in the results. All data gathered that correspond to the goals and objectives will be summarized in the report in textual and/or graphic form.

Partnerships/Capacity Building

SWCA Environmental Consultants is teaming with the North Slope Borough Department of Wildlife Management and will be working with them to help improve their capacity for conducting research projects involving qualitative research methods.

The project would contribute to the North Slope Borough Department of Wildlife Management's identified mission and responsibilities as listed below:

- Document the continued importance of subsistence hunting, fishing, and trapping through maintaining accurate, area-specific harvest records
- Determine those geographic areas critical to subsistence-use animals.
- Define critical aspects of the biology of major subsistence-use animals, to support efforts directed toward local management of such species.
- Cooperate with the Alaska Department of Fish and Game, the U.S. Fish and Wildlife Service, and the U.S. National Marine Fisheries Service regarding the conduct of studies and evaluation of data for strong local input into management of subsistence-use resources.
- Work closely with the Borough's fish and game management committee in developing and implementing programs for subsistence-use animals. Since this committee has a representative from each village, it is a valuable means for assisting in the local coordination

of wildlife studies conducted by the borough and others and state and federal management programs.

The Borough's responsibilities for the project include the following:

- Securing local cooperation and support from the tribal governments,
- Identifying and setting up interview times with community residents,
- Assisting with language translations during qualitative interviews,
- Assisting in analyzing qualitative data from resident interviews,
- Collaboration between SWCA fisheries biologists and NSB fisheries biologists to determine possible physiological effects to whitefish and cisco that may result from climate change, and
- Assisting in report writing.

Justification

The project is focused solely on collecting qualitative ethnographic information about the harvests and associated uses, methods and means, and knowledge of subsistence fisheries in the Northern Region communities of Atqasuq and Kaktovik. This was a priority information need in the 2012 Request for Proposals that asked for "more comprehensive baseline and ethnographic data of salmon and nonsalmon fisheries in the region." The principal investigator has chosen to collaborate with researchers new to the Monitoring Program, who may provide interesting and valuable insight into the intersection of subsistence issues, health, and community well-being. Potentially significant data is being offered using a reasonable budget in a short time span. The ethnographic data collection will be tied to spatial data collection and mapping and may offer interesting insights into current and past whitefish and cisco subsistence fishing conditions in these four Northern Region communities.

YUKON REGION OVERVIEW

Issues and Information Needs

The 2012 Request for Proposals for the Yukon Region identified eight priorities:

- Reliable estimates of Chinook and chum salmon escapements (e.g., weir and sonar projects).
- Effects on salmon stocks (e.g., gillnet dropout mortality) and users of fishery management practices implemented to conserve Chinook salmon (e.g., gillnet mesh size, gillnet depth, and windowed openings).
- Methods for including "quality of escapement" measures (e.g., egg deposition, size composition, habitat utilization) in establishing Chinook salmon spawning goals and determining the reproductive potential of spawning escapements.
- Contemporary economic strategies and practices in the context of diminished salmon runs. Topics may include an evaluation of barter, sharing, and exchange of salmon for cash, as well as other economic strategies and practices that augment and support subsistence activities. Of particular interest are distribution networks, decision making, and the social and cultural aspects of salmon harvest and use.
- Description of changes through time in gillnet use (set versus drift, and by mesh size) for Chinook salmon subsistence harvest in the mainstem Yukon River, in context with harvest and escapement levels.
- Location and timing of Bering cisco spawning populations in the Yukon River drainage.
- Complete genetic baseline sampling and population marker development for sheefish spawning populations in the Yukon River drainage.
- Harvest, use, and associated contextual information for whitefish by species in lower Yukon River drainage communities

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 93 projects have been funded in the Yukon Region, and seven of these will still be operating in 2012 (Tables 1 and 2). Some of the projects continue previously funded work. Seventy-two of the projects have been directed at salmon, 20 projects have addressed resident fish species such as whitefish and northern pike, and one project has examined climate change impacts on fisheries. Of the seven ongoing projects, five address salmon, one focuses on non-salmon, and one examines climate change (Table 2).

Projects Forwarded for Investigation Plan Development

Fifteen Yukon Region proposals were initially submitted to the Office of Subsistence Management in response to the 2012 Request for Proposals. In March 2011, the Technical Review Committee reviewed these proposals and recommended nine for investigation plan development, including seven Stock Status and Trends projects and two Harvest Monitoring and Traditional Ecological Knowledge projects. One Stock Status and Trends and one Harvest Monitoring/Traditional Ecological Knowledge proposal were withdrawn by the investigators prior to submittal of an investigation plan. Investigators for the remaining seven projects responded to Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $783,000 is available for funding new projects in the Yukon Region.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the seven investigation plans, the Technical Review Committee recommended funding six projects (Table 5):

12-200	Alatna River Inconnu Population Structure	$	32,547
12-202	Abundance and Run Timing of Salmon in Henshaw Creek	$	136,990
12-204	Anvik River Sonar Project	$	93,366
12-205	Kaltag Chinook Salmon Sampling Project	$	4,000
12-207	Yukon River Bering Cisco Spawning Origins Telemetry	$	71,050
12-251	In-season Management Teleconferences and Harvest Interviews	$	24,866
	Total	$	362,819

The six projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each investigation plan recommended for funding in the Yukon region in 2012 is summarized below (see Executive Summaries for more details).

12-200 Alatna River Inconnu Population Structure. This one-year project would provide biological information on inconnu (often referred to as sheefish) harvested by subsistence fishermen in the Alatna River during September. Age, sex, length, and gonadosomatic index information would be obtained, and tissue samples would be collected for development of a genetic baseline. The Alatna River contains the only documented spawning habitat for inconnu in the Koyukuk River, and the stock utilizing this habitat is thought to be the second largest one in the Yukon River drainage. Development of genetic baselines and description of stock structure for whitefish stocks was a priority information need identified in the 2012 Request for Proposals as well as in the Whitefish Strategic Plan.

12-202 Abundance and Run Timing of Salmon in Henshaw Creek. This two-year project would allow continued operation of the Henshaw Creek weir, which provides run timing and escapement information for Chinook and summer chum salmon in a stream located in the upper Koyukuk River. Data collected at the Henshaw Creek weir has been used as an index for salmon populations in the upper Koyukuk River drainage, and these stocks support subsistence fisheries in the Koyukuk River and lower Yukon River drainage. Continuation of this work is supported by Tribal, State and Federal stakeholders. Information obtained from this project has been used to evaluate escapements; estimate the age, sex, and length composition; and determine run timing of Chinook and summer chum salmon entering Henshaw Creek. While this project would address a priority information need identified in the 2012 Request for Proposals, collected information primarily supports the management of commercial fisheries directed at summer chum salmon.

12-204 Anvik River Sonar Project. This two-year project would allow continued operation of Anvik River sonar, which provides information used to assess run strength and monitor escapement of the summer chum salmon run. The Anvik River is one of the top producers of summer chum salmon in the Yukon River and currently represents about one third of total production. While information from the project primarily supports management of commercial fisheries directed at summer chum salmon, approximately 70% of the total subsistence harvest of summer chum salmon occurs below the Anvik River. The Alaska Department of Fish and Game has operated this project since 1979, but lost dedicated State funding for its continued operation in 2004. The Monitoring Program has provided 50% of the funding needed to operate the project since that time. This project would address a priority information need identified in the 2012 Request for Proposals.

12-205 Kaltag Chinook Salmon Sampling Project. This four-year project would continue biological sampling of subsistence caught Chinook salmon downstream from Kaltag in Subdistrict 4A. Collected information has been used to supplement age, sex, and length information collected from the Chinook salmon subsistence fishery in the middle Yukon River. The project has allowed direct involvement of a local community in the collection of fisheries data from the subsistence harvest, and requires two local technicians to data and collect scale samples. The Monitoring Program has funded this work since 2001. Although the project would not address priority information need identified in the 2012 Request for Proposals, the information collected would continue to be of use in evaluating Chinook salmon subsistence harvests.

12-207 Yukon River Bering Cisco Spawning Origins Telemetry. This three-year project would use radio telemetry to document the spawning locations and timing of Bering cisco in the Yukon River drainage. Bering cisco is an important component of Yukon River subsistence fisheries, but spawning in the entire Yukon drainage may be limited to only a few areas in the main stem of the river. It is likely that one of these is located in the Yukon Flats National Wildlife Refuge. The identification and characterization of spawning areas is essential for conservation and management of this species, and was a priority information need identified in the 2012 Request for Proposals as well as in the Whitefish Research Strategic Plan.

12-251 In-season Management Teleconferences and Harvest Interviews. This four-year project would allow continuation of weekly in-season teleconferences between managers of and fishers for Chinook, chum, and coho salmon stocks spawning in the Yukon River. These teleconferences between fishers and managers in Alaska and Canada, facilitated by the Yukon River Drainage Fisheries Association, have been funded through the Monitoring Program since 2000. The project would also provide for the collection of qualitative information on Chinook salmon harvests from ten Alaskan villages (Marshall, Russian Mission, Holy Cross, Kaltag, Nulato, Huslia, Galena, Nenana, Fort Yukon, Eagle), which would be reported during teleconferences. Although the project would not address priority information need identified in the 2012 Request for Proposals, in-season teleconferences have become an important part of the management process and provide a vital outreach and communication tool for managers and fishers throughout the Yukon drainage.

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in the Yukon since 2000. Abbreviations used for investigators are: AC=Alaskan Connections, ADFG=Alaska Department of Fish and Game, AVCP=Association of Village Council Presidents, AV= Arctic Village, BF=Bill Fliris, BLM=Bureau of Land Management, BSFA=Bering Sea Fisherman's Association, CATG=Council of Athabascan Tribal Governments, COK=City of Kaltag, DFO=Department of Fisheries and Oceans, EMV= Emmonak Village Council, NPS=National Park Service, LTC=Louden Tribal Council, NVE=Native Village of Eagle, NVHB= Native Village of Hooper Bay, NVV=Native Village of Venetie, RN=Research North, RW=Robert Wolfe and Associations, SVNRC= Stevens Village, SZ=Stan Zuray, TCC=Tanana Chiefs Conference, TTC=Tanana Tribal Council, UAF=University of Alaska Fairbanks, USFWS=U.S. Fish and Wildlife Service, USGS=U.S. Geological Survey, UW=University of Washington, and YRDFA=Yukon River Drainage Fisheries Association.

Project Number	Project Title	Investigators
	Yukon River Salmon Projects	
00-003	Effects of *Ichthyophonus* on Chinook Salmon	UW
00-005	Tanana Upper Kantishna River Fish Wheel	NPS
00-018	Pilot Station Sonar Upgrade	ADFG
00-022	Hooper Bay Test Fishing	ADFG, NVHB
00-024	Pilot Station Sonar Technician Support	AVCP
00-025	Henshaw Creek Salmon Weir	USFWS
00-026	Circle and Eagle Salmon and Other Fish TEK	NVE
01-014	Yukon River Salmon Management Teleconferences	YRDFA
01-015	Yukon River Salmon TEK	YRDFA
01-018	Pilot Station Sonar Technician Support	AVCP
01-026	East Fork Andreafski River Salmon Weir	BSFA
01-029	Nulato River Salmon Weir	BSFA
01-032	Rampart Rapids Tagging Study	USFWS
01-038	Kateel River Salmon Weir	USFWS
01-048	Innoko River Drainage Weir Survey	USFWS
01-050	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
01-058	East Fork Andreafsky Weir Panel Replacement	USFWS
01-122	Lower Yukon River Salmon Drift Test Fishing	ADFG, EMV
01-177	Rampart Rapids Extension	USFWS
01-197	Rampart Rapids Summer CPUE Video	SZ
01-199	Tanana Fisheries Conservation Outreach	TTC
01-200	Effects of *Ichthyophonus* on Chinook Salmon	USGS
01-211	Upper Yukon, Porcupine, & Black River Salmon TEK	CATG
02-009	Pilot Station Sonar Technician Support	AVCP
02-011	Rampart Rapids Fall Chum Handling/mortality	USFWS
02-097	Kuskokwim & Yukon Rivers Sex-ratios of Juvenile & Adult Chinook	USFWS
02-121	Yukon River Chinook Salmon Genetics	USFWS, ADFG, DFO
02-122	Yukon River Chinook & Chum Salmon In-season Subsistence	USFWS
03-009	Tozitna River Salmon Weir	BLM
03-013	Gisasa River Salmon Weir	USFWS
03-015	Phenotypic Characterization of Chinook Salmon Subsistence Harvests	YRDFA, USFWS
03-034	East Fork Andreafsky River Salmon Weir	USFWS
03-038	Yukon River Sub-district 5-A Test Fishwheel	BF
04-206	Tozitna River Salmon Weir	BLM
04-208	East Fork Andreafsky River Salmon Weir	USFWS
04-209	Gisasa River Salmon Weir	USFWS
04-211	Henshaw Creek Salmon Weir	USFWS

Table 1. continued.

Project Number		Project Title	Investigators
		Yukon River Salmon Projects (continued)	
04-217		Rampart Rapids Fall Chum Salmon Abundance	USFWS
04-228		Yukon River Chum Salmon Genetic Stock Identification	USFWS
04-229		Lower Yukon River Salmon Drift Test Fishing	ADFG
04-231		Yukon River Chinook Salmon Telemetry	ADFG
04-234		Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
04-251		Fort Yukon Traditional Ecological Knowledge Camp	TCC,CATG, ADFG
04-255	[a]	Yukon River Salmon Fishery Traditional Ecological Knowledge	NPS
04-256		Tanana Conservation Outreach	TTC, USFWS
04-263		Yukon River Salmon Management Teleconferences	YRDFA
04-265		Yukon River TEK of Customary Trade of Subsistence Fish	YRDFA
04-268		Hooper Bay Subsistence Monitoring	ADFG, HBTC
05-203		Yukon River Coho Salmon Genetics	USFWS
05-208		Anvik River Salmon Sonar Enumeration	ADFG
05-210		Tanana River Fall Chum Salmon Abundance	ADFG
05-211		Henshaw Creek Salmon Weir	TCC, USFWS
05-254		Yukon River Salmon Inseason Subsistence Harvest Monitoring	USFWS
06-205		Yukon River Chum Salmon Mixed Stock Analysis	USFWS
07-202		East Fork Andreafsky River Salmon Weir	USFWS
07-204		Lower Yukon River Salmon Drift Test Fishing	ADFG
07-207		Gisasa River Salmon Weir	USFWS
07-208		Tozitna River Salmon Weir	BLM
07-209		Yukon River Salmon Management Teleconferences	YRDFA
07-210		Validation of DNA Gender Test Chinook Salmon	USFWS
07-211		Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
07-253		Yukon River Salmon Harvest Patterns	RWA, AC
08-200	[a]	Kaltag Chinook Salmon Age-Sex-Length Sampling	COK
08-201	[a]	Henshaw Creek Salmon Weir	TCC
08-202	[a]	Anvik River Chum Salmon Sonar Enumeration	ADFG
08-253	[a]	Yukon River Teleconferences and Inseason Management	YRDFA
10-206		Nulato River Salmon Assessment	TCC
		Yukon River Non-Salmon Projects	
00-004		Humpback Whitefish/Beaver Interactions	USFWS, CATG
00-006		Traditional Ecological Knowledge Beaver/Whitefish Interactions	ADFG, CATG
00-021		Dall River Northern Pike	ADFG, SV
00-023		Upper Tanana River Humpback Whitefish	USFWS
01-003		Old John Lake TEK of Subsistence Harvests and Fish	ADFG, AV, USFWS
01-011		Arctic Village Freshwater Fish Subsistence Survey	ADFG, AV, USFWS
01-100		Koyukuk Non-salmon Fish TEK and Subsistence Uses	ADFG, TCC
01-140		Yukon Flats Northern Pike	ADFG, SV
01-238		GASH Working Group	USFWS
02-006		Arctic Village Freshwater Fish Subsistence	ADFG, NVV
02-037		Lower Yukon River Non-salmon Harvest Monitoring	ADFG, TCC
02-084		Old John Lake Oral History and TEK of Subsistence	USFWS, AV, ADFG
04-253		Upper Tanana Subsistence Fisheries Traditional Ecological Knowledge	USFWS,UAF, ADFG
04-269		Kanuti NWR Whitefish TEK and Radio Telemetry	USFWS, RN

Table 1. continued.

Project Number		Project Title	Investigators
		Yukon River Non-Salmon Projects	
06-252		Yukon Flats Non-salmon Traditional Ecological Knowledge	ADFG, BLM, USFWS, CATG
06-253		Middle Yukon River Non-salmon TEK and Harvest	ADFG, LTC
07-206	[a]	Innoko River Inconnu Radio Telemetry	USFWS, ADFG
08-206		Yukon and Kuskokwim Coregonid Strategic Plan	USFWS, ADFG
08-250		Use of Subsistence Fish to Feed Sled Dogs	RN, AC

[a] Final Report in preparation.

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in the Yukon Region. Abbreviations used for investigators are: BC=Bue Consulting, RN=Research North, USFWS=U.S.Fish Wildlife Service, and YRDFA=Yukon River Drainage Fisheries Association.

Project Number	Data Project Title	Investigators	Budget 2012	Budget 2013
	Yukon River Salmon			
10-200	Yukon River Chinook Salmon Run Reconstruction	BC	$6.9	$0.0
10-201	Yukon River Chinook Salmon ASL Data	YRDFA	$16.7	$16.8
10-202	East Fork Andreafsky River Salmon Assessment	USFWS	$156.1	$149.6
10-205	Yukon River Chum Salmon Mixed-Stock Analysis	USFWS	$124.8	$124.8
10-207	Gisasa River Chinook and Summer Chum Salmon Assessment	USFWS	$135.1	$141.9
	Yukon River Non-Salmon			
10-209	Yukon Delta Bering Cisco Mixed-Stock Analysis	USFWS	$22.2	$13.9
	Harvest Monitoring and Traditional Ecological Knowledge			
10-250	Yukon Climate Change Impacts on Subsistence Fisheries	RN	$31.9	$0.0
	Total Yukon Monitoring Program		$493.7	$447.0

Table 3. Yukon project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-200	Alatna River Inconnu Population Structure	$32.5			
12-202	Henshaw Creek Salmon Weir	$137.0			
12-203	Chinook Salmon Untrasound Evaluation of Reproductive Biology	$50.8			$80.5
12-204	Avnik River Sonar		$93.4		
12-205	Kaltag Chinook Salmon Sampling				$4.0
12-207	Yukon river Bering Cisco Spawning Origins Telemetry Investigation			$66.1	$5.0
	Harvest Monitoring and Traditional Ecological Knowledge Projects				
12-251	Inseason Salmon Harvest Teleconferences				$24.9

Table 4. Yukon local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG= Alaska Department of FIsh and Game, COK=City of Kaltag, TCC=Tanana Chiefs Conference, USFWS=U.S. Fish and Wildlife Servce, and YRDFA=Yukon River Drainage Fisheries Association.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends Projects		
12-200	TCC	Alatna River Inconnu Population Structure	$0.0	$11.0
12-202	TCC	Henshaw Creek Salmon Weir	$0.0	$6.8
12-203	TCC	Chinook Salmon Untrasound Evaluation of Reproductoin Biology	$0.0	$0.0
12-204	ADFG	Avnik River Sonar	$0.0	$100.7
12-205	COK	Kaltag Chinook Salmon Sampling	$2.3	$1.5
12-207	USFWS	Yukon river Bering Cisco Spawning Origins Telemetry Investigation	$0.0	$148.0
		Harvest Monitoring and Traditional Ecological Knowledge Projects		
12-251	YRDFA	Inseason Salmon Harvest Teleconferences	$6.2	$0.0

Table 5. Funding recommendations by the Technical Review Committee (TRC) for the Yukon 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends Projects					
12-200	Alatna River Inconnu Population Structure	Yes	$32.5	$0.0	$0.0	$0.0
12-202	Henshaw Creek Salmon Weir	Yes	$137.0	$131.4	$0.0	$0.0
12-203	Chinook Salmon Untrasound Evaluation of Reproductoin Biology	No	$131.3	$133.6	$77.1	$0.0
12-204	Avnik River Sonar	Yes	$93.4	$97.0	$0.0	$0.0
12-205	Kaltag Chinook Salmon Sampling	Yes	$4.0	$4.0	$4.0	$4.0
12-207	Yukon river Bering Cisco Spawning Origins Telemetry Investigation	Yes	$71.1	$77.6	$10.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge Projects					
12-251	Inseason Salmon Harvest Teleconferences	Yes	$24.9	$72.5	$72.9	$54.7
	Total		$494.2	$516.1	$164.0	$58.7
	Funding Guideline		$783.0			
	TRC Rcommendation		$362.9	$382.5	$86.9	$58.7

Project Number: 12-200
Project Title: Alatna River Inconnu Population Structure
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: Aaron Dupuis, Tanana Chiefs Conference
Co-Investigator(s): Randy Brown, U.S. Fish and Wildlife Service
Jeffrey Olsen, U.S. Fish and Wildlife Service

Project Cost:* **2012:** $32,547

*Tanana Chiefs Conference has applied for continuation of the Office of Subsistence Management's Partner in Fisheries Program to fund a fishery biologist through 2015. Should Tanana Chiefs Conference receive this award, the salary of the fishery biologist (plus 33.2% indirect) requested in this proposal will be returned to the Office of Subsistence Management.

Recommendation: Fund

Issue

Five species of whitefish are present in the Koyukuk River drainage and are routinely harvested in local subsistence fisheries. Local residents rely heavily on whitefish which are taken in currently unmonitored fisheries. Inconnu *Stenodus leucichthys*, a large, long-lived, piscivorous whitefish, represent an important component of this subsistence harvest. The Alatna River is the only documented spawning tributary for inconnu in the Koyukuk River drainage and has been identified as the second largest spawning stock for inconnu in the Yukon River system. Despite the obvious importance of the Alatna River spawning population, there is currently no biological information available describing the age, sex, and length structure, and there have been no genetic collections for baseline development. Development of genetic baselines from known spawning stocks and the collection of stock and sex specific age and length data were cited as high priorities for inconnu throughout Alaska. Genetic baseline samples have been collected from the Yukon Flats and Sulukna River populations and samples from the Alatna River will be extremely useful in the future determination of stock compositions of inconnu taken in mixed-stock subsistence fisheries in the Yukon River drainage. Information describing the maturity of whitefishes is also important when describing the demography of a population. The gonadosomatic index can be used to assess the maturity of whitefishes. In addition, sex-specific age and length data can be used to monitor responses to changes in future management decisions and harvest activities. Given the importance of the Alatna River spawning stock to local subsistence fisheries and its contribution to the Yukon River system, it is appropriate to support this tissue and data collection activity.

Objectives

1. Collect 200 tissue samples from inconnu spawning in the Alatna River for population specific genetics baseline development.
2. Describe the demographic composition (age, sex, length, gonadosomatic index) of the Alatna River inconnu population.

Methods

Inconnu will be captured in cooperation with subsistence fishers from the local community of Alatna. Fish sampling will occur when subsistence fishers target fishing efforts near the putative spawning area in the

Alatna River in the month of September. In order to sample fish over the entire run in the Alatna River, weekly sampling trips will be made during the month of September. Each week will be treated as separate strata for subsequent analyses. During each trip, 50 fish will be randomly sampled, for a total sample size of 200 inconnu. This sample size is consistent with similar studies describing the demographic composition of whitefishes in Alaska.

To address objective 1, a small piece of the pelvic fin will be removed from each fish, placed in a labeled genetic sample vial, and preserved in ethanol for genetic analyses. To address **objective 2**, all captured fish will be individually numbered, measured (fork length to the nearest 1 mm), weighed (wet weight to the nearest 1 g), sexed (by gross examination), and otoliths will be removed for aging. Removed otoliths will be placed in a labeled centrifuge tube. Female fish will have their ovaries removed and each ovary will be weighed separately. The gonadosomatic index (GSI) for female fish will be determined as: GSI = (total ovary weight/wet weight) x 100.

The U.S. Fish and Wildlife Service, Genetics Laboratory will archive the genetic samples with those from the Yukon Flats and Sulukna River populations until they are ready to proceed with baseline development and analysis (J. Olson, U.S. Fish and Wildlife Service, personal communication). All otoliths will be returned to the U. S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office for age analysis (R. Brown, U.S. Fish and Wildlife Service, personal communication).

All genetic analyses will be the responsibility of the U. S. Fish and Wildlife Service, Genetics Laboratory. Age determination will be completed by U. S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office personnel. To describe the demographics of the Alatna River inconnu population ordinary least squares regression will be used to describe the relationships between age, length, weight, and GSI. Logarithmic transformations of data will be used if variances need to be stabilized. A paired t-test will be used to compare the length and weight for male and female inconnu. A Kruskal-Wallis one-way analysis of variance will be used to determine if significant differences in length and weight exist among the sampling strata (weeks). If differences are found, a Dunn's multiple comparisons test will be used to identify when differences occurred.

Partnerships and Capacity Building

This project represents collaboration among Tanana Chiefs Conference, U. S. Fish and Wildlife Service's Fairbanks Fish and Wildlife Field Office, U. S. Fish and Wildlife Service's Genetics Lab, and local subsistence fishers from Allakaket. The principal investigator will hire local fishers to coordinate sampling with subsistence fishing of inconnu on the Alatna River. This project will serve to build capacity among the residents of Allakaket by giving them a role in the future management and conservation of this resource. Additionally, this project will build the capacity of the Tanana Chiefs Conference fisheries program by involving the Office of Subsistence Management's Partners Program fishery biologist, and by strengthening professional relationships with the U. S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office and the subsistence fishers from Allakaket.

Justification

The proposed work addresses a priority information need supporting monitoring and management of Federal subsistence fisheries resources. The study outline is achievable and investigators are fully capable of successfully completing the work. The project would build capacity in a regional Tribal organization for conducting meaningful fisheries research supporting Federal subsistence management.

Project Number: 12-202
Project Title: Abundance and Run Timing of Adult Salmon in Henshaw Creek, Alaska
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: Aaron Dupuis, Tanana Chiefs Conference
Co-Investigator(s): Aaron Martin, U.S. Fish and Wildlife Service

Project Cost:* **2012:** $136,990 **2013:** $131,369

*Tanana Chiefs Conference has applied for continuation of the Office of Subsistence Management's Partners in Fisheries Program to fund a fishery biologist and a fishery intern through 2015. Should Tanana Chiefs Conference receive this award, the salary of the fishery biologist and the fishery technician crew leader (plus 33.2% indirect) requested in this proposal will be returned to the Office of Subsistence Management. The savings to this project would be substantial, totaling $115,450 over the two year period which would reduce the total cost of the project to $152,909. Expected notice of the availability of these funds will be in fall 2011.

Recommendation: Fund

Issue

Management of the Koyukuk River salmon fishery is complex. This is due, in part, to a limited number of salmon escapement studies within the system and the mixed stock nature of the Yukon River salmon fishery. The Alaska Department of Fish and Game, Division of Commercial Fisheries has conducted aerial surveys within the Koyukuk River drainage since 1960, but the usefulness and reliability of that information is limited. Both Chinook salmon *Oncorhyncus tshawytscha* and chum salmon *O. keta* from Henshaw Creek contribute to the harvests occurring in the Koyukuk and Yukon rivers, and the information collected at Henshaw Creek is vital to the difficult task of managing the complex mixed-stock subsistence and commercial salmon fisheries in the Yukon River. In-season management and post-season evaluations of management actions are enhanced by the data from this project as well. Further, the Henshaw Creek weir is the only Upper Koyukuk River drainage salmon escapement monitoring project and its information can facilitate comparisons with lower drainage escapement projects. Furthermore, in recent years subsistence and commercial harvesters have identified a concern with the apparent decrease in the size of Chinook salmon in the Yukon River. The continuation of reliable escapement estimates and the collection of age, sex, and length (ASL) data at Henshaw Creek will assist in future analyses of trends in Chinook salmon and summer chum salmon run timing, escapements, gender composition, and size and age structure over time. In addition, this project aids the Kanuti National Wildlife Refuge in meeting objectives outlined in the 1993 Kanuti National Wildlife Refuge Fishery Management Plan, and addresses the priority information needs outlined for Yukon Region salmon by providing reliable estimates of Chinook and chum salmon escapements. With Tanana Chiefs Conference as the primary investigator and through the hire of local residents, this project will help to facilitate capacity building within Tanana Chiefs Conference and will give local communities a continued role in the management of this resource.

Objectives

1. Determine daily escapement and run timing of adult salmon
2. Determine age, sex and length (ASL) composition of adult salmon
3. Determine the number of resident fish passing the weir

4. Serve as an outreach platform for Kanuti National Wildlife Refuge staff and Tanana Chiefs Conference Partners Program fisheries biologist to conduct an onsite science camp

Methods

The Henshaw Creek weir project will provide involvement, education, and employment opportunities within local communities, as well as provide Federal and state managers with necessary information. The first component of this project will be to record abundance and run timing of Chinook and summer chum salmon returning to Henshaw Creek using a resistance board weir. The weir will be operational from approximately the last week of June until the middle of August. The second component will be to collect biological data from adult salmon migrating through the weir. A fish trap will be used to collect and sample salmon for ASL information, and also to document the movement and presence of resident fishes. Data will be collected using established sampling protocols. Daily escapement counts will be provided to Federal and state managers for in-season management needs. All data will be sent to the PI to collaborate with the co-investigator in organizing, editing, and ensuring data quality. The principal investigator will forward pertinent data to the proper laboratory for analysis. Biological samples will be prepared, processed, compiled, analyzed, and summarized by Alaska Department of Fish and Game laboratories. ASL data will be handled by the Stock Biology Laboratory (Anchorage). Any Chinook and chum genetic samples will be sent to Alaska Department of Fish and Game and U.S. Fish and Wildlife Service laboratories, respectively. The third component will be to serve as a platform for a one week science camp conducted in cooperation with Kanuti National Wildlife Refuge staff and local community members and funded by a Challenge Cost Share grant through the refuge.

Partnerships and Capacity Building

The Henshaw Creek weir project represents collaboration among the Tanana Chiefs Conference, the U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office, the Kanuti National Wildlife Refuge, and the local communities of the Koyukuk River drainage. This project has consulted with the U.S. Fish and Wildlife Service, Fairbanks Fish and Wildlife Field Office to provide logistical support for field operations, training of field technicians, and support with post-season data analyses and report writing. Consultations have been made with Kanuti National Wildlife Refuge in providing the project with overwintering storage facilities for gear and annually being a participant in a science camp hosted at Henshaw Creek weir through a Challenge Cost Share Grant. Additionally, Larry DuBois, Alaska Department of Fish and Game AYK Stock Biologist provided input and will continue to support this project through in-kind support by analyzing ASL data. Tanana Chiefs Conference will continue to work with Kanuti National Wildlife Refuge staff, the Western Regional Advisory Council, Allakaket, Alatna, Hughes, and Evansville traditional councils to recruit local residents.

Justification

The Henshaw Creek weir provides run timing and escapement information for Chinook and summer chum salmon in a stream located in the upper Koyukuk River. Data collected at the Henshaw Creek weir is used as an index for salmon populations in the upper Koyukuk River drainage; these stocks support subsistence fisheries in the Koyukuk River and lower Yukon River drainage. Project objectives are clear and have been achieved. The capacity building portion of this study is excellent, with Tanana Chiefs Conference assuming more responsibility for the Henshaw Creek weir. Support has been voiced by Tribal, State and Federal stakeholders. The continuation of reliable escapement estimates and the collection of age-sex-length data at Henshaw Creek will enable future analyses of trends in Chinook and summer chum salmon run timing, escapements, gender composition, and size and age structure over time. Funding beyond 2013 could be considered in response to the 2014 Request for Proposals; but given competing

priorities and budget limitations, investigators should begin seeking other funding sources. The overall long term priority of this project to address Federal subsistence management issues may not be sufficient to justify longer term support.

Project Number: 12-203
Project Title: Ultrasound Evaluation of the Reproductive Biology of Chinook Salmon
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: Aaron Dupuis, Tanana Chiefs Conference
Co-Investigator(s): Dr. Trent Sutton, University of Alaska Fairbanks
Dr. Andrew Seitz, University of Alaska Fairbanks

Project Cost:* **2012:** $131,296 **2013:** $133,602 **2014:** 77,111

*Tanana Chiefs Conference has applied for continuation of the Office of Subsistence Management's Partners in Fisheries Program to fund a fishery biologist through 2015. Should Tanana Chiefs Conference receive this award, the salary of the fishery biologist (plus 33.2% indirect) requested in this proposal would be returned to Office of Subsistence Management.

Recommendation: Do Not Fund

Issue

In 2000, the Alaska Board of Fisheries classified Yukon River Chinook salmon *Oncorhynchus tshawytscha* as a stock of yield concern in response to poor returns and low harvests. The management of this resource is complex and utilizes information from several escapement monitoring projects located throughout the drainage which collect data on abundance, and age, sex, and length (ASL) composition from returning Chinook salmon to develop management strategies. Data describing the reproductive capacity of a spawning stock are also important when considering management strategies, but can be difficult to obtain and incorporate into monitoring programs. Fecundity influences the reproductive capacity of spawning stocks (i.e., egg deposition), and can have significant spatial, temporal, and intra-population variation. Because the fecundity of female fish is related to size, a decline in mean length or weight could also result in declining reproductive capacity for spawning stocks. To estimate the reproductive capacity of a spawning stock, information on abundance, ASL, and the fecundity-size relationship is needed. Traditional methods for estimating fecundity require that fish be sacrificed; however, ultrasound technology has been shown to be an effective non-lethal method for sexing Chinook salmon and has been used to estimate fecundity, gonad volume, and egg size in other fish species. Additionally, this project will also be able to evaluate the use of ultrasound for sex determination of Chinook salmon, which will be important in lower Yukon River monitoring projects. The goal of this project is to develop the use of ultrasound as a viable method for determining the fecundity and sex of Chinook salmon in the Yukon River drainage. The proposed project would develop readily-transferable methods for the use of ultrasound technology to estimate reproductive biology parameters in Chinook salmon; therefore, it would be possible to begin incorporating fecundity monitoring into escapement monitoring projects and to accurately determine sex in lower river test fisheries. This would allow managers to make informed in-season management decisions and post-season evaluations, as well as aid in the development of conservation and harvest strategies.

Objectives

1. Evaluate the use of ultrasound technology as a non-lethal method for determining the sex of Chinook salmon in the Yukon River drainage;

2. Evaluate the use of ultrasound technology as a non-lethal method for determining the fecundity of female Chinook salmon in the Yukon River drainage.

Methods

Female Chinook salmon will be collected in cooperation with locally hired subsistence fishers from Pilot Station, Holy Cross, Koyukuk, Nenana, and Eagle, Alaska. To determine the sex of Chinook salmon, at least 60 fish (30 female fish must be identified) will be randomly selected from the subsistence catch from each sampling location in each year. To determine the fecundity of Chinook salmon, of the fish identified as female, 30 will be randomly selected at each sampling location each year. These sample sizes are consistent with similar studies conducted to evaluate estimations of sex and fecundity using ultrasound technology. All captured fish will be measured (mid-eye to fork length) to the nearest 1 mm and weighed to the nearest 1 g, and scales will be removed for aging. Scales will be aged in the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences aging laboratory.

A NanoMaxx portable ultrasound device with an L38n transducer (SonoSite; Bothell, WA) will be used to identify sex and estimate three ovarian characteristics: fecundity, egg diameter, and gonad volume. For sex determination, fish will be scanned and the resulting image will be used to estimate sex. For fecundity estimation, female fish will be scanned to identify the posterior and anterior points of the ovary; a transverse cross section of the ovary will then be captured using the ultrasound at three equidistant points along the gonad. Ultrasound images will be analyzed using image analysis software. Diameters of clearly defined eggs will be measured from each cross-sectional image, and a random sub-sample of egg diameters will be taken from each cross-section. Total gonad volume will be estimated by incorporating the cross-sectional images and length measurements into a cylindrical shape that is representative of the ovaries. Fecundity will be estimated for individual females by dividing mean egg volume (derived from egg diameter) by total ovary volume. This project will require a validation of the ultrasound estimates by also estimating fecundity, egg diameter, and gonad volume using standard methods to allow for a direct comparison of estimates between the ultrasound and standard methods.

Partnerships and Capacity Building

This project represents collaboration among Tanana Chiefs Conference; University of Alaska Fairbanks, School of Fisheries and Ocean Sciences; Alaska Department of Fish and Game, Division of Commercial Fisheries; and subsistence fishers of the Yukon River. Project personnel will work with Tanana Chiefs Conference, the Western and Eastern Regional Advisory Councils, and local traditional councils to identify subsistence fishers who would be willing to provide the samples necessary to satisfy the project objectives. This project will provide an opportunity for interns hired through the Partner's in Fisheries Program at Tanana Chiefs Conference (if funded) to be exposed to different types of research and to learn about the educational opportunities in fisheries available at the University of Alaska. This project will provide opportunities for local communities to participate in the management of fishery resources, and will help to build the capacity of the Tanana Chiefs Conference fisheries program by developing a professional relationship with the University of Alaska Fairbanks, School of Fisheries and Ocean Sciences and with Alaska Department of Fish and Game, Division of Commercial Fisheries.

Justification

The Technical Review Committee proposal review specifically requested that the investigation plan be focused on sex determination at a substantially reduced cost rather than fecundity measurements. Fecundity measurements were viewed as a low priority since existing projects already include routine measurement of Chinook salmon size (length and/or girth), which is a good indicator of fecundity. While

the investigation plan addressed sex determination as an objective and included sampling at the lower river test net project, the investigators chose to include measurement of fecundity with ultrasound as a primary objective and increased the level of funding. The Technical Review Committee considered the investigators' arguments concerning the need to further examine fecundity, but unanimously determined that the cost of the project given the limited utility of results could not be justified. Concept feasibility could be tested with hatchery fish for a fraction of the cost. In addition, some Technical Review Committee members felt that the project cost might be more reasonable if a feasibility study was combined with an actual application of the methods for selected spawning stocks.

Project Number: 12-204
Project Title: Anvik River Sonar Project
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: Carl T. Pfisterer, Alaska Department of Fish and Game
Co-Investigator(s): Malcolm McEwen, Alaska Department of Fish and Game

Project Cost: **2012:** $93,366 **2013:** $97,043

Recommendation: Fund

Issue

The Anvik River contributes to the subsistence chum salmon fishery in the lower Yukon River, which is part of the Yukon Delta National Wildlife Refuge. The subsistence summer chum fishery occurs in the Yukon Delta National Wildlife Refuge from approximately June 10 through July 15. The Anvik River sonar project is a continuing project that directly addresses the identified Yukon Region priority need "reliable estimates of Chinook and chum salmon escapements (e.g., weir and sonar projects)".

The Anvik River sonar project has provided reliable estimates of chum salmon escapement to the Anvik River since 1979 and is one of only two projects in the Yukon River drainage with an established Biological Escapement Goal for summer chum salmon. A Biological Escapement Goal is the escapement that provides the greatest potential for maximum sustained yield and is the primary management objective for escapement. The Anvik River sonar project's longevity and history of being one of the largest producers of summer chum salmon in the Yukon River drainage combine to make this one of the most important projects for escapement monitoring and management of chum salmon in the Yukon Region. Daily estimates of chum salmon passage are provided to Federal and State fishery managers daily for consideration in management actions that can directly affect subsistence harvest in the Yukon Delta National Wildlife Refuge and the rest of the Yukon River drainage.

Objectives

1. Estimate chum salmon fish abundance in the Anvik River using DIDSON sonar from approximately June 16 through July 26.
2. Collect between 162–210 chum salmon samples during each of 3 to 4 stratum throughout the season to estimate the age, sex, and length (ASL) composition of the Anvik River chum salmon passage, such that simultaneous 95% confidence intervals of age composition in each sample are no wider than 0.20 ($\alpha = 0.05$ and $d = 0.10$).
3. Monitor selected climatic and hydrological parameters daily at the project site for use as baseline data.

Methods

The Anvik River sonar project will be operated from its customary location approximately 76 km upstream of the confluence of the Anvik and Yukon Rivers, 5 km below Theodore Creek (Figure 2) in Sections 34 and 35, Township 31 North, Range 61 West, Seward Meridian, at latitude/longitude 62° 44.208" N 160° 40.724" W.

Dual Frequency Identification Sonar (DIDSON) will be used to count salmon migrating past the site. The DIDSON sonar is a state-of-the-art imaging sonar that produces video like images making it easy to identify fish, the direction of travel, and even limited ability to estimate size. Sonar will be deployed on each bank of the Anvik River and data will be collected 30 minutes of each hour, 24-hours per day, and seven days a week for the duration of the study. This will provide a total of 12 hours of data per day per bank. Counts will be expanded for the fraction of the day sampled to estimate daily passage. The only fish species present in large numbers during the chum salmon run is pink salmon. When pink salmon are present a tower will be used to estimate the relative proportion of chum and pink salmon. These proportions will be used to apportion the sonar counts to species.

Region wide standards have been set for the sample size needed to describe age composition of a salmon population. These would apply to the time period or stratum in which the sample is collected. Sample size goals are based on accuracy (d) and precision (a) objectives of d = 0.10 and a = 0.05 for a rejection rate of 10%. Sample sizes will be based on obtaining 162 summer chum salmon for each of the following time strata: June 17–30; July 1–7; July 8–14; and July 15–30.

Climatic and hydrologic data will be collected at approximately 1800 hours each day at the sonar site. River depth is monitored using a staff gauge marked in 1 cm increments. Change in water depth will be presented as negative or positive increments from the initial reading of 0.0 cm. Water and air temperature will be measured using a HOBO temperature logger, which will electronically recorded the temperature every hour. Subjective notes on wind speed and direction, cloud cover and precipitation will be recorded.

Partnerships/Capacity Building

Due to the technical nature of the work, limited opportunities exist to develop partnerships and build local capacity. During the fishing season information is presented during the weekly Yukon River Drainage Fisheries Association teleconference. Currently we have a technician working on the project from a village downriver of Anvik. When there is a vacancy with the crew we are trying to hire from the local villages.

Justification

The Anvik River is one of the top producers of summer chum salmon in the Yukon River currently accounting for approximately one third of total production. Approximately 70% of the total subsistence harvest of summer chum salmon occurs below the Anvik River. The Anvik River Sonar project is an important monitoring project for summer chum salmon to assess run strength and meet biological escapement goals. The project primarily supports the management of commercial fisheries directed at summer chum salmon. Consistent with policy for ongoing base projects, the proposal includes a 56% match with State funds. However, the overall long term priority of this project to address Federal subsistence management issues may not be sufficient to justify longer term support. Therefore, it is recommended that the project be funded for only an additional two years. Funding beyond 2013 could be considered in response to the 2014 Request for Proposals; but given competing priorities and budget limitations, investigators should begin seeking other funding sources.

Project Number: 12-205
Project Title: Kaltag Chinook Salmon Sampling Project
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: Richard Burnham, City of Kaltag

Project Cost: **2012:** $4,000 **2013:** $4,000 **2014:** 4,000 **2015:** $4,000

Recommendation: Fund

Issue

Knowledge of Chinook salmon mixed stock harvests are a prerequisite to understanding and evaluating changes to stock-specific production. Current sampling programs are designed to fulfill the U.S.-Canada Treaty Agreement by assessing the number of Yukon River Chinook salmon harvested and estimating this harvest by age, sex, length (ASL), and stock composition. A lack of data from the District 4 harvest, which includes Kaltag, has contributed to uncertainty in previous stock specific harvest estimates. In 2005, subsistence harvest samples from Kaltag and Nulato will be used to estimate the ASL and stock composition of the Yukon River Subdistrict 4-A subsistence harvest. In some years, with no or limited sampling, the nearest commercial harvest samples were used for estimating subsistence harvest composition. However, the subsistence harvest is greater than the commercial harvest in some districts, and the gear types may be different. Further, as subsistence harvests increase in relation to other harvests, these samples will become increasingly important to the composite database.

Federal and State managers rate this project as a high strategic priority. This project helps fulfill the US-Canada Treaty Agreement by estimating the age, sex, length (ASL), and stock composition for the fishery in Subdistrict 4-A. The Office of Subsistence Management supported this project in 2001 (01-050).

Objectives

Collect biological data from 250 Chinook salmon harvested by Kaltag subsistence fishers. These data include scales, sex, length, and an axillary process clip.

Record associated data such as date, harvest location, gear type, and mesh size.

Methods

Chinook salmon will be sampled in the round as soon after capture as practical. Sampling will occur throughout the duration of the run in proportion to abundance as much as possible. During sampling, all available fish will be sampled for an axillary process clip, scales, sex, and length. Capture method, mesh size, location, date, fish number, scale card number, and genetic vial number will be recorded.

Alaska Department of Fish and Game will send sampling supplies to Kaltag before the field season begins in late May. Sampling technicians will be hired before the field season. Sample collection will begin as soon as subsistence fishers start harvesting salmon, usually early to mid-June.

Three scales are collected from the preferred area on the left side of the fish and mounted on pre-printed gum cards. Length will be measured from mid-eye to fork of tail to the nearest five mm. Sex will be visually determined from external morphological characteristics or from internal examination of the

gonads. Approximately ¾-inch of the axillary process is clipped, placed in individually numbered vials, and the vial filled with ethanol. Associated data are recorded in field logbooks and later transferred to Opscan forms. After the majority of the Chinook salmon subsistence harvest has occurred, samples and associated data will be will be sent to the Alaska Department of Fish and Game, Anchorage office.

From August through December, samples will be processed, analyzed and summarized by Alaska Department of Fish and Game. ASL data will be compiled by the Stock Biology Laboratory and the axillary process clips will be compiled by the Genetics Laboratory to estimate stock composition for Canadian- and U.S.-origin fish. Upon completion of sample processing and analysis, Alaska Department of Fish and Game will forward preliminary results to the principal investigator for inclusion in performance, annual, and final reports. Alaska Department of Fish and Game final reports, which include data collected by the principal investigator, will be forwarded to the principal investigator when available.

Partnership/Capacity Building

The project directly involves Kaltag residents collecting inseason fisheries data from the subsistence Chinook salmon harvest. Technical consultations were completed with Alaska Department of Fish and Game, Division of Commercial Fisheries, Larry Dubois, Summer Season Area Research Biologist.

Justification

The project supplements the commercial age, sex, and length database providing 250 samples from subsistence caught Chinook salmon in Subdistrict 4A. The project provides for direct involvement of a local community in the collection of fisheries data from the subsistence harvest. The project is reasonably budgeted and the information collected benefits the post-season evaluation of Chinook salmon harvest. Two local technicians would be hired to collect age, sex, and length and scale samples. The Office of Subsistence Management has supported this work since 2001.

Project Number: 12-207
Project Title: Yukon River Bering Cisco Spawning Origins Telemetry Investigation
Geographic Region: Yukon
Information Type: Stock Status and Trends
Principal Investigator: David Daum, U.S. Fish and Wildlife Service
Co-Investigator(s): Randy Brown, U.S. Fish and Wildlife Service

Project Cost: **2012:** $71,050 **2013:** $77,550 **2014:** $9,500

Recommendation: Fund

Issue

The Bering cisco *Coregonus laurettae* population in the Yukon River is thought to spawn in main-stem reaches of the upper Yukon Flats and rear in coastal lagoons of western and northern Alaska, though a comprehensive study defining spawning and rearing extent has not been attempted to date. Subsistence fishers harvest Bering cisco throughout their range and the species is particularly favored in most coastal communities of western Alaska. Annual subsistence harvest data specific to Bering cisco have not been collected (harvest surveys combine all Coregonid species under a "whitefish" category); however, harvest is assumed to be substantial. A commercial fishery for whitefish was initiated in the lower Yukon River in the fall of 2005 and the product is being marketed as a smoked fish product in New York City. Initially, all coregonid species were targeted in the fishery, but Bering cisco is now the preferred commercial species. The fishery has been limited to an annual cisco harvest of about 4,500 kg (10,000 lb) until 2010, when the allocation was increased to 6,800 kg (15,000 lb). This amount has been considered by fishery managers to be conservative, but there are no population abundance estimates to support this view. On numerous occasions, the commercial buyer has requested substantial increases in the annual allocation, but without additional population-specific data, managers have been reluctant to grant an additional allocation. Some coastal subsistence users are concerned about the developing commercial fishery and its potential impact on their harvest. There is also a biological concern for the potential over-harvest of Yukon River Bering cisco since the species is demographically distributed over a very large geographic region.

This proposed study will define the geographic spawning distribution of the Yukon River Bering cisco population. A spawning aggregate has been documented in the Yukon River main stem, upper Yukon Flats, though upper and lower limits of spawning have not been described. Also, additional spawning aggregates may exist that have not been identified. Defining the spawning locations of Yukon River Bering cisco is the next step in the sequential process leading to the ability to manage this important fishery. As outlined in the Preliminary Strategic Plan for Research of Whitefish Species in the Yukon and Kuskokwim River Drainages in Alaska, run timing and demography of the spawning run past Rampart Rapids (1,200 km upstream from the Yukon River mouth) have been described, genetic stock composition and demographic description of the commercial harvest are ongoing; spawning locations identified (this proposal); stock composition of the subsistence catch quantified; and a population monitoring program established. Data from this project will also be useful for ensuring protection of these important freshwater habitats from potential disruptive development, such as, streambed gravel extraction for rural village infrastructure upgrades. This proposal addresses the Yukon Region Priority Information Needs described in Office of Subsistence Management's 2012 Request for Proposals, specifically, location of Bering cisco spawning habitat and timing of spawning in the Yukon River drainage. This proposal also addresses the Whitefish Strategic Plan general issues of concern #4, spawning origins of priority species

must be located to identify populations; and Bering cisco research priority #3, delineation of the spawning distributions of Bering cisco in the Yukon and Kuskokwim River drainages.

Objectives

1. Deploy 100 radio transmitters per year (2012 and 2013) at Rampart Rapids during the Bering cisco summer/fall spawning migration;
2. Locate spawning destinations for Bering cisco using remote station and aerial telemetry techniques;
3. Analyze telemetry data to determine geographic spawning distribution, timing of spawning, and post-spawning downstream migration; and
4. Nominate spawning areas for inclusion into the Alaska Anadromous Waters Catalog and other appropriate habitat protection vehicles.

Partnership/Capacity Building

A large part of this project (fish tagging) is directly dependent on the partnership with Rapids Research Center, the director Stan Zuray, and the local individuals (mostly students) who work at the Student Educational Camp during the summer months. The Rapids video fish wheel project (funded by Restoration and Enhancement Funds) will be the platform used for capturing, tagging, and releasing fish. This fish wheel has been designed to capture and release fish unharmed, which is not the case for most subsistence and commercial fish wheels operating in the Yukon River drainage. Local students, workers, fisherman, and camp instructors will all witness the Bering cisco tagging project first hand; becoming acquainted with all aspects of the project through discussions, hands on demonstrations, scientific interactions, and direct participation when work schedules allow. The Rapids Research Center will also provide housing and logistics for the project during the summer/fall tagging seasons in 2012 and 2013.

Justification

The proposal specifically addresses a priority information need established in the 2012 Request for Proposals and Strategic Whitefish Research Plan. Strategic priority, technical merit and investigator ability are rated high. The project design and sampling described in the investigation plan should ensure that the project objectives are achievable. The association and participation of the Rapids Research Center in this project provide enhanced opportunities for capacity building with local stake holders and communities. Given the importance of Bering cisco to Yukon River subsistence fisheries, detailed mapping and documentation of this species spawning areas will assist management agencies to protect their habitat as well as design future work to monitor the status of the Yukon River Bering cisco stock. This work should be viewed as an important and necessary step leading to development of effective management strategies to ensure long term conservation.

Project Number: 12-251
Project Title: In-season Salmon Management Teleconferences and Harvest Interviews
Geographic Region: Yukon
Information Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Jason Hale, Yukon River Drainage Fisheries Association
Co-Investigator(s): Catherine Moncrieff, Yukon River Drainage Fisheries Association

Project Cost: **2012:** $24,886 **2013:** $72,472 **2014:** $72,940 **2015:** $54,722

Recommendation: Fund

Issue

This project addresses the need for inclusive management in-season for Chinook, chum, and coho salmon fisheries on the Yukon River. Salmon are a critical resource for subsistence and commercial users in this region, which includes numerous Federal conservation units, and fisheries managers must have a means to gather input, assess harvests, and share information with these fishermen and fisheries stakeholders throughout the fishing season.

Yukon River Drainage Fisheries Association will host public in-season salmon management teleconferences throughout the salmon fishing season to foster communications between managers and fishermen in Yukon River. The Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service fisheries managers monitor salmon fisheries and make in-season management decisions that need to be conveyed to approximately 55 communities in the Alaskan and Canadian portions of the Yukon River. The in-season management teleconferences give fishermen a reliable and consistent forum to access current information and also provide a direct link to communicate with fisheries managers. During the calls each week, fisheries reports are given up and down the river, including from 10 villages where Yukon River Drainage Fisheries Association will coordinate gathering qualitative in-season salmon harvest data. This enables fisheries managers to hear from fishermen, and community members from many locations along the Yukon River about fishing effort, harvest levels, and fishing conditions that impact their ability to harvest salmon. The calls aim to focus on in-season salmon management to ensure a maximum number of people can participate in the 90 minute time frame allotted to the calls. This project addresses the need for Alaskans and Canadians to participate first hand in fisheries management decision-making, especially during times of low salmon abundance and builds understanding regarding the management, use, and status of their shared salmon resource. The information shared helps fishing families prepare for the fishing season and builds relationships among diverse stakeholders that are needed for resource decision-making. Due to the need for consistent

The in-season harvest survey is an important assessment tool in that it qualitatively informs managers how fishers in key locations throughout the drainage are doing in-season, enabling managers to make timely decisions allowing the maximum of fishers to meet their subsistence needs. The in-season harvest survey will compliment the quantitative post-season survey by providing an explanation of fishing success such as high water, debris and other adverse effects that influence fishing success. In addition, a new question will be added to gather total harvest goals allowing for a secondary analysis of subsistence needs met as compared to harvest goal size.

Objectives

Provide an in-season forum for sharing information, facilitating discussion, building understanding among all stakeholder and user groups in the Yukon River drainage;

Collect qualitative harvest data information from 10 communities in the Alaskan portion of the Yukon River drainage during the Chinook salmon season.

Methods

Yukon River Drainage Fisheries Association will work with Alaska Department of Fish and Game and U.S. Fish and Wildlife Service annually to plan for the project by reviewing past performance and refining methods to meet project objectives. Yukon River Drainage Fisheries Association will implement pre-season promotions through direct mail, e-mail, social media, letters, posters, and newspaper advertisements to increase participation. Yukon River Drainage Fisheries Association will reserve a toll free phone line for every Tuesday at 1 p.m. AK time from the first week in June to the last week in August. During the first teleconference of the season Yukon River Drainage Fisheries Association will review the agenda and meeting protocols and Yukon River Drainage Fisheries Association staff will facilitate each teleconference that will include subsistence and management reports, as well as discussion. Yukon River Drainage Fisheries Association will summarize each call, which will be reviewed by agency managers and distributed through email and Yukon River Drainage Fisheries Association's website.

In-season harvest interviews will take place during the summer Chinook salmon season in 10 villages (Marshall, Russian Mission, Holy Cross, Kaltag, Nulato, Huslia, Galena, Nenana, Fort Yukon, and Eagle). The interview methodology will follow the *Principles for Conduct of Research in the Arctic*. The Yukon River Drainage Fisheries Association anthropologist will review the interview methodology and survey instrument will be reviewed and revised annually to ensure the recording and reporting formats are useful for managers and fishermen; she will identify any limitations from the previous year and will update data collection forms, interviewer training and protocols, and reporting.

Feedback from the state and federal managers in 2011 led to changes in the interview form and reports. Both the Yukon River post-season survey and the Kuskokwim River In-season survey have been reviewed and staff consulted on revisions. The in-season harvest survey methodology focuses on interviewing fishers weekly to collect qualitative information to provide managers with a real time assessment of the run. Quantitative information is not collected through this survey because of the nature of the design, surveyors do not always interview the same fishers every week but opportunistically interview all fishers they are able to contact, would make it difficult to collect extensive quantitative information, as in the post-season survey. But a secondary analysis that can link the post-season survey will include a question inquiring about each fisher's harvest goals at the beginning of the season and followed up weekly with a report on their progress towards their harvest goals.

In addition to collecting information from fishers, interviewers will disseminate relevant information to fishers as it becomes available. This will give fishers another link to management and keep them informed in-season regarding the fishery.

Partnerships/Capacity Building

This project will build the capability and expertise of Yukon River Drainage Fisheries Association, local interviewers, tribal councils and the fishing families participating in the interviews. Yukon River Drainage Fisheries Association will contract with tribal councils and train interviewers on information

gathering and reporting to include interview techniques, informed consent, protection of privacy, and how to report results in weekly teleconferences. The survey portion of the project will also build the capacity of the fishers being interviewed by informing them of current fisheries news and involving them in management. This project will promote interaction among rural residents through participation in the teleconferences and interaction within their villages on fisheries management. By engaging the resource users in the process of data gathering and including them in weekly discussions, they will be building their capacity in resource decision-making. Yukon River Drainage Fisheries Association will also build capacity in working with tribal councils on program implementation, oversight and delivery of services.

Justification

The project has a high strategic priority with high investigator ability and will continue to promote in-season information sharing, partnerships and capacity building, and management efforts on the Yukon River. In-season teleconferences have facilitated and improved communication and information sharing; the current proposal continues that effort. The budget is adequate for the proposed work.

KUSKOKWIM REGION OVERVIEW

Issues and Information Needs

For the Kuskokwim Region, the 2012 Request for Proposals focused on 10 priority information needs, both of which address salmon:

- Reliable estimates of Chinook, chum, sockeye, and coho salmon escapement (e.g., weir projects).
- Effects on salmon stocks and users of fishery management practices implemented to conserve Chinook salmon.
- Methods for including "quality of escapement" measures (e.g., egg deposition, size composition, habitat utilization) in establishing Chinook salmon spawning goals and determining the reproductive potential of spawning escapements.
- Harvest, use, and associated contextual information for whitefish by species in upper Kuskokwim River drainage communities. Communities of interest include McGrath, Telida, Nikolai, Takotna, and Lime Village.
- Contextual information associated with whitefish harvest by species in central Kuskokwim River drainage communities to supplement information from previous research. Communities of interest include Upper Kalskag, Lower Kalskag, Aniak, Chuathbaluk, Red Devil, Sleetmute, Stony River, and Crooked Creek.
- Harvest, use, and associated contextual information for whitefish by species in lower Kuskokwim River drainage communities. Specific groups of communities of interest are Kwethluk, Akiachak, Napaskiak, and Tuluksak, or Chefornak, Kipnuk, Kongiganak, and Kwigillingok.
- Broad whitefish population assessment, including distribution and age structure.
- Location and timing of Bering cisco spawning populations in the Kuskokwim River drainage.
- Complete genetic baseline sampling and population marker development for sheefish spawning populations in the Kuskokwim River drainage.
- Status of sheefish spawning population in Highpower Creek, an upper tributary of the Kuskokwim River (this could be part of the genetic baseline study listed directly above).

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 75 projects have been funded in the Kuskokwim Region, and eight of these will still be operating during 2012 (**Tables 1 and 2**). These projects provide information needed to manage and conserve subsistence fisheries resources, address fisheries issues and priorities identified by the Kuskokwim Regional Advisory Councils, and address regulatory actions. Presently, the Monitoring Program supports over 50% of all fisheries monitoring and research conducted in the Kuskokwim Region.

Projects Forwarded for Investigation Plan Development

Sixteen Kuskokwim Region proposals were submitted to the Office of Subsistence Management. The Technical Review Committee reviewed the proposals and recommended nine for investigation plan development. Investigators for one of these proposals withdrew it from further consideration prior to submitting an investigation plan. Investigators for the remaining eight responded to Technical Review Committee proposal review comments in developing their investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (**Tables 3 and 4**).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $783,000 is available for funding new projects in the Kuskokwim Region (Table 5).

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the eight investigation plans, the Technical Review Committee recommended funding seven of the proposed projects (Table 5):

12-302	Lower Kuskokwim River Chinook Salmon Harvest ASL	$	100,279
12-303	George River Salmon Weir (Option B)	$	171,097
12-304	Takotna River Salmon Escapment Monitoring	$	116,096
12-309	Kwethluk River Weir Video Salmon Escapement Enumeration	$	36,240
12-312	Highpower Creek Sheefish Status and Upper Kuskokwim River	$	100,776
12-313	Kuskokwim River Bering Cisco Spawning Origins	$	74,116
12-352	Upper Kuskokwim River Whitefish Climate Change Trends	$	70,411
	Total	$	669,015

The seven projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each of the projects proposed for funding in 2012 are summarized below (see Executive Summaries for more details on all projects).

12-302 Lower Kuskokwim River Chinook Salmon Harvest ASL. This four-year project would continue the collection and analysis of age, sex, and length information from the subsistence Chinook salmon harvest in the lower Kuskokwin River, from Eek Island to Tuluksak. During the first year, a sampling goal would be set based on results of a sensitivity analysis using data from 2001 to 2012. Information provided by this work has been used in managing Kuskokwim River salmon fisheries. Age, sex, and length composition comparisons have shown distinct differences between the subsistence harvest, the commercial harvest and the escapement. This project would address a priority information need identified in the 2012 Request for Proposals and by the Kuskokwim Fisheries Resource Coalition. This work has been supported by the Fisheries Monitoring Program since 2005.

12-303 George River Salmon Weir (Option B). This two-year project would continue operation of the George River weir to monitor salmon escapement. The investigation plan includes two options: Plan A followed the original proposal, and Plan B added funding for a high school intern component. While the George River is located upstream of the Federal conservation unit boundary, George River salmon stocks are harvested by Federally-qualified subsistence users within the boundaries of the Yukon Delta National Wildlife Refuge. This weir has been operated since 1996, and managers use resulting information to monitor Chinook, chum, and coho salmon escapements and run timing. The weir has been operated

cooperatively by Alaska Department of Fish and Game and Kuskokwim Native Association since 1996, and supported by Monitoring Program funds since 2005.

12-304 Takotna River Salmon Escapment Monitoring. This two-year project would continue operation of the Takotna River weir to monitor salmon escapement. Takotna River salmon stocks are harvested by Federally-qualified subsistence users within the boundaries of the Yukon Delta National Wildlife Refuge. This weir has been operated since 1996, and managers use resulting information to monitor Chinook, chum, and coho salmon escapements and run timing. The weir has been operated cooperatively by the Alaska Department of Fish and Game and Takotna Tribal Council since 1999, and supported by Monitoring Program funds since 2005.

12-309 Kwethluk River Weir Video Salmon Escapement Enumeration. This project would provide funding and support to purchase, install and operate an underwater video system to improve salmon escapement monitoring at the Kwethluk River weir. The weir is located within the Yukon Delta National Wildlife Refuge and has been supported by the Monitoring Program since 2000. Weir counts have been suspended on several occasions due to high or turbid water conditions. Adding video monitoring capability could provide more reliable monitoring of salmon passage and species identification. Underwater video and above water counts by field staff would be compared to ensure proper functioning of the video system and motion detection software as well as to evaluate the effectiveness of the methodology. Results of these comparisons will be presented in an annual report for the weir operations (project 10-306). Managers use information from the weir to monitor Chinook, chum, pink, and coho salmon escapements and run timing.

12-312 Highpower Creek Sheefish Status and Upper Kuskokwim River. This three-year project would build upon previous Monitoring Program work conducted by the investigator by providing information on the status of sheefish (referred to as inconnu by fishery scientists) spawning populations in Highpower Creek. Sheefish have very specialized spawning habitat needs, and very few spawning locations have been documented in the Kuskokwim River. This project would use radiotelemetry to determine whether sheefish spawn at the mouth of Highpower Creek or elsewhere in the Swift Fork drainage. Sheefish are highly valued by Kuskokwim Area subsistence users and account for a large percentage of the total annual subsistence harvest of non-salmon fish species. This project would address a priority information need identified in the 2012 Request for Proposals and the Whitefish Strategic Plan.

12-313 Kuskokwim River Bering Cisco Spawning Origins. This three-year project would use radiotelemetry to provide information on the migratory timing and spawning locations of Bering cisco entering the Kuskokwim River. Biological sampling suggests that the Yukon and Kuskokwim rivers may be the only two western Alaska drainages in which Bering Cisco spawn, so these two rivers may be the source of all Bering cisco harvested in western Alaska coastal waters. Subsistence use of Bering cisco has been well documented in coastal and interior villages of western and northwestern Alaska, including those in Federal Conservations Units. Since 2005, Bering cisco has also been commercially harvested in the Yukon River Delta. Information on Bering cisco life history, including documentation of spawning areas, is needed to ensure that harvest level in both the subsistence and commercial fisheries are sustainable. This project would address a priority information need identified in the 2012 Request for Proposals and the Whitefish Strategic Plan.

12-352 Upper Kuskokwim River Whitefish Climate Change Trends. This three-year project would examine whitefish harvests within the broader context of non-salmon harvest efforts in two Kuskokwim River drainage communities, Lime Village and Nikolai. Given the importance of whitefish subsistence harvests in the upper Kuskokwim River, this research would attempt to determine why harvest levels

for key species have declined over the past few decades. This would be accomplished by documenting contemporary harvest and use patterns of each whitefish species used by Lime Village and Nikolai residents, and by examining factors that have shaped harvest efforts for each whitefish species over time and that are influencing the ability of residents to harvest the various species of whitefish. This project would address a priority information need identified in the 2012 Request for Proposals and the Whitefish Strategic Plan.

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in the Kuskokwim since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, AVCP=Association of Village Council Presidents, BC=Bue Consulting, BSFA=Bering Sea Fisherman's Association, KNA=Kuskokwim Native Association, MNVC=McGrath Native Village Council, NPT=Nuniwarmiut Piciryarata Tamaryalkuti, Inc., ONC=Orutsararmiut Native Council, OVK=Organized Village of Kwethluk, TNC=Tuluksak Native Community, and USFWS=U.S. Fish and Wildlife Service.

Project Number	Project Title	Investigators
	Kuskokwim River Salmon	
00-007	Tatlawiksuk River Salmon Weir	ADFG, KNA
00-008	Bethel Inseason Subsistence Harvest Data	ONC
00-009	Bethel Postseason Harvest Monitoring	ADFG, ONC
00-019	Kwethluk River Salmon Weir	USFWS, OVK
00-029	Documentation/Communication on Floating Weirs	AVCP
00-030	Kuskokwim Salmon Project Site Surveys	ADFG, USFWS
01-019	Planning Meetings in AVCP Region	AVCP, KNA
01-023	Upper Kuskokwim River Inseason Data	ADFG, MNVC
01-024	Bethel Postseason Fishery Household Surveys	ADFG, ONC
01-053	Tuluksak River Salmon Weir	USFWS, TNC
01-070	Kuskokwim River Chinook Salmon Genetic Diversity	ADFG, USFWS
01-086	Kuskokwim River Escapement Project Technician	ONC
01-088	Natural Resource Internship Program	KNA
01-116	Kuskokwim River Salmon Work Group support	ADFG
01-117	Kuskokwim Salmon Age-Sex-Length Assessment	ADFG
01-132	Bethel Inseason Subsistence Salmon Harvest Data	ONC, ADFG
01-141	Holitna River Chinook, Chum and Coho Telmentry	ADFG
01-147	Aniak River Sport Fisheries Survey	ADFG, KNA
01-225	Middle Kuskokwim River Inseason Salmon Harvest	KNA, ADFG, USFWS
01-226	Subsistence Fisheries Research Capacity Building	ADFG
02-036	Aniak Postseason Subsistence Fishery Surveys	ADFG, KNA
02-046	Kuskokwim River Chinook Salmon Inriver Abundance	ADFG
03-030	Kuskokwim River Salmon Mark-Recapture	ADFG, KNA
03-041	Kuskokwim Coho Salmon Genetics	ADFG, USFWS
03-931	Kuskokwim Science Plan	BSFA
04-301	Kwethluk River Salmon Weir	USFWS, OVK
04-302	Tuluksak River Salmon Weir	USFWS, TNC
04-306	Holitna River Chinook and Chum Salmon Telemetry	ADFG
04-307	Kuskokwim Age-Sex-Length Sampling	ADFG
04-308	Kalskag Salmon Mark-Recapture	ADFG
04-309	Kuskokwim Native Association Intership Program	KNA
04-310	Tatlawiksuk River Salmon Weir	ADFG, KNA
04-311	Kuskokwim Coho Salmon Genetic Mixed Stock Assessment	USFWS
04-353	Bethel Inseason Subsistence Salmon Data Collection	ADFG, ONC
04-359	Kuskokwim Postseason Salmon Subsistence Harvest Surveys	ADFG, KNA, ONC
05-302	Kuskokwim River Chinook Salmon Inriver Abundance	ADFG

Table 1 continued.

Project Number		Project Title	Investigators
		Kuskokwim River Salmon (continued)	
05-304		George and Takotna River Salmon Weirs	ADFG
05-305		Kuskokwim Chinook Salmon Genetic Stock Identification	ADFG
05-307		Lower Kuskokwim Subsistence Fisheries Catch Monitoring	ONC
06-306	[a]	Lower Kuskokwim Salmon Inseason Subsistence Catch Monitoring	ADFG
06-307		Kuskokwim River Salmon Management Working Group	ADFG
07-302		Kuskokwim River Chum Salmon Run Reconstruction	ADFG, BC
07-304		Tatlawiksuk River Salmon Weir	ADFG, KNA
07-306		Kwethluk River Salmon Weir	USFWS, OVK
07-307		Tuluksak River Salmon Weir	USFWS, TNC
08-302	[a]	Lower Kuskokwim Subsistence Chinook Salmon Age-Sex-Length	ADFG
08-303	[a]	George River Salmon Weir	ADFG
08-304	[a]	Takotna River Salmon Weir	ADFG
08-351		Tuluksak River Subsistence Chinook Salmon Age-Sex-Length	USFWS
08-352	[a]	Bethel and Aniak Postseason Subsistence Salmon Harvest Surveys	ADFG
		Kuskokwim Bay Salmon	
00-027		Goodnews River Salmon Weir	ADFG
00-028		Kanektok River Salmon Weir	ADFG, USFWS
01-118		Kanektok River Salmon Weir	ADFG, BSFA
04-305		Kanektok River Salmon Weir	ADFG, BSFA
04-312		Goodnews River Coho Salmon Weir	ADFG
04-351		Kuskokwim Bay Traditional Ecological Knowledge and Oral History	USFWS
05-353		Nunivak Island Subsistence Cod Fisheries	NPT
		Resident Species	
01-052		Whitefish Lake Humpback & Broad Whitefish	USFWS, KNA
01-112		Aniak River Subsistence Fisheries Study	ADFG, KNA
01-235		Upper Kuskokwim Community Use Profiles	ADFG
04-304		Whitefish Lake Whitefish Telemetry	USFWS
05-301		Whitefish PIT Tags	USFWS
06-303		Kuskokwim River Whitefish Migratory Behaviour	USFWS, KNA
06-305		Kuskokwim River Inconnu Spawning Distribution	ADFG
06-351		Lower Kuskokwim Non-salmon Harvest and TEK	ADFG, AVCP
08-300		Aniak River Rainbow Trout Seasonal Distribution	ADFG
10-305	[a]	Kuskokwim River Sheefish Spawning, Distribution and Timing	ADFG

[a] Final Report in preparation.

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in the Kuskokwim by subsistence fishery. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, USFWS=U.S. Fish and Wildlife Service.

Project Number	Project Title	Investigators	Budget 2012	Budget 2013
	Kuskokwim River Salmon			
10-300	Kanektok and Goodnews River Salmon Assessment	ADFG	$184.1	$145.9
10-303	Kuskokwim River Salmon Age Sex Length Assessment	ADFG	$117.0	$121.4
10-304	Tatlawiksuk River Salmon Assessment	ADFG	$192.3	$200.4
10-306	Kwethluk River Salmon Assessment	USFWS	$221.3	$224.3
10-307	Tuluksak River Salmon Assessment	USFWS	$167.2	$157.8
10-352	Kuskokwim Salmon Postseason Harvest Monitoring	ADFG	$91.2	$82.3
10-353	Kuskokwim Salmon Working Group Support	ADFG	$46.7	$45.3
10-354	Kuskokwim Salmon Inseason Harvest Monitoring	ADFG	$31.4	$21.5
	Total Kuskokwim Monitoring Program		$1,051.2	$998.9

Table 3. Kuskokwim project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-302	Lower Kuskokwim River Chinook Salmon Harvest ASL	$35.0	$65.3		
12-303	George River Salmon Weir (Option A or B)	$51.5	$119.5		
12-304	Takotna River Salmon Escapment Monitoring	$4.0	$112.1		
12-308	McGrath Broad Whitefish Spawning Population	$34.4	$12.5	$75.7	
12-309	Kwethluk River Weir Video Salmon Escapement Enumeration			$36.2	
12-312	Highpower Creek Sheefish Status and Upper Kuskokwim River		$100.8		
12-313	Kuskokwim River Bering Cisco Spawning Origins	$69.6		$4.5	
	Harvest Monitoring and Traditional Ecological Knowledge				
12-352	Upper Kuskokwim River Whitefish Climate Change Trends		$70.4		

Table 4. Kuskokwim local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG=Alaska Department of Fish and Game, KNA=Kuskokwim Native Association, and USFWS=U.S. Fish and Wildlife Service.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends Projects		
12-302	ADFG	Lower Kuskokwim River Chinook Salmon Harvest ASL	$14.8	$70.2
12-303	ADFG	George River Salmon Weir (Option A or B)	$7.1	$118.6
12-304	ADFG	Takotna River Salmon Escapment Monitoring	$34.4	$67.3
12-308	USFWS	McGrath Broad Whitefish Spawning Population	$40.4	$306.5
12-309	USFWS	Kwethluk River Weir Video Salmon Escapement Enumeration	$0.0	$29.6
12-312	ADFG	Highpower Creek Sheefish Status and Upper Kuskokwim River	$9.0	$105.3
12-313	KNA	Kuskokwim River Bering Cisco Spawning Origins	$7.7	$26.5
		Harvest Monitoring and Traditional Ecological Knowledge		
12-352	ADFG	Upper Kuskokwim River Whitefish Climate Change Trends	$0.0	$0.0

Table 5. Funding recommendations by the Technical Review Committee (TRC) for the Kuskokwim 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends Projects					
12-302	Lower Kuskokwim River Chinook Salmon Harvest ASL	Yes	$100.3	$93.8	$96.9	$82.4
12-303	George River Salmon Weir (Option B)	Yes	$171.1	$175.3	$0.0	$0.0
12-304	Takotna River Salmon Escapment Monitoring	Yes	$116.1	$115.3	$0.0	$0.0
12-308	McGrath Broad Whitefish Spawning Population	No	$122.6	$66.8	$0.0	$0.0
12-309	Kwethluk River Weir Video Salmon Escapement Enumeration	Yes	$36.2	$0.0	$0.0	$0.0
12-312	Highpower Creek Sheefish Status and Upper Kuskokwim River	Yes	$100.8	$45.8	$24.4	$0.0
12-313	Kuskokwim River Bering Cisco Spawning Origins	Yes	$74.1	$56.9	$17.1	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge					
12-352	Upper Kuskokwim River Whitefish Climate Change Trends	Yes	$70.4	$63.0	$42.1	$0.0
	Total		$791.6	$616.9	$180.5	$82.4
	Funding Guideline		$783.0			
	TRC Recommendation		$669.0	$550.1	$180.5	$82.4

Project Number: 12-302
Project Title: Lower Kuskokwim River Subsistence Chinook Salmon Harvest ASL Composition
Geographic Region: Kuskokwim
Information Type: Stock Status and Trends
Principal Investigator: Zachary W. Liller, Alaska Department of Fish and Game
Co-Investigator(s): Greg Roczicka, Orutsararmiut Native Council
Christopher A. Shelden, Alaska Department of Fish and Game
Kevin L. Schaberg, Alaska Department of Fish and Game

Project Cost: **2012:** $100,279 **2013:** $93,803 **2014:** $96,923 **2015:** $82,429

Recommendation: Fund

Issue

This project is designed to characterize the annual age, sex, and length (ASL) composition of the Lower Kuskokwim River Chinook salmon subsistence harvest for years 2012–2015. This project provides a quantitative assessment of Kuskokwim River Chinook salmon subsistence harvest patterns such as timing and methods (i.e., gear type) and the resulting harvest composition by age, sex, and size. The utility of this data is magnified when integrated with other existing Kuskokwim River monitoring projects that estimate total subsistence harvest of Chinook salmon, ASL composition of the annual escapement, ASL composition of the annual commercial harvest, and total Chinook salmon run abundance. Collectively, this information allows for broad-scale analyses that guide sustainable management of Kuskokwim River Chinook salmon.

The Kuskokwim Area subsistence salmon fishery is one of the largest and most important in the state. With a recent 10-year average (2000–2009) annual harvest of over 87,000 Chinook salmon, the Kuskokwim River subsistence fishery accounts for about half of the total statewide subsistence harvest of Chinook salmon. Within the Kuskokwim River, subsistence harvest accounts for over 96% of the average annual total harvest of Chinook salmon (2000–2009) with approximately 85% of the subsistence harvest occurring in the project study area, which is within the Yukon Delta National Wildlife Refuge. On average (2000–2009), the subsistence fishery harvests 33% of the total annual returns of Chinook salmon to the Kuskokwim River; although, exploitation by the subsistence fishery has been as high as 50–60% in years of low Chinook salmon abundance.

Given the relative size of the Kuskokwim River subsistence harvest of Chinook salmon compared to other fisheries, it is clear that the subsistence fishery has the single greatest inriver influence on the number and quality of returning adult Chinook salmon that escape each year. Moreover, considering that the timing of the Chinook salmon subsistence fishery tends to be focused during the early portion of the run and the primary gear type used (i.e., large mesh gill nets) is selective for larger fish (of which many are older-aged fish and females), there is considerable potential to adversely affect spawning escapement by harvesting disproportionately across stocks, age classes, sex, and sizes.

Continuing to accurately quantify the ASL composition of the Lower Kuskokwim River Chinook salmon subsistence harvest may prove especially valuable in upcoming years. Given the recent low returns of Chinook salmon to monitored tributaries in the Lower Kuskokwim River, conservation measures may be warranted that could have implications to subsistence fishermen. This project could provide insight into

the effects those management actions may have on subsistence harvests. Furthermore, knowledge of the ASL composition of the harvest is critical for generating reliable estimates of drainage wide Chinook salmon escapement and producing quantitative forecasts of future year returns, the importance of which are magnified during years of expected low abundance.

Objectives

- Describe the annual and temporally stratified ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest.
- Characterize the annual ASL composition of Chinook salmon in the lower Kuskokwim River subsistence harvest by gear type.
- Compare the ASL composition of Chinook salmon harvested in the Kuskokwim River subsistence fishery to the ASL composition of the commercial harvest and spawning escapement.
- Assess the effectiveness of the current project study design. The goal of this analysis will be to:
- Identify an optimal number of participants to characterize the proportions of gear types used by lower Kuskokwim River Chinook salmon subsistence fishermen;
- Examine the cost vs. benefit of the spatial distribution of participants' fishing effort;
- Examine the effects of sub-sampling fishermen's annual harvest.

Methods

This study is a continuation of Monitoring Program project 08-302. The project study area is defined as ranging from the Eek Island at the mouth of the Kuskokwim River upstream to Tuluksak (rkm 192). Chinook salmon ASL information will be collected throughout the study area by non-agency participants, primarily subsistence fishermen and subsistence household members that will sample from their annual harvest. This study will implement a two-stage sampling design for collecting representative ASL data from the lower Kuskokwim River Chinook salmon subsistence harvest. The first stage involves recruiting a voluntary sample of lower river subsistence fishermen in order to characterize the harvest patterns of the subsistence fleet. The second stage involves collection of ASL samples from each Chinook salmon harvested by those participating fishermen. All data will be collected using standardized methods consistent with those used by Alaska Department of Fish and Game staff. All samples will be processed by Alaska Department of Fish and Game stock biologists and summarized in table and figure form. Data will be archived in the Arctic-Yukon-Kuskokwim Regional Database Management System and published in the Alaska Department of Fish and Game Fisheries Data Series.

Partnerships/Capacity Building

Alaska Department of Fish and Game, Commercial Fisheries Division and Orutsararmiut Native Council will conduct this project in partnership. Alaska Department of Fish and Game, Commercial Fisheries Division is responsible for data collection from communities outside the Bethel area, for data processing, and reporting. Orutsararmiut Native Council staff is responsible for data collection from Bethel and fish camps within nearly 20 miles of Bethel. Orutsararmiut Native Council staff provides critical review of data analysis and reporting.

Communication and consultation are cornerstones of the Kuskokwim Area fishery program with a proud history of building trust and broad public support through active sharing of information, which is perhaps best epitomized through the Kuskokwim River Salmon Management Working Group and the semi-annual Kuskokwim Interagency Fisheries meetings. Investigators not only heighten awareness of the subsistence ASL program, but guide participants through the process of interpreting and integrating a broad array of

fisheries projects to build a foundation on which to base informed fishery management decisions, and which facilitate effective public integration into the management process.

Justification

The project addresses a priority information need identified in the 2012 Request for Proposals. The principal investigator was responsive to the Technical Review Committee's proposal review and thoroughly addressed all study design and budget issues. The investigation plan includes an additional objective to assess the effectiveness of the current project study design (sensitivity analysis) in the first year of the project and sets a sampling goal. Project objectives appear to be achievable with proposed budget. The funding request represents a 12% decrease over the previous four-year project budget. There is a strong partnership between the Alaska Department Fish and Game and the Orutsararmiut Native Council, project investigators.

Project Number: 12-303
Project Title: George River Salmon Weir
Geographic Region: Kuskokwim
Data Type: Stock Status and Trends
Principle Investigator: Christopher A. Shelden, Alaska Department of Fish and Game
Co-Investigator(s): Michael Thalhauser, Kuskokwim Native Association
Kevin Schaberg, Alaska Department of Fish and Game
Zachary Liller, Alaska Department of Fish and Game

Project Cost Option A: **2012:** $154,903 **2013:** $159,630
Project Cost Option B: **2012: $**171,097 **2013:** $175,289
Inclusive of Kuskokwim Native Association High School intern costs.

Recommendation: Fund Option B

Issue

George River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge Federal nexus. Contributing to numerous initiatives that are inclusive of the entire Kuskokwim River drainage, the George River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region (Area), issues identified by the Office of Subsistence Management as a priority information need. The project provides fundamental escapement information necessary to facilitate inseason management decisions and to assess trends in salmon populations. This project is essential as a platform for several other projects and for developing escapement goals. This project also incorporates substantial capacity building and outreach components, including a Kuskokwim Native Association High School Internship program that has fostered understanding and cooperation between stakeholders and agencies across the region.

Salmon escapements from this project have been monitored successfully 13 out of 15 years since 1996. Information from this project has become integrated into the annual management process, both by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at George River provides part of the context needed to assess the impacts of subsistence harvest practices (*Age, Sex, and Length Composition of Lower Kuskokwim River Subsistence Chinook Harvest,* proposed project 12-302). Total run abundance estimates that include data from George River weir contribute to determination of annual exploitation rates, comparison of exploitation among age/sex components, assessment of high seas interception, examination of the influence of environmental factors on variability in abundance, and investigations into the potential development of drainage-wide escapement goals. This information is foundational for assessing changes in salmon abundance and run dynamics that may result from management actions or environmental factors such as climate change. Total abundance estimates facilitate the identification of both harvestable surpluses and conservation concerns, contributing to regulatory and management decisions that directly affect subsistence use as the issue of “allocation priority” is defined in the 2012 Request for Proposals.

Objectives

1. Determine daily and total annual Chinook, chum, and coho salmon escapements from 15 June to 20 September;
2. Estimate age-sex-length (ASL) composition of annual Chinook, chum, and coho salmon escapements to the George River such that 95% confidence intervals of age composition will be no wider than ±10% (a=0.05, d=0.10);
3. Provide mentorship and administer education curriculum to Kuskokwim Native Association high school interns; and
4. Serve as a platform to facilitate current and future fisheries research projects.

Methods

Investigators will install a resistance board weir on the lower George River. Passage gates in the weir will allow fish to be identified by species and counted as they pass upstream and a live trap will be used to sample salmon for scales, and sex and length information; and for tag recovery for AYK SSI funded projects *Kuskokwim River coho salmon investigations,* and *Kuskokwim River Sockeye Salmon Investigations*. ASL data is processed post-season under the *Kuskokwim Salmon ASL Assessment Project* (project 10-303). Investigators will also record daily water temperature, water level, and weather conditions, and maintain equipment in support of *Temperature Monitoring* (project 08-701). A local technician hired by Kuskokwim Native Association will operate the project along with a lead crew member provided by Alaska Department of Fish and Game. The project will serve as a platform for several research initiatives including those listed above and genetic and otolith collection for stock identification. Potential exists for this project to provide a platform for future studies as well.

Partnership/Capacity Building

Kuskokwim Native Association and Alaska Department of Fish and Game operate the George River weir jointly at the Partnership Level. Planning, operation, and data analysis associated with the weir is done through an interactive feedback between staff from both organizations, including the Kuskokwim Native Association fishery biologist who is employed through the Office of Subsistence Management Partners Program. Kuskokwim Native Association has a proven track record of effective involvement in weir operation. Past interactions between Kuskokwim Native Association, Alaska Department of Fish and Game, Commercial Fisheries Division, and local communities has created a high level of public awareness about salmon management and stock status, and has fostered career interests in fisheries through the student internship program.

The George and Takotna project hosts an established high school mentorship program, which facilitates broad community awareness and understanding, interest, and direct involvement fisheries management. The Kuskokwim Native Association High School intern program sponsors between 15 and 20 high school age students from throughout the Kuskokwim Area on week-long internships, which includes a curriculum of activities and assignments on salmon life history and management. This outreach program is a long-term investment that develops informed individuals who will serve as the future technicians, biologists, board members, public leaders, and the voting citizens who will influence the course of future events through their decisions. Several former High School and college interns from this program have already gone on to become fisheries technicians with both Kuskokwim Native Association and the Department of Fish and Game. Several others are now completing college degrees, having gotten a start through this program.

Justification

The project addresses a priority information need for salmon escapement monitoring identified in the 2012 Request for Proposals and provides information for inseason subsistence fishery managers. The investigators are experienced, competent and knowledgeable and there is strong partnership between the Alaska Department of Fish and Game and Kuskokwim Native Association. Option B is a request for $16,000 of additional funds per year for approximately 15 high school interns. Under this option, the interns would spend 1-2 weeks at the George River weir and other fisheries projects, and would complete a curriculum of field work, a photo and writing journal, and worksheets; and engage in other relevant and related educational activities. The intern program is currently being funded under the Partners Program, PFM-103, which will conclude on 31 December 2011. Due to some confusion, the Kuskokwim Native Association Co-Investigator did not submit a proposal in early 2011 to the Office of Subsistence Management to continue this portion of the Partners Program. The public outreach and community involvement engendered by the intern program is one of the most important components of the various activities that the Alaska Department of Fish and Game and Kuskokwim Native Association do cooperatively, and therefore warrants inclusion in Project 12-303. There is a precedence for funding through a Stock Status and Trends project, as funding for the intern program was part of the Monitoring Program budget for the Tatlawiksuk River weir project (FIS 07-304), also cooperatively operated by the Alaska Department of Fish and Game and Kuskokwim Native Association. The investigation plan submitted would provide only two years of funding for this project. This was done at the request of the Technical Review Committee so that a programmatic and geographic review of all Kuskokwim area salmon enumeration (weir) projects could be done prior to the 2014 Call for Proposals.

Project Number: 12-304
Project Title: Takotna River Salmon Weir
Geographic Region: Kuskokwim
Information Type: Stock Status and Trends
Principle Investigator: Christopher A. Shelden, Alaska Department of Fish and Game
Co-Investigators: Dick Newton, Takotna Community Association
Nell Huffman, Takotna Community Association
Kevin Schaberg, Alaska Department of Fish and Game
Zachary Liller, Alaska Department of Fish and Game
Clinton Goods, Alaska Department of Fish and Game

Project Cost: **2012:** $116,096 **2013:** $115,345

Recommendation: Fund

Issue

Takotna River salmon contribute to subsistence, commercial, and recreational fisheries within the Yukon Delta National Wildlife Refuge Federal nexus. Contributing to numerous initiatives that are inclusive of the entire Kuskokwim River drainage, the Takotna River weir is one of several projects used to develop reliable estimates of abundance, run timing, stock structure, productivity, and carrying capacity of salmon stocks over a broad geographic scale in the Kuskokwim Region (Area), issues identified by the Office of Subsistence Management as a priority information need. The project provides fundamental escapement information necessary to facilitate inseason management decisions and to assess trends in salmon populations. This project is essential as a platform for several other projects and for developing escapement goals. This project also incorporates substantial capacity building and outreach components, including a Takotna Community Association High School Internship program that has fostered understanding and cooperation between stakeholders and agencies across the region.

Salmon escapements from this project have been monitored successfully 13 out of 15 years since 1996. Information from this project has become integrated into the annual management process, both by providing insights into escapement and stock specific run timing through the fishery. The escapement age, sex, and length information collected at Takotna River provides part of the context needed to assess the impacts of subsistence harvest practices (*Age, Sex, and Length Composition of Lower Kuskokwim River Subsistence Chinook Harvest, p*roposed project 12-302). Total run abundance estimates that include data from Takotna River weir contribute to determination of annual exploitation rates, comparison of exploitation among age/sex components, assessment of high seas interception, examination of the influence of environmental factors on variability in abundance, and investigations into the potential development of drainage-wide escapement goals. This information is foundational for assessing changes in salmon abundance and run dynamics that may result from management actions or environmental factors such as climate change. Total abundance estimates facilitate the identification of both harvestable surpluses and conservation concerns, contributing to regulatory and management decisions that directly affect subsistence use as the issue of “allocation priority” is defined in the 2012 Request for Proposals.

Objectives

1. Determine daily and total annual Chinook, chum, and coho salmon escapements from 15 June to 20 September;
2. Estimate age-sex-length (ASL) composition of annual Chinook, chum, and coho salmon escapements to the Takotna River such that 95% confidence intervals of age composition will be no wider than ±10% (a=0.05, d=0.10);
3. Provide mentorship and administer education curriculum to Takotna Community Association high school interns; and
4. Serve as a platform to facilitate current and future fisheries research projects.

Methods

Investigators will install a resistance board weir on the lower Takotna River. Passage gates in the weir will allow fish to be identified by species and counted as they pass upstream and a live trap will be used to sample salmon for scales, and sex and length information; and for tag recovery for Arctic-Yukon-Kuskokwim Sustainable Salmon Initiative funded projects *Kuskokwim River coho salmon investigations,* and *Kuskokwim River Sockeye Salmon Investigations*. ASL data is processed post-season under *Kuskokwim Salmon ASL Assessment Project* (project 10-303). Video equipment will be installed to improve counting coverage at times of low volume passage. Investigators will also record daily water temperature, water level, and weather conditions, and maintain equipment in support of *Temperature Monitoring* (project 08-701). A local technician hired by Takotna Community Association will operate the project along with a lead crew member provided by Alaska Department of Fish and Game. The project will serve as a platform for several research initiatives including those listed above and genetic and otolith collection for stock identification. Potential exists for this project to provide a platform for future studies as well.

Partnership/Capacity Building

Takotna Community Association and Alaska Department of Fish and Game operate the Takotna River weir jointly at the Partnership Level. Planning, operation, and data analysis associated with the weir is done through an interactive feedback between staff from both organizations. Formerly, this project was administered by Takotna Tribal Council with assistance from Takotna Community Association. However, because of financial and administrative difficulties, Takotna Tribal Council has requested that Takotna Community Association take responsibility for this project. Takotna Community Association is the recognized village government of the village of Takotna and has a proven track record of grant and project management. Takotna Community Association is committed to fostering the continued development of a high level of public awareness about salmon management and stock status, and to continue to foster career interests in fisheries through the student internship program.

The Takotna projects has an established high school mentorship program, which facilitates broad community awareness and understanding, interest, and direct involvement fisheries management. The Takotna program provides part-time employment throughout the season to high school students who work directly with the full-time adult crew members. This program also sponsors an annual meeting where community members for Takotna and McGrath spend a full day touring the weir and participating in a presentation that describes the annual status of Kuskokwim River salmon runs and an overview of projects. This outreach program is a long-term investment that has developed informed individuals who have served as technicians, and will one day be board members, public leaders, and voting citizens who will influence the course of future events through their decisions.

Justification

The investigation plan addresses a priority information need for salmon escapement monitoring identified in the 2012 Request for Proposals. The investigators are experienced, competent and knowledgeable and there is strong partnership between the Alaska Department of Fish and Game and the community of Takotna. This project has a history of successful operation, providing fisheries managers with reliable information on salmon escapement in the Takotna River. In addition, the Takotna River weir has been utilized as a platform for other projects, including Monitoring Program project 08-701 for water temperature and stream gauge monitoring. The proposed budget is adequate to achieve project objectives, with both years less than the budget amount for 2011 under project 08-304. The investigation plan submitted would provide only two years of funding for this project. This was done at the request of the Technical Review Committee so that a programmatic and geographic review of all Kuskokwim area salmon enumeration (weir) projects could be done prior to the 2014 Call for Proposals.

Project Number: 12-308
Project Title: Population Assessment of Kuskokwim River Broad Whitefish Spawning above McGrath
Geographic Area: Kuskokwim
Information Type: Stock Status and Trends
Principal Investigator: Ken Harper, U.S. Fish and Wildlife Service
Co-Investigator(s): Malcolm McEwen, Alaska Department of Fish and Game
Merlyn Schelske, Bureau of Land Management
Kevin Whitworth, McGrath, Takotna, Nicholai, Telida Properties

Project Cost: **2012:** $122,621 **2013:** $66,815
Total Cost: **$189,436**

Recommendation: Do Not Fund

Issue

The exercise of making management recommendations implies that characteristics of fish populations have been reasonably estimated. Recent studies of broad whitefish biology in the Kuskokwim River have provided information on general location of spawning grounds and movement patterns, but have not estimated population sizes, age composition, or harvest, all critical information needs for management. This study will focus on determining the population size and demographics of broad whitefish that migrate from feeding area within the Yukon Kuskokwim Delta National Wildlife Refuge and other areas along the Kuskokwim River to the spawning area between McGrath and Medfra. This project addresses broad whitefish priority research needs identified in the Whitefish Strategic Plan for the Yukon and Kuskokwim rivers including collection of population-specific length and age data, and development of methods to estimate abundance of broad whitefish spawning populations. This feasibility study will allow us to determine size and age of the broad whitefish population that spawns upstream of McGrath. These data will be used in the future to monitor changes in spawning population abundance, age composition, recruitment, and mortality. This project will also assist the Service in meeting the legislative intent of Section 303 (7) (B) of ANILCA. Section 303 sets forth the purpose for which the Refuge was established, and mandates the Service to: (i) conserve fish and wildlife populations and habitats in their natural diversity . . . . (ii) provide, in a manner consistent with the purposes set forth in paragraph (I), the opportunity for continued subsistence uses by local rural residents.

Objectives

To conduct an initial mark-recapture study to estimate abundance of mature broad whitefish spawning in the Kuskokwim River upstream of McGrath using the standard levels of accuracy and precision prescribed by Robson and Regier (1964) for preliminary studies, resulting in an estimate that is within 50% of the true value 95% of the time;

Determine feasibility of using user-configurable sonar equipment to monitor the upstream and downstream migration of broad whitefish and estimate abundance of broad whitefish spawning in the Kuskokwim River between McGrath and Medfra.

To estimate the age, sex and length composition of mature broad whitefish spawning in the Kuskokwim River upstream of McGrath from samples collected from the run such that simultaneous 90% confidence intervals have a maximum width of 0.20."

Methods

We propose to use both mark-recapture (M-R) and Dual frequency identification sonar (DIDSON) to assess the population size of broad whitefish migrating to the spawning area located upstream of McGrath and below Medfra. The bounds of the study will include the marking and recapture of fish moving upstream to the spawning area and downstream after spawning. The upstream migration time-period will require capture of upstream migrating broad whitefish from September 1 through approximately October 28. Capture of post spawning fish will allow for mixing of tagged upstream migrants and the population estimated from this mixture. If this is not feasible then the upstream marking and recapture events will be used to estimate the numbers of whitefish during the upstream passage period.

Broad whitefish migrating upstream will be captured using nets and traps, marked with numbered tags, a secondary mark of a fin clip applied and released. Recapture will occur using similar equipment upstream of the initial marking location and below the spawning location during the upstream migration and then near the lower marking location during the post-spawning downstream migration. The M-R combination thought to be obtainable to estimate the population is 316 marked and 695 examined for marks. Although observed sample sizes will differ from these estimates as a function of success the goal will be to mark and examine in excess of this number.

Dual frequency identification sonar (DIDSON) will be deployed simultaneously from both banks of the Kuskokwim River near McGrath during the same period as the M-R study. DIDSON sonar will be deployed on each bank of the Kuskokwim River and sonar data will be collected, in two 30 min files, 24-hours per day, 7 days a week for the duration of the study. Technicians will mark fish on an electronic echogram, verifying swimming direction using DIDSON video. Marked files will be saved and the counts entered in a Microsoft Excel spreadsheet where daily estimates will be computed. Depending on the amount of time that may be missed, the crew will use different methods to make up for incomplete or missing counts. If less than 25 minutes are missed the passage rate for the period within that interval will be used to estimate passage for the non-sampled portion of the interval. Nets or seines fished near the sonar will be used to verify species.

To estimate the age, sex and length composition of the spawning population, otoliths and fin rays will be removed from a sample of fish (N=177, k=15, α 0.10, d=0.10) to estimate the simultaneous confidence intervals of ages present. Otoliths and fin rays will be cleaned and stored dry in coin envelopes and labeled with capture date, crew, capture method, location, species, and length. Otoliths, and fin rays will be aged and compared using published standards and guidelines. Fin clips will also be collected for genetic analysis.

Partnerships and Capacity Building

This project will foster the development of a partnerships and capacity building between the Service, locally hired end users, and McGrath, Takotna, Nicholai, Telida Properties. Technicians working on this project and hired by McGrath, Takotna, Nicholai, Telida Properties will be hired locally and trained in data collection and reporting methods. One Alaska Native Science and Engineering Program student intern hired by BLM will be able to work on this project during the spring semester at the University of Alaska Fairbanks..The use of local residents will also benefit the Service in gaining local traditional knowledge of fishing locations and environmental conditions. This Project will also allow technicians

and residents of McGrath and other residents of the Kuskokwim River to learn more about the research being conducted, the information gained from that research, and to take this information back to their communities.

Justification

While the investigators appear well qualified to conduct the proposed work, it was difficult to determine whether the first, and most important, objective of the project was achievable. The investigation plan mentions three to four models that could be used to estimate abundance, implying that one or more would be selected for use based on the recapture technique that proved most successful in the field. However, the investigation plan did not address an important issue raised in the proposal review concerning treatment of recoveries at more than one location. Since capture probabilities will likely vary among recovery locations, this aspect of the study design should have been addressed. Finally, the proposed budget appears high for a one-year project having a 2-4 month field season.

Project Number: 12-309
Project Title: Kwethluk River Weir Salmon Escapement Enumeration with Videography
Geographic Area: Kuskokwim
Information Type: Stock Status and Trends
Principal Investigator: Ken Harper, U.S. Fish and Wildlife Service
Co-Investigator(s): Steve J. Miller, U.S. Fish and Wildlife Service

Project Cost: **2012:** $36,240

Denotes cost associated with data analysis and report preparation between October 2013 and May 2014.

Recommendation: Fund

Issue

This project focuses on one of the priority information needs identified in the Federal Subsistence Fisheries Resource Program: Obtaining reliable estimates of Chinook, chum, and coho salmon escapements (e.g. weir projects). Management of Kuskokwim Area salmon fisheries is complex because of annual variability in run size, timing, and harvest of mixed stocks, overlapping runs of multiple species, allocation issues, and the immense size of the Kuskokwim River drainage. Weirs that monitor salmon returning to Kuskokwim River tributaries provide accurate escapement numbers, sex and age information as well as run timing. These data are heavily relied upon by state and federal managers for management of the Kuskokwim River commercial fisheries and the largest subsistence fisheries in the state. Without adequate and accurate escapement monitoring of salmon returns to the Kwethluk River, there is a risk to the conservation and maintenance of Chinook *Onchorynchus tshawytscha*, chum *O. keta*, sockeye *O. nerka*, pink *O. gorbuscha,* and coho salmon *O kisutch* populations. Monitoring of salmon returns to the Kwethluk River is essential to ensuring that Federal conservation mandates are fulfilled within the Yukon Delta National Wildlife Refuge (Alaska National Interest Lands Conservation Act (Section 303 (7) (8) a, b, c)). Escapement monitoring also helps reduce the risk of failure to provide a priority to subsistence uses, and the risk that subsistence harvest user needs will not be met. The addition of videography to the Kwethluk weir will enable accurate enumeration and identification of salmon passing the weir. It is anticipated that the video will allow for counts during turbid and high water events and allow fish passage to be recorded unattended during the night. The addition of the video will also help with fixed budgets and increasing operational costs that may result in reduced monitoring at the weirs in the future.

Objectives

1. Install and operate an underwater video system to improve enhance salmon escapement monitoring at the Kwethluk River weir.
2. Compare results of underwater video and above water counts to ensure video system functions correctly.

Methods

An underwater video system will be installed and operated in conjunction with the existing Kwethluk River weir project (project 10-306). The weir will direct upstream migrating adult salmon through a fish passage panel. A live trap will be attached to the upstream side of the fish passage panel and will be used

to capture and sample fish. A fish passage chute and video box will be installed at the head of the live trap to count fish. The entire weir and live trap will be visually inspected daily and maintained as needed to insure integrity.

Setup, design and operation of the video system will be similar to that used successfully in other rivers or tributaries in Bristol Bay, Kuskokwim River, and south-central Alaska. One underwater video camera will be located inside a sealed video box attached to the fish passage chute. The video box will be constructed of 3.2-mm aluminum sheeting and filled with filtered water. Safety glass will be installed on the front of the video box to allow for a scratch-free, clear surface through which images are captured. The passage chute will be constructed from aluminum angle and enclosed in plywood to isolate it from exterior light. The backdrop of the passage chute from which video images are captured will be adjustable laterally to minimize the number of fish passing through the chute at one time. The backdrop will be fabricated for ease of removal from the video chute when dirty and replaced with a new one. All video images will be recorded on a removable hard drive at 20 frames-per-second using a computer-based Digital Video Recorder. Fish passage will be recorded 24 hours per day seven days each week. Stored video files will be reviewed daily. The video box and fish passage chute will be artificially lit using a pair of 12-volt underwater pond lights. Pond lights will be equipped with 10-watt bulbs, which provided a quality image. The lights are to provide a consistent source of lighting during day and night hours. The Digital Video Recorder unit will be equipped with motion detection to minimize the amount of blank video footage and review time. A solar panel array will provide power to batteries. A gasoline generator will provide supplemental power to charge the batteries as needed. The video system will be installed and operated in conjunction with the weir, from late June through September 10. Age, sex, and length samples will continue to be collected as outlined in the weir investigation plan for the weir operations (project 10-306).

Proper function of the video system and motion detection software will be validated by comparisons of visual counts using established weir protocol and review of video footage for the same hourly blocks of time. Counts from on top of the fish trap will occur between the hours of 08:00 and 23:00 hours and adjustments to the video system will occur during this time when paired counts can be evaluated. Once counts match ($\pm$ 3%) between the two methods the fish passage chute will be opened and fish passage recorded 24 hours / day with video. The passage chute will be closed during periods when fish are sampled for ASL data. Video counts between 23:00 and 08:00 hours will be reviewed and tallied each day. Video operations will be evaluated and checked throughout the season. Four hours of randomly selected paired counts/week will be checked to validate the video system. During these paired counts, comparisons will be made between numbers counted, and identification of species. It is suspected that some deviation will occur between the two counting methods due to: water turbidity, multiple fish passing at one time, effects of water glare, and or rain/wind disturbances of the water surface. Species identification is also more accurate using the video because frames can be frozen, and reviewed numerous times by multiple observers. Results will be presented in the annual report for the weir operations (project 10-306).

Partnerships and Capacity Building

The Organized Village of Kwethluk has cooperatively worked with the U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office at the Kwethluk weir from 2001–present. The village employs local residents on the weir and keeps their constituents informed of information gathered at the weir. OVK is looking forward to continuing the partnership and working with the U.S. Fish and Wildlife Service, Kenai Fish and Wildlife Field Office. The addition of video to the weir will allow the FWS to train village technicians in the operation of this technology.

Justification

The Kwethluk River weir is an established and successful salmon monitoring project that provides the primary escapement and run strength data used to ensure sustainability of subsistence fisheries in the Yukon Delta National Wildlife Refuge and to conserve fisheries stocks in the Kwethluk River. Over the years of operation, weir counts have had to be suspended on several occasions due to high water or turbid water conditions. Adding video monitoring capability to the Kwethluk weir could provide more reliable estimates of salmon abundance, improve the long term data set necessary to monitor changes in adult salmon run strength on the Yukon Delta National Wildlife Refuge, and make enumeration work more cost effective.

The Office of Subsistence Management is planning to conduct a programmatic and geographic review of all Kuskokwim area weir projects prior to the 2014 Request for Proposals. If this video project (12-309) is funded in 2012, the video equipment may need to be transferred to another weir in 2014, if results of the programmatic and geographic review indicate this weir site to be of lower priority than others.

Project Number: 12-312
Project Title: Status of sheefish in Highpower Creek and Upper Kuskokwim River
Geographic Region: Kuskokwim
Information Type: Stock Status and Trends
Principle Investigator: Lisa Stuby, Alaska Department of Fish and Game

Project Cost: **2012:** $100,776 **2013:** $45,828 **2014:** $24,396

Recommendation: Fund

Issue: Sheefish are a highly migratory, long-lived species that migrate throughout most of the Kuskokwim River drainage and are important to both subsistence and sport fishers. A five-year radiotelemetry study (06-305; 10-305) was initiated in 2007 to extend our understanding of sheefish in the Kuskokwim River drainage. Through this effort, two previously undocumented spawning areas (Middle and East Forks) have been identified and information refined on the most populous spawning area (Big River) in the upper Kuskokwim River. However, none of the radio-tagged sheefish were detected at the mouth of Highpower Creek, which had been described as a spawning area in an Alaska Department of Fish and Game 1972 study. In 2010, a survey of this area noted that the habitat characteristics were unlike the Big River and Middle Fork spawning areas. According to the 1972 study, an area approximately 24 km upstream of Highpower Creek on the Swift Fork had the right combination of gravel size, water depth, and current for sheefish spawning. However, few sheefish were observed and it was assumed that most spawning occurred downstream. Implanting radio transmitters into sheefish located in the vicinity of Highpower Creek would facilitate locating the actual spawning area(s), provide information on migratory behavior and life history characteristics of fish spawning in that area, and contribute additional samples toward genetic baseline stock identification efforts. Identifying the status of a sheefish spawning population in Highpower Creek and completing genetic baseline sampling of sheefish spawning populations have been identified as priority research needs by the Strategic Plan for Research of Whitefish Species and by the 2012 Fisheries Monitoring program.

Locating aggregations of radio-tagged sheefish during the spawning period does not necessarily provide conclusive evidence of spawning in a particular location. Verification of spawning requires site visits to those areas to sample sheefish and assess their spawning condition. By completion date of the current project (10-305), site visits and sampling activities will have been completed at 2 of the 5 known or suspected spawning areas in the Kuskokwim River (Big River and Middle Fork). This project proposes to conduct site visits and sample sheefish in the 3 remaining potential spawning areas (the Kongeruk River, East Fork, and Highpower Creek) to verify whether spawning is occurring at these locations and to collect tissue samples from documented spawning stocks for genetic baseline development.

Objectives

1. Determine the status of the sheefish in the vicinity of Highpower Creek by:
    a. Documenting the locations of radiotagged sheefish during the spawning period;
    b. Verifying spawning areas by conducting site visits and capturing fish to assess their spawning condition; and,
    c. Determining the migratory timing and seasonal distribution of radiotagged sheefish through aerial tracking surveys and stationary tracking stations.

2. Conduct site visits and capture sheefish to assess spawning condition on suspected spawning areas on the East Fork Kuskokwim River and Kongeruk River to verify whether spawning is occurring there.
3. Collect tissue samples from each sheefish captured at spawning areas for future genetic stock identification analysis.
4. Describe habitat characteristics of the areas used for spawning such as channel characteristics, water temperature, spawning substrate, flow, turbidity, and pH.

Methods

Thirty sheefish will be captured using gillnets and hook and line gear and implanted with radio transmitters on the North Fork Kuskokwim River, principally at and near the mouth of Highpower Creek during September 2012. These fish will be followed through the fall of 2014 with a combination of stationary tracking stations and aerial tracking flights to ascertain whether or not they are actually spawning at the mouth of Highpower Creek or elsewhere on the Swift Fork Kuskokwim River. Because sheefish have been noted arriving at the Big River and Middle Fork 1–2 months prior to spawning, up to 15 transmitters will be deployed downriver to determine if sheefish migrate to additional upper Kuskokwim River locations to spawn. These transmitters will be deployed above the confluence with South Fork Kuskokwim River in order to not inadvertently tag sheefish bound for the East Fork Kuskokwim River spawning area.

Site visits to the Highpower Creek area (fall 2012) and the suspected spawning areas on the East Fork and Kongeruk River (fall 2013) will be made to capture sheefish and ascertain spawning readiness to verify whether spawning is occurring there. During these sampling efforts, a minimum of 10 sheefish will be examined at each location. Spawning readiness (i.e., determination of whether a fish will spawn in that season) will be evaluated based on a visual examination of gonads and Gonadosomatic indices (GSI) will be calculated for all fish sacrificed to begin establishing quantitative standards for maturity. Sheefish will be captured from each site using gillnet and/or hook and line gear. In addition, for every sheefish sampled, lengths will be taken and a fin clip will be collected and archived for future genetic analysis. Otoliths will be removed from all fish aged and archived for future strontium distribution microchemistry analysis to decipher the degree of anadromy for the different spawning stocks.

Few studies have been performed to classify and/or characterize sheefish spawning habitats, but it is generally recognized that sheefish require very specific habitats to spawn. Therefore, basic habitat characteristics in spawning areas such as water temperature, channel characteristics, spawning substrate, flow, pH, turbidity, and other pertinent habitat characteristic will be noted.

Partnerships/Capacity Development

The project biologist will continue to provide project updates to the Kuskokwim Native Association, McGrath, Telida, Nikolai, and Takotna, Limited), McGrath Native Village Council, and Tanana Chiefs Conference. She will continue to work closely with Kuskokwim Native Association and McGrath Native Village Council to garner college interns and/or local hires and will encourage local participation. The project biologist will offer to give public and school presentations. She will continue to present at the Kuskokwim Area staff meetings. The project biologist will work with the Eluska family of Telida and relatives in Nikolai for assistance in tagging sheefish at Highpower Creek and sampling sheefish on the East Fork Kuskokwim River. This project will be conducted cooperatively with other Kuskokwim River whitefish projects in sharing downloading duties of the stationary tracking stations and incorporating frequencies during aerial tracking flights. The fin clips collected during this study will be combined with

the fin clips collected during 2007 –2010 and added to a larger Yukon/Kuskokwim database currently at the U.S. Fish and Wildlife Service's Alaska Conservation Genetics Laboratory in Anchorage. The project biologist is a co-investigator for "Yukon and Kuskokwim Rivers Inconnu Genetic Baseline (project 12-700)".

Justification

This project addresses a priority information need identified in the 2012 Request for Proposals and the Whitefish Strategic Plan (project 08-206). The principal investigator has successfully designed, planned, and conducted similar sheefish work in the Kuskokwim River drainage (projects 06-305 and 10-305). The four objectives of the project are well thought out, clear, build on previous work by the principal investigator, and appear achievable with the proposed budget.

Project Number: 12-313
Project Title: Location, Migration Timing, and Description of Kuskokwim River Bering Cisco Spawning Origins
Geographic Area: Kuskokwim
Data Type: Stock Status and Trends
Principle Investigator: J. Michael Thalhauser, Kuskokwim Native Association
Co-Investigators: Randy J. Brown, U.S. Fish and Wildlife Service
Ken Harper, U.S. Fish and Wildlife Service

Project Cost: **2012:** $74,116 **2013:** $56,878 **2014:** $17,138

Recommendation: Fund

Issue

This project addresses the Kuskokwim River priority information need for determining migration timing and destination of Bering cisco *Coregonus laurettae* spawning populations in the Kuskokwim River Drainage. Bering cisco are anadromous salmonids with known spawning populations only in the Yukon, Kuskokwim, and Susitna rivers in Alaska. At this time, there is little understanding of the life history of Bering cisco harvested in the coastal waters of western Alaska. It is believed that all Bering cisco in coastal environments are rearing individuals from the Yukon and Kuskokwim rivers because these are the only two rivers, among the many surveyed in western Alaska, in which spawning Bering cisco have been identified. Sampling activities in late September 2010 within the Kuskokwim River drainage suggest that Bering cisco restrict their spawning migration to the mainstem, and appear to go into the South Fork Kuskokwim River only, where pre-spawning fish were captured approximately 20 miles above the village of Nikolai.

Starting in 2005, fall commercial fisheries for coregonid (whitefish) species were permitted in the Yukon River delta. During the first two (more explorative) years of this fishery, 10,077 coregonids of various species were harvested (17,541 lbs). During 2006, Bering Cisco made up a bulk of that catch and since then, have been the targeted species of this fishery with buyers originally requesting an allocation of 40,000 lbs for an East Coast Kosher market. Managers set the limit at 10,000 lbs from the Yukon Delta region, which was considered to be a conservative allocation given that little biological information was available for Bering cisco. The commercial fishery continues to target Bering cisco and in 2008 and 2009 an average of 8,914 Bering cisco was harvested per year with an average weight of 8,642 lbs/year. Buyers have continued to pressure managers for higher harvest limits with the near limitless demand of the market, despite a lack of information on Bering ciscos life history and abundance. If the commercial fishery for Bering cisco continues, it will be important to identify all spawning origins and to determine a sustainable harvest level. Identification of their spawning destination and timing will allow: 1) description and protection of the habitat; and 2) the possibility of obtaining stock abundance (mark-recapture) estimates if management of the fishery is required.

Objectives

1. Deploy 50 radio transmitters per year (2012 and 2013); 25 at the Kalskag Fish Wheels on the main stem and 25 near Nikolai on the South Fork;

2. Identify spawning destinations for Bering cisco in the Kuskokwim River by use of fixed tracking stations along the main stem and aerial telemetry flights along the main stem and in suspected, tributary spawning areas;
3. Characterize habitat that make these spawning areas suitable for Bering cisco spawning in order to add this information to the life history record of Bering cisco; and
4. Nominate spawning areas for inclusion into the Alaska Anadromous Waters Catalog

Methods

We propose to deploy radio transmitters in Bering cisco that are migrating upstream in the Kuskokwim River and track them to their spawning destinations. Sampling data in the Yukon and Kuskokwim rivers suggests that all Bering cisco migrating upstream during summer and fall months are mature spawning individuals. Gonadosomatic index data for Bering cisco captured in late September (near Nikolai) further indicate that spawning in this area takes place in October. While some migration timing research has been conducted in the Yukon River, migration timing in the middle reaches of the Kuskokwim River is not as well understood, although it is presumed to be similar.

Radio tags will be deployed in migrating Bering cisco from a Kuskokwim River fish wheel operated by Alaska Department of Fish and Game at Lower Kalskag and by using beach seines and fish traps near the village of Nikolai in 2012 and 2013. Twenty-five transmitters will be deployed at each location between May and September. Receiving stations upstream from the Lower Kalskag deployment site will identify those fish that migrate upstream and the region of the upper drainage to which they migrate. Aerial surveys flown from Aniak to suspected spawning areas of the upper drainages will take place in late September and throughout October to further identify migration rates and to locate spawning destinations. In 2013, Mike Thalhauser, assisted by one local technician and Daniel Gillikin from U.S. Fish and Wildlife Service, Yukon-Delta National Wildlife Refuge will travel to identified spawning areas to conduct habitat studies in order to better characterize the flow and substrate qualities that Bering cisco utilize during spawning.

Partnerships/Capacity Building

We have spoken with numerous individuals and organizations about this project and have received only favorable responses. Kuskokwim Native Association has and will continue to involve its represented villages involved in this project through outreach and locally hired technicians. The Village of Nikolai will play a key role in this project.

Justification

This project directly addresses a priority information need in the 2012 Request for Proposals and would help determine whether or not Bering cisco from the Kuskokwim drainage are being harvested in the commercial Bering cisco fishery in the Yukon River, which could have implications for subsistence management. The study is well-thought out and designed, and utilizes proven methods from previous whitefish studies in the Kuskokwim River drainage. The objectives are clear and appear achievable with the proposed budget, and the investigators are well qualified to conduct the proposed work. The capacity building component of this project would be strong, particularly since the principal investigator would be a Partners Program biologist and the Kuskokwim Native Association.

Project Number: 12-352
Project Title: Whitefish trends on the Upper Kuskokwim, Alaska
Geographic Region: Kuskokwim Region
Information Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Davin Holen, Alaska Department of Fish and Game
Co-Investigator(s): James Van Lanen, Alaska Department of Fish and Game
David Runfola, Alaska Department of Fish and Game

Project Cost: **2012:** $70,411 **2013:** $63,014 **2014:** $42,055

Recommendation: Fund

Issue

The Yukon-Kuskokwim Delta and Western Interior Regional Advisory Councils have identified collection and analysis of traditional ecological knowledge and non-salmon fish population monitoring as issues and information needs. Whitefish are among the most important non-salmon fish in local subsistence harvests on the upper Kuskokwim River, but subsistence harvest levels have declined over the last several decades, for unknown reasons. Whitefish migration patterns are also little understood on the upper Kuskokwim River and genetic studies of whitefish species are incomplete. This project responds to two information needs identified by the 2012 Fisheries Resource Monitoring Program's "Priority Information Needs" document; "harvest, use, and associated contextual information for whitefish by species in upper Kuskokwim River drainage communities" and the multi-regional priority information need to document "changes in subsistence fishery resources and uses, in the context of climate change where relevant including but not limited to fishing seasons, species targeted, fishing locations, fish quality, harvest methods and means, and methods of preservation. Include management implications."

This project seeks to understand whitefish harvests within the broader non-salmon harvest efforts. These efforts mainly take place in the spring and fall and include jigging for fish through holes in the ice in the spring, or by using nets in the fall. In addition, whitefish near Nikolai are caught in nets during the salmon harvest and are often incorrectly identified as distinct whitefish species and harvests are underreported. In order to understand contemporary harvests and reasons for change over time researchers have focused on three research questions: 1) What are the contemporary harvest and use patterns of each whitefish species used by Lime Village and Nikolai?; 2) What factors have shaped the harvest efforts of each whitefish species over time and why are whitefish harvests declining?; 3) What factors are influencing the ability of residents to harvest the varied species of whitefish?

Objectives

1) Estimate the subsistence harvest of non-salmon fish by residents of Lime Village (pop. 27) and Nikolai (pop. 96) in 2012 and 2013.
2) Evaluate the harvest of subsistence non-salmon fish in terms of species, gear, location, and timing of harvests.
3) Document traditional ecological knowledge of each whitefish species, including life history, ecology, environmental and climate-related observations, seasonal movement, spawning areas, interactions with other fish and wildlife, local taxonomies, trends in abundance, and traditional management systems.

4) Describe the characteristics and trends of the whitefish fishery by species.
5) Identify what factors may be influencing the ability of residents to harvest various whitefish species through the ice in the spring by jigging and with nets, and with nets in the summer and fall.

Methods

1) Harvest survey. The harvest survey is intended to address Objective 1, to estimate the harvest of non-salmon by residents of Lime Village and Nikolai in 2012 and 2013, and Objective 2, to evaluate the harvest of non-salmon fish in terms of species, gear, location, and timing of harvests. A harvest survey for all non-salmon species will occur for study year 2012 between February and March of 2013 and for study year 2013 in February 2014. The survey will be a recall survey. The respondents will be asked to estimate their households' harvests for the past year. An attempt will be made to interview knowledgeable representatives of all households in each study community.

2) Key Respondent Interviews. Key respondent interviews will collect traditional ecological knowledge related to trends in whitefish stocks and subsistence uses of these stocks to add to the information already available from previous. A minimum of five key respondent interviews will be conducted in each of the study communities. Researchers will identify key respondents in each community during household harvest surveys and through consultation with community members during the community scoping meetings. Key respondents will represent a range of harvesting effort and experience in the fishery. Topics will focus on those addressed in Objective 3, to document local knowledge of each whitefish species, including life history, ecology, environmental and climate-related observations, seasonal movement, spawning areas, interactions with other fish and wildlife, local taxonomies, trends in abundance, and traditional management systems.

3) Participant observation. Participant observation will be utilized during this project to add an ethnographic context to whitefish harvest patterns and use. It is also important for researchers to have firsthand experience in participating in spring ice fishing to better understand the skills and knowledge involved in this important activity. Participant observation will be useful in meeting Objectives 3 and 4. This participation will mainly occur during spring whitefish harvest activities in Lime Village and during the summer in Nikolai. Researchers will document methods and gear for taking whitefish. In addition researchers will attempt to understand if whitefish are a target species, if certain species of whitefish targeted, or if whitefish are simply part of the overall harvest of non-salmon fish.

Partnerships/Capacity Building

The project will only be successful through participation of the residents of Lime Village and Nikolai. As noted community scoping meetings will occur prior to the start of research and residents will work with community members during fishing activities. Lime Village and Nikolai have been contacted about this project and both communities will submit resolutions supporting this project after the community scoping meeting takes place. Nikolai has submitted a letter of support already for this project. Local researchers will be trained to assist in conducting interviews and surveys and will work as co-researchers on this project. Alaska Department of Fish and Game will sign cooperative agreements with the tribal governments of Lime Village and Nikolai. This will allow the communities to choose and hire local personnel. The local research assistant hired by each community will be responsible for arranging and conducting interviews in their communities.

Justification

The proposed project addresses a priority information need in the 2012 Request for Proposals, notably data on whitefish (by species) in upper Kuskokwim River drainage communities. The objectives for collecting harvest and some demographic data are clear and achievable, and the time frame is reasonable. The methods to reach the objectives are clearly described and adequate, budget appears adequate to achieve project goals, and the study provides opportunity for the communities to actively participate in the project.

SOUTHWEST ALASKA OVERVIEW

Issues and Information Needs

For the Southwest Region, the 2012 Request for Proposals was focused on four priority information needs:

- Obtain reliable estimates of Chinook salmon escapements.
- Patterns in whitefish harvest and use from Lake Clark communities.
- Environmental, demographic, regulatory, cultural, and socioeconomic factors affecting harvest levels of salmon for subsistence use in the Kodiak Area. Researchers should consider evaluating factors influencing use patterns and describing the socioeconomic impacts of other fisheries.
- Harvest of salmon for subsistence use by residents of the Aleutian Islands Area, including current and traditional harvest methods and means by species, and current and traditional uses and distribution practices.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 45 projects have been funded in the Southwest Region, and three will still be operating during 2012 (**Tables 1 and 2**). The ongoing projects address sockeye salmon assessment in the Buskin and Afognak river systems and Chinook salmon assessment in the Togiak River system.

Projects Forwarded for Investigation Plan Development

Seven proposals for research in the Southwest Region were submitted to the Office of Subsistence Management for funding consideration in 2012. In March 2011, the Technical Review Committee reviewed these proposals and recommended four projects for development of investigation plans. One project was withdrawn by the investigators prior to submission of an investigation plan. Investigators for the remaining three projects used comments from the Technical Review Committee review of proposals to develop investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigating agencies and organizations (**Tables 3 and 4**).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $405,000 is available for funding new projects in the Southwest Alaska Region.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Southwest Alaska since 2000. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, APIA= Aleutian-Pribilof Islands Association, BBNA=Bristol Bay Native Association, ISU= Idaho State University, KANA=Kodiak Area Native Association, NTC= Nondalton Tribal Council, NPS=National Park Service, QT=Qawalangin Tribe, USFWS=U.S. Fish and Wildlife Service, USGS=U.S. Geological Survey, USS&E=US Science and Education, and UW=University of Washington.

Project Number		Project Title	Investigators
		Bristol Bay Salmon	
00-010		Togiak River Salmon Weir	USFWS
00-031		Alagnak River Sockeye Salmon Escapement	ADFG, NPS, BBNA
00-033		Alagnak River Angler Effort Index	ADFG
00-042		Lake Clark Sockeye Salmon Assessment	USGS
01-047		Togiak River Subsistence Harvest Monitoring	BBNA, ADFG, USFWS
01-075		Nondalton Sockeye Salmon and Freshwater Fish TEK	NPS, NTC
01-095		Lake Clark Sockeye Salmon Escapement	USGS, UW
01-109		Traditional Ecological Knowledge of AkPeninsula/Becharolf NWR	ADFG, BBNA
01-173		Alagnak River Harvest Salmon Assessment of Recreational Fishery	ADFG
01-204		Ugashik Lakes Coho Salmon Escapement Estimation	USFWS, ADFG, BBNA
03-046		Fisheries Biotechnician Training Program	NPS
04-411	[a]	Lake Clark Sockeye Salmon Run Timing	ADFG
04-454		Bristol Bay Sharing, Bartering, and Trade of Subsistence Resources	ADFG, BBNA
05-402		Lake Clark Sockeye Salmon Escapement	NPS, USGS
08-402		Togiak River Chinook Salmon Radio Telemetry	USFWS, BBNA
08-405	[a]	Lake Clark Sockeye Salmon Assessment	NPS, USS&E, BBNA
		Chignik Salmon	
02-098		Kametalook River Coho Salmon Escapement & Carrying Capacity	USFWS, BBNA
02-099		Clark River Estimation of Sockeye and Coho Salmon Escapement	USFWS, BBNA
03-043		Perryville Coho Salmon Escapement	USFWS
05-405		Perryville-Chignik Coho and Sockeye Salmon Aerial Surveys	USFWS
07-404		Perryville-Clark River Coho and Sockeye Salmon Aerial Surveys	USFWS
		Bristol Bay-Chignik Freshwater Species	
00-011		Togiak River Dolly Varden Genetic Baseline Development	USFWS
00-012		Bristol Bay Traditional Knowledge of Fish	ADFG
02-034		Kvichak River Resident Species Subsistence Fisheries Assessment	ADFG, BBNA
04-401		Ungalikthlik and Negukthlik Rivers Rainbow Trout Assessment	USFWS
04-415		Tazimina Rainbow Trout Assessment	ADFG
05-403	[a]	Lake Clark Whitefish Assessment	ADFG, BBNA
07-408	[a]	Togiak River Rainbow Smelt Assessment	USFWS, BBNA
07-452		Kvichak Watershed Subsistence Fishing Ethnography	ADFG, BBNA, NPS
		Kodiak-Aleutians	
00-032		Buskin River Sockeye Salmon Stock Assessment	ADFG
01-059		McLees Lake Sockeye Salmon Escapement	USFWS
01-206		Mortenson Creek Sockeye and Coho Salmon Escapement	USFWS
02-032		Lower AK Peninsula/Aleutians Subsistence Fish Harvest Assessment	ADFG, APIA, ISU
03-047		Afognak Lake Sockeye Salmon - Smolt Enumeration Feasibility	ADFG
04-402		Mortenson Creek Sockeye and Coho Salmon Escapement	USFWS
04-403		McLees Lake Sockeye Salmon Escapement	USFWS
04-412		Afognak Lake Sockeye Salmon Stock Assessment	ADFG
04-414		Buskin River Sockeye Salmon Stock Assessment	ADFG
04-457		Kodiak Subsistence Fisheries Harvest Assessment and TEK	ADFG, KANA
07-401		Afognak Lake Sockeye Salmon Smolt Assessment	ADFG
07-402		Buskin River Sockeye Salmon Weir	ADFG
07-405		McLees Lake Sockeye Salmon Weir	USFWS, ADFG, QT
10-404	[a]	Buskin River Sockeye Salmon Smolt Assessment Feasibility	ADFG
10-406	[a]	McLees Lake Sockeye Salmon Weir	USFWS, ADFG, QT

[a] Final Report in preparation.

Table 2. Summary of onging 2012 projects funded under the Fisheries Resource Monitoring Program in Southwest Alaska. Abbreviations used for investigators are: ADFG=Alaska Department of Fish and Game, BBNA=Bristol Bay Native Association, and USFWS=US Fish and Wildlife Service.

Project Number	Project Title	Investigators	Budget 2012	Budget 2013
	Bristol Bay Salmon			
10-401	Afognak Lake Sockeye Salmon Smolt and Adult Assessment	ADFG	$147.0	$150.9
10-402	Togiak River Chinook Salmon Adult Assessment	USFWS, BBNA, ADFG	$210.1	$0.0
10-403	Buskin River Sockeye Salmon Adult Assessment	ADFG	$95.0	$96.8
	Total Southwest Alaska Monitoring Program		$147.0	$150.9

Table 3. Southwest Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Harvest Monitoring and Traditional Ecological Knowledge				
12-450	Aleutian Islands Salmon and Other Subsistence Harvests				$44.2
12-452	Lake Clark Whitefish Climate Change Trends	$55.9	$80.2	$2.0	
12-453	Kodiak Salmon Fishery Changing Patterns				

monitoring plan for each region and across the entire state. After reviewing the three investigation plans, the Technical Review Committee recommended funding all of the proposed projects (**Table 5**):

12-450	Aleutian Islands Salmon and Other Subsistence Harvests	$	44,241
12-452	Whitefish Trends, in Lake Clark and Iliamna Lake, Alaska	$	138,169
12-453	Kodiak Salmon Fishery Changing Patterns	$	0
	Total	$	182,410

The three projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each project recommended for funding in the Southwest Alaska region in 2012 is summarized below (see Executive Summaries for more details on all projects).

12-450 Aleutian Islands Salmon and Other Subsistence Harvests. This three-year project would provide data on harvests and subsistence uses of salmon and other fish species in the Aleutian communities of Unalaska, Nikolski, Atka, and Adak. The investigator would combine data from this project with data from a concurrent project and provide the Monitoring Program with information on a total of eight communities. The study would explore recent changes to subsistence harvests so that "managers can better understand factors that have shaped current practices" including, but not limited to, changing access, changing regulations, climactic influences, and socioeconomic influences. The study would explore household and community economics in order to place subsistence salmon practices into

Table 4. Southwest Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG=Alaska Department of Fish and Game and ISU=Idaho State University.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Harvest Monitoring and Traditional Ecological Knowledge		
12-450	ISU	Aleutian Islands Salmon and Other Subsistence Harvests	$0.0	$0.0
12-452	ADFG	Lake Clark Whitefish Climate Change Trends	$0.0	$0.0
12-453	ADFG	Kodiak Salmon Fishery Changing Patterns	$0.0	$0.0

Table 5. Southwest Alaska funding recommendations by the Technical Review Committee (TRC) for the 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Harvest Monitoring and Traditional Ecological Knowledge					
12-450	Aleutian Islands Salmon and Other Subsistence Harvests	Yes	$44.2	$160.1	$100.0	$0.0
12-452	Lake Clark Whitefish Climate Change Trends	Yes	$138.2	$93.3	$53.4	$0.0
12-453	Kodiak Salmon Fishery Changing Patterns	Yes	$0.0	$86.3	$86.3	$0.0
	Total		$182.4	$339.7	$239.7	$0.0
	Guidelines		$405.0			
	TRC Recommended		$182.4	$339.7	$239.7	$0.0

broader socioeconomic contexts of the region. This project would address a priority information need identified in the 2012 Request for Proposals.

12-452 Whitefish Trends, in Lake Clark and Iliamna Lake, Alaska. This two-year project would investigate declining whitefish harvests and whitefish harvests more generally in the context of non-salmon fisheries in a portion of the Bristol Bay region. The investigators would focus on whitefish harvests that primarily occur in spring and fall through the ice or in nets during salmon harvests. These harvests have often been misidentified and underreported. To understand contemporary harvests and reasons for change, the investigators propose three research questions to be answered through ethnographic fieldwork in the communities of Igiugig, Iliamna, Newhalen, Nondalton, and Port Alsworth. Igiugig was added after the proposal review and Pedro Bay was deleted. The research questions are: 1) What are the contemporary harvest and use patterns of each whitefish species used by residents of the Lake Clark communities?; 2) What factors have shaped the harvest efforts of each whitefish species over time?; and 3) What factors are influencing the ability of residents to harvest the varied species of whitefish? This project would address a priority information need identified in the 2012 Request for Proposals and in the Whitefish Strategic Plan.

12-453 Kodiak Salmon Fishery Changing Patterns. This two-year project would investigate changes in subsistence fisheries on Kodiak Island, with particular emphasis on the communities of Larsen Bay and Old Harbor. This research would update and expand prior research in the area that showed harvests were

underrepresented when based on estimates obtained from permits. The investigators would evaluate the reporting system for subsistence harvests, compare communities along the Kodiak road system with more remote communities, and elucidate factors that influence current harvests. The goal of this work would be to reveal information about factors affecting salmon harvests within broader environmental, demographic, regulatory, cultural and socioeconomic contexts. Three main research questions would be explored: 1) What are the historic use patterns of subsistence salmon fisheries that can be accessed by the Kodiak archipelago road system and by more isolated communities?; 2) What local knowledge do subsistence salmon harvesters hold regarding the social-ecological system of the Kodiak archipelago of which the subsistence salmon fishery is a part?; and 3) How have cultural, social, and economic factors shaped the Kodiak subsistence salmon fishery over time? This project would address a priority information need identified in the 2012 Request for Proposals.

Project Number: 12-450
Project Title: Aleutian Islands Salmon and other Subsistence Harvests
Geographic Region: Southwest Alaska
Information Type: Harvest Monitoring and Traditional Ecological Knowledge
Principal Investigator: Dr. Katherine Reedy-Maschner, Idaho State University

Project Cost: **2012:** $44,241 **2013:** $160,113 **2014:** 99,984

Recommendation: Fund

Issue

This proposal addresses the priority information need for harvest data of salmon for subsistence use by Aleutian Islands Area residents, methods and means by species, and traditional use and distribution practices. Current detailed information on all subsistence harvests is needed for management of these species. This study will contextualize salmon in the broader subsistence and socioeconomic conditions of Adak, Atka, Nikolski, and Unalaska, and will include findings from a previous study involving the collection of similar data from Akutan, False Pass, Nelson Lagoon, and Port Heiden. The Office of Subsistence Management will receive comprehensive data on eight Bering Sea communities. Using household and community level data, the study will document subsistence harvests, distribution practices and levels, social dynamics that contribute to those practices, map harvest areas using GIS, and describe household and community economics in order to meet the priority need of the Office of Subsistence Management for information on salmon for subsistence use in the Aleutian Islands. This study will provide data on salmon availability and importance relative to other subsistence foods. The study will also investigate the role of salmon and other foods and products in household distribution networks, access to subsistence foods (regulatory, obtainability, socioeconomic and logistical), costs incurred, and resources (e.g., equipment, crews) needed in order to harvest. Surveys will also gather ecological observation data in conjunction with species observations to potentially evaluate climate change impacts on subsistence fish and other species.

Objectives

The overarching research questions are, what is the current role of subsistence fisheries to Aleutian Islands Area residents?; and what is the social map of food harvesting and distribution, and how is it shaped by other socioeconomic circumstances? The objectives are:

1) Estimate the harvest levels and methods of all subsistence species in the study communities for calendar year 2012, especially salmon. Determine proportion of salmon relative to other subsistence harvests.
2) Estimate sharing and distribution patterns of species and products between individuals, households, and communities.
3) Link and compare household harvests and uses by communities to four other Bering Sea study communities. Eight total villages will be included.
4) Determine, using all available qualitative and quantitative data, changes in subsistence species, access, and uses over time.
5) Contextualize subsistence fisheries in the broader regional economy.

6) Compare household survey data with harvests reported in the State's permit system and identify reporting issues.
7) Discover community subsistence concerns, observed changes in species abundances and locations, and observed environmental changes.

Methods

Methods, in order of implementation, are 1. Connect with Aleutian communities, give presentations on the goals and methods of the project, and set out opportunities for local involvement. 2. Conduct key informant interviews to determine harvest access, methods, frequency and use, village socioeconomics, local politics, demographics, and cultural factors. Perform a literature review. 3. Conduct household surveys for the four study communities (aiming for 100%) that capture genealogical relationships; harvest numbers of salmon, other marine fish, freshwater fish, land mammals, birds and eggs, and plant species for all household members; sharing and distribution of whole species and products between individuals; household economics; harvest locations; and species health/abundance observations. Participants shall be remunerated at a reasonable rate for their time and effort. 4. Integrate these data into a database from a recent ongoing study contract under the U.S. Bureau of Ocean Energy Management, Regulation and Enforcement in which similar data (in the context of anticipated oil and gas development) were collected for Port Heiden, Nelson Lagoon, False Pass and Akutan. Preliminary data from Akutan demonstrate limited salmon trading with people in the Pribilofs, thus data from those communities will be gathered indirectly. Contribute these data to the Community Subsistence Information System (CSIS) 5. Compare survey data with harvest numbers reported to the State to address data gaps. 6. Analyze survey field data, perform social network analysis, and use qualitative data to guide interpretation. 7. Prepare reports to the OSM and to the communities.

Partnerships and Capacity Building

This project actively solicits local research assistants who will be trained in administering the surveys. Assistants and survey respondents will be compensated for their time and efforts. The project also actively seeks analytical input from local communities in interpreting survey results. The project with conform to each community's requirements for participation and partnership.

Justification

This project offers to provide data as requested in the 2012 priority information needs for the Aleutian Islands Area, namely harvest data of salmon and other subsistence resources. The investigator will collect comprehensive data on subsistence harvests in four Aleutian communities, Unalaska, Nikolski, Atka, and Adak. The investigator presents this research plan clearly and comprehensively. The investigator offers a clear socio- cultural study which integrates valuable harvest information and knowledge about Aleutian fisheries with contemporary community, household, and management changes. The overall framework, questions, and objectives, the research methods, and researcher ability lead to a recommendation to fund this project.

Project Number: 12-452
Project Title: Whitefish trends in Lake Clark and Iliamna Lake, Alaska
Geographic Region: Southwest Alaska
Information Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Davin Holen, Alaska Department of Fish and Game,
Co-Investigator(s): Courtenay Gomez, Bristol Bay Native Association,
Robbin La Vine, Alaska Department of Fish and Game,
Karen Evanoff, Lake Clark National Park and Preserve,
Valerie Engebretsen, Nondalton Tribal Council

Project Cost: **2012:** $138,169 **2013:** $93,323 **2014:** $53,359

Recommendation: Fund

Issue

This project responds to two information needs identified in the "Priority Information Needs" document by the Office of Subsistence Management and the Bristol Bay Regional Advisory Council. These are "patterns in whitefish harvest and use from Lake Clark communities," and the multi-regional priority information need to document "changes in subsistence fishery resources and uses, in the context of climate change where relevant including but not limited to fishing season, species target, fishing locations, fish quality, harvest methods and means, and methods of preservation. Include management implications." Whitefish species are among the most important non-salmon fish in local subsistence harvests, but harvest of whitefish by local residents of Lake Clark have declined over the last several decades, for unknown reasons. Whitefish migration patterns are also little understood in the Iliamna area and genetic studies of whitefish species are incomplete. A more complete understanding of whitefish migration patterns through local knowledge could inform fisheries managers and biologists in Lake Clark National Park and Preserve and Katmai National Park who could potentially be managing the same whitefish stock. This project seeks to understand whitefish harvests within broader non-salmon fish harvest efforts. These efforts mainly take place in the spring and fall and include jigging for fish through holes in the ice in the spring, or by using nets in the fall. In addition, whitefish in Sixmile Lake and Lark Clark are caught in nets during the salmon harvest and are often incorrectly identified and harvests are underreported. In order to understand contemporary harvests and reasons for change over time researchers have focused on three research questions: 1) What are the contemporary harvest and use patterns of each whitefish species used by residents of the Lake Clark communities of Igiugig, Iliamna, Newhalen, Nondalton, and Port Alsworth?; 2) What factors have shaped the harvest efforts of each whitefish species over time?; 3) What factors are influencing the ability of residents to harvest the varied species of whitefish?

Objectives

1. Estimate the harvest of nonsalmon by residents of Igiugig (pop. 50 in 2010), Iliamna (pop. 109), Newhalen (pop. 190), Nondalton (pop. 164), and Port Alsworth (pop. 159) in 2012 and 2013.
2. Describe the harvest of nonsalmon fish in terms of species, gear, location, and timing of harvests
3. Document local knowledge (TEK) of each whitefish species, including life history, ecology, environmental and climate-related observations, seasonal movement, spawning areas, interactions

with other fish and wildlife, local taxonomies, trends in abundance, and traditional management systems.

4. Describe the characteristics and trends of the whitefish fishery by species.
5. Identify what factors may be influencing the ability of residents to harvest various whitefish species through the ice in the spring.

Methods

1) Harvest survey. The harvest survey is useful to meet Objective 1; to estimate the harvest of nonsalmon by residents of Igiugig, Iliamna, Newhalen, Nondalton, and Port Alsworth in 2012 and 2013 and Objective 2; to evaluate the harvest of nonsalmon fish in terms of species, gear, location, and timing of harvests. A harvest survey for all non-salmon species will occur for study year 2012 between February and March of 2013 and for study year 2013 in February 2014. The survey itself will also document household demographics, harvest of non-salmon fish, and location of harvests. The study communities are experiencing demographic changes and this survey could lead to a greater understanding of the link between demographic changes and harvest patterns.

2) Key Respondent Interviews. Key respondent interviews will collect local traditional knowledge related to trends in whitefish stocks and subsistence uses of these stocks to add to the information already available from previous research. A minimum of four key respondent interviews will be conducted in each of the main study community of Igiugig, Nondalton, and Port Alsworth and an additional 4 key respondent interviews will be conducted in the other study communities for a total of 16 key respondent interviews. The topics will focus on those identified in Objective 3: to document local knowledge of each whitefish species, including life history, ecology, environmental and climate-related observations, seasonal movement, spawning areas, interactions with other fish and wildlife, local taxonomies, trends in abundance, and traditional management systems.

3) Participant observation. Participant observation will be utilized during this project to add an ethnographic context to whitefish harvest patterns and use. It is also important for researchers to have firsthand experience in participating in spring ice fishing to better understand the skills and knowledge involved in this important activity. Participant observation will be useful in meeting Objectives 3 and 4. This participation will mainly occur during spring whitefish harvest activities in Nondalton and Port Alsworth. In addition researchers will attempt to understand if whitefish are a target species, whether certain species of whitefish are targeted, or whether whitefish are simply part of the overall harvest of non-salmon fish. There will be an education element to the participant observation component. Spring fishing on the ice in Nondalton, for example, often occurs during culture week at the school.

Partnerships/Capacity Building

The project would be a collaborative effort among the Bristol Bay Native Association, the Division of Subsistence, Alaska Department of Fish and Game, the Nondalton Tribal Council, Lake Clark National Park and Preserve, and the tribal governments of Igiugig, Iliamna, and Newhalen. Local researchers will be trained to conduct interviews and surveys. The Nondalton Tribal Council is very interested in this study as it would complement their Integrated Resource Management Plan currently underway. The Nondalton Tribal Council will be a full partner on this project. The Nondalton Tribal Council researcher will coordinate the key respondent interviews and the participant observation. In addition they will be involved in Port Alsworth as well as this community has close ties to Nondalton. In all of the study communities the local research assistant will be responsible for arranging and conducting interviews in their communities.

Justification

The proposed project addresses a priority information need in the 2012 Request for Proposals that has been a high priority for a few years. The investigators followed the suggestions of the Technical Review Committee, rewriting their objectives and research questions so that they are clearer and potentially achievable. The project goals have the potential of being met within the suggested time frame. Ratings of high were given to the ability of the researchers, the partnership and capacity building, the need for this research, and the Federal linkage is clear. The investigators note that they are offering a broader exploration of factors affecting change; however, it is suggested that to be successful in meeting this goal the investigators need to address the framework for identifying these factors prior to collecting data so that it can be understood in the appropriate broader socio-environmental, political or economic context. While answering the research questions and objectives relating to change may be possible, without a clear discussion of how this study fits into existing data or without clearly defined and presented parameters surrounding 'factors' of influence, this study may only provide more data relating to description of the harvest and use patterns dealing with the first four objectives of the study. It would better serve the Monitoring Program to have the data collected by the project placed into a clearly defined context which will help the investigators to make a more reliable identification of the factors influencing the harvest levels by residents of these communities by species and through time. If the investigators address the concerns of the Technical Review Committee, it is recommended that this project be funded.

Project Number: 12-453
Project Title: Changing Patterns in the Kodiak Area Subsistence Salmon Fishery
Geographic Region: Southwest Alaska
Information Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Davin Holen, Alaska Department of Fish and Game
Co-Investigator(s): Malla Kukkonen, Alaska Department of Fish and Game
Meredith Marchioni, Alaska Department of Fish and Game
Tonya Lee, U.S. Fish and Wildlife Service

Project Cost: **2012:** $0 **2013:** $86,334 **2014**: $86,323

Recommendation: Fund

Issue

This project responds to an information need identified in the "Priority Information Needs" document prepared by the Office of Subsistence Management and the Kodiak Aleutians Regional Advisory Council by investigating the "environmental, demographic, regulatory, cultural and socioeconomic factors affecting harvest levels of salmon for subsistence use in the Kodiak Area." This project was devised, and study communities chosen, after consultation with staff from the Kodiak National Wildlife Refuge, Alaska Department of fish and Game area fisheries managers, the Alutiiq Museum, the Kodiak Area Native Association, and the Sun'aq Tribe of Kodiak. In the Kodiak area, Alaska Department of fish and Game sends subsistence fishery permits to every permit holder who returned a permit in the previous year. Subsistence fishers are required to return their permits to Alaska Department of fish and Game after the salmon season. Every year, the U.S Postal Service returns many permits to Alaska Department of fish and Game marked "undeliverable." Therefore, harvest reports are not expanded for this area to produce an estimated harvest. Surveying a sample of subsistence salmon permit holders on the Kodiak road system, a sample of the general population of the Kodiak road system, and the case study communities of Larsen Bay and Old Harbor could assist fishery managers and regulatory boards in evaluating subsistence salmon fishing opportunities in the Kodiak area. Information would also be collected for Kodiak road system resident important harvesting locations including the Buskin River, which the Federal Subsistence Board has identified as important for the customary and traditional use by residents of Kodiak. This project would update and expand on research previously conducted in Akhiok, Larsen Bay, Old Harbor, Ouzinkie, and Port Lions in 2005 which found data from returned permits underrepresented subsistence harvests. Conducting follow-up research in Larsen Bay and Old Harbor could inform managers on the outcome of educational efforts undertaken during the 2005 study to encourage residents to obtain permits and return them to Alaska Department of fish and Game. During deliberations at the 2010 Board of Fisheries meeting in Kodiak, Board Chairman Vince Webster encouraged the Subsistence Program Manager for the Division of Subsistence, Davin Holen, to conduct research to provide better harvest data for Kodiak Island communities. In addition to harvest data, this research project would also help managers understand the broader socioeconomic and regulatory factors influencing the harvest of salmon for subsistence by Kodiak Island residents. In addition to harvest data, this research project would also help managers understand the broader socioeconomic and regulatory factors influencing the harvest of salmon for subsistence by Kodiak Island residents.

Subsistence fisheries on Kodiak Island have been influenced by changes in demography, transportation technology, ecology, environmental disasters, and other cultural, social, and economic factors. This

project will seek to understand the effects of these changes on the cultural, social, and economic characteristics of salmon fishing. This research will be guided by three research questions based on an evaluation of existing data and the literature summarizing social-ecological studies about subsistence fishing economies and fisheries management. The three research questions are: 1) What are the historic use patterns of subsistence salmon fisheries that can be accessed by the Kodiak archipelago road system and by more isolated communities?; 2) What local knowledge do subsistence salmon harvesters hold regarding the social-ecological system of the Kodiak archipelago of which the subsistence salmon fishery is a part?; 3) How have cultural, social, and economic factors shaped the Kodiak subsistence salmon fishery over time?

Objectives

1) To compile and update data on the harvest of salmon in the Kodiak archipelago road system and the case study communities of Larsen Bay and Old Harbor and to compare and contrast the road system fishery and the fishery of the more isolated communities.
2) To describe current (2012 study year) subsistence harvest and use patterns of salmon on the Kodiak archipelago including harvest locations. Evaluate whether education efforts in Larsen Bay and Old Harbor increased the accuracy of permits over time.
3) To collect and discuss local knowledge about patterns and trends of salmon harvests and salmon stock diversity, including changes in location over time.
4) To identify factors of the social-ecological system of the Kodiak archipelago that shape contemporary subsistence harvesting patterns and uses of salmon by residents of Kodiak City and the nearby road system, and the study communities of Larsen Bay and Old Harbor.

Methods

1) Compile and update harvest data. This objective has two parts. The first task is to compile existing harvest data including spatial data. The second part of Objective 1 is to evaluate harvest and use patterns for salmon. The second data gathering method will be a systematic household survey administered in Kodiak City and the surrounding road system and the study communities of Larsen Bay and Old Harbor. Kodiak City will include Kodiak City, Kodiak Station, and Womens Bay; all of which are grouped together in findings prepared by Alaska Department of fish and Game.

2) Describe current subsistence harvest and use patterns. The data gathering methods for this objective will consist of key respondent interviews in the form of "map biographies" guided by an open interview protocol. Knowledgeable retired fishers will also be interviewed to understand historic harvest locations that could be compared to contemporary fishers.

3) Collect traditional ecological knowledge about salmon. Traditional ecological knowledge topics will be explored during the map biographies described under Objective 3. During the discussion, fishers will be asked to describe their observations regarding changes in salmon stocks at fishing locations they are familiar with and will be asked to provide information to help explain these trends. Topics will be focused on answering the research questions including what cultural, social, economic, and environmental factors have shaped salmon harvest efforts over time, as well as what environmental and climate related factors influence their ability to harvest salmon.

4) Identify factors influencing subsistence salmon fishing. A quantitative analysis of these factors will performed based on the systematic household surveys in Objective 2, which will include an assessment question which will address how fishing activity has changed over time.

Partnerships/Capacity Building

This project will begin with a community scoping meeting in November 2012. Input will be sought from communities, staff of the divisions of Commercial Fisheries and Sport Fish of Alaska Department of Fish and Game, as well as the U.S. Fish and Wildlife Service, regarding survey instruments and interview protocols. The project will be a collaboration between the Division of Subsistence, Alaska Department of Fish and Game, and the Kodiak National Wildlife Refuge. The Sun'aq Tribe of Kodiak has been consulted. Local researchers will be trained to conduct interviews and surveys. The community of Larsen Bay and the Alutiiq Museum have provided letters of support for this project and a letter of support will be sought from the community of Old Harbor following the community scoping meeting. Ethnographic material will be archived at the Alutiiq Museum.

Justification

This project addresses a priority information need in the 2012 Request for Proposals on factors affecting salmon harvests in the Kodiak Area. The investigators are qualified to conduct research and the partnership and capacity building component of the research is rated high.

SOUTHCENTRAL ALASKA REGION OVERVIEW

Issues and Information Needs

For the Southcentral Alaska Region, the 2012 Request for Proposals was focused on two priority information needs:

- Mapping of lifetime and current subsistence use areas for harvest of salmon and non-salmon fish species by residents of Ninilchik, Hope, and Cooper Landing. Research should include intensity of use and use on Federal public lands and waters.
- Harvest, use, and associated contextual information for salmon and nonsalmon by species in communities of the Copper River Basin, updating previous research supported by the Monitoring Program.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 44 projects have been funded in the Southcentral Alaska Region, and four of these projects are ongoing during 2012 (Tables 1 and 2). All of the ongoing projects are directed at Copper River salmon.

Projects Forwarded for Investigation Plan Development

Three proposals for research in the Southcentral Alaska Region were submitted to the Office of Subsistence Management for funding consideration in 2012. In March 2011, the Technical Review Committee reviewed these proposals and recommended two for development of investigation plans. Investigators used comments from the Technical Review Committee review of proposals to develop investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigators (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $135,000 is available for funding new projects in the Southcentral Alaska Region.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the two investigation plans, the Technical Review Committee recommended funding both of the proposed projects (Table 5):

12-500	Copper River Chinook Salmon RFID Feasibility	$	76,401
12-550	Upper Copper River Changing Environments and Subsistence	$	81,967
	Total	$	158,368

The two projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each project recommended for funding in the Southcentral Alaska region in 2012 is summarized below (see Executive Summaries for more details on all projects).

12-500 Copper River Chinook Salmon RFID Feasibility. This two-year project would examine the feasibility of placing radio frequency identification readers into a Copper River tributary to monitor Chinook salmon escapement. This project would piggyback on Monitoring Program Project 10-503, which estimates drainage-wide Chinook salmon abundance through mark-recapture methods using passive integrated transponders inserted into external T-bar tags. These marked Chinook salmon comprise up to 5% of the estimated drainage-wide Chinook salmon escapement each year. If they could be reliably detected by radio frequency identification readers placed in tributaries, resulting information would provide annual estimates of entry timing and relative abundance. While this project would not directly address a priority information need identified in the 2012 Request for Proposals, successful implementation of this technology could allow long term monitoring of tributary escapements and might contribute to a better understanding of climate change effects on run timing and spawning populations.

12-550 Upper Copper River Changing Environments and Subsistence. This two-year project would examine the various factors affecting subsistence harvests of salmon and other fishes in the Upper Copper River. This would be accomplished through use of available information as well as the collection of new information. Available information would be summarized and used to describe the characteristics and trends of the subsistence fisheries. New information would be obtained by documenting subsistence fishing effort, harvest, processing, and distribution of fish in four Copper River basin families in the communities of Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center. This information would be used to identify factors affecting contemporary subsistence harvests of salmon and non-salmon and to determine whether and how these factors could be addressed through resource management practices. This project would address a priority information need identified in the 2012 Request for Proposals.

Table 1. Summary of completed projects under the Fisheries Resource Monitoring Program in Southcentral Alaska since 2000. Abbreviations for investigators are: ADFG=Alaska Department of Fish and Game, CNTC=Cheesh'na Tribal Council, CRNA=Copper River Native Association, CRRC=Chugach Regional Resources Commission, CRWP=Copper River Watershed Project, FS=USDA Forest Service, Karie=Dr. Karie, LGL=LGL Ltd, MTC=Mentasta Tribal Council, NPS=National Park Service, NVE=Native Village of Eyak, PWSSC=Prince William Sound Science Center, and USFWS=U.S. Fish and Wildlife Service.

Project Number	Project Title	Investigators
	Copper River Salmon	
00-013	Tanada Creek Salmon Escapement	NPS
00-034	Miles Lake Sonar Improvement	FS, ADFG
00-040	Copper River Salmon Subsistence Fishery Evaluation	ADFG, CRNA
01-020	Copper River Chinook Salmon Feasibility of Abundance Estimate	NVE, LGL
01-021	Lower Copper River In-season Abundance Estimate	NVE, LGL, ADFG
01-217	Copper River Groups Capacity Building Workshop	CRNA, LGL
02-015	Copper River Chinook Salmon Radio Telemetry	ADFG, NVE
03-010	Upper Copper River C&T Subsistence Fish Harvests GIS Atlas	CRNA, LGL
04-501	Long Lake Sockeye Salmon Escapement	NPS,CRWP
04-502	Tanada Creek Salmon Escapement	NPS
04-503	Copper River Chinook Salmon Abundance Estimate	NVE, LGL
04-506	Lower Copper River In-season Abundance Estimate	NVE, LGL, ADFG
04-507	Copper River Chinook Salmon Genetics	ADFG, NVE, NPS
04-553	Copper River Salmon Runs Traditional Knowledge of Long Term	ADFG, NVE
05-501	Copper River Sockeye Salmon Spawning Distribution	NVE, ADFG
06-502	Copper River Sockeye Salmon Inriver Abundance	NVE, ADFG
07-502	Tanada Creek Salmon Weir	NPS
07-503	Copper River Chinook and Sockeye Salmon Abundance	NVE
07-505	Long Lake Salmon Weir	NPS, PWSSC
08-501	Copper River Sockeye Salmon Abundance	NVE
	Copper River Steelhead	
01-148	Copper River Steelhead Stock Status	ADFG, CRNA,USFWS
01-035	Copper River Steelhead Harvest Monitoring	NPS, CRNA
03-001	Cooper River Steelhead Population Biology	ADFG
05-502	Copper River Steelhead Abundance	ADFG, NVE
	Copper River Freshwater Species	
01-110	Copper River Non-Salmon Species Harvest and Use	CRNA, ADFG, CHVC, CNTC, Karie,
02-077	Upper Copper River Increasing GIS Capabilities	CRNA
07-501	Tanada and Copper Lakes Burbot Abundance	NPS, ADFG, MTC
	Copper River Eulachon	
02-075	Eulachon Subsistence Harvest Opportunities	NVE, FS, ADFG
	Prince William Sound Salmon	
00-035	Coghill Coho Salmon Weir	ADFG, FS
02-028	Chugach Region TEK Mapping	CRRC
03-033	Billy's Hole, PWS Salmon Stock Assessment	ADFG, CRRC, FS
	Cook Inlet	
00-038	Cooper Creek Dolly Varden Assessment	ADFG
00-041	Turnagain Arm Eulachon Subsistence Use & Assessment	FS
03-045	Cook Inlet Subsistence Fisheries Harvest Assessment	ADFG
07-506	Tustumena Lake Coho Salmon Spawning Assessment	USFWS
07-507	Kasilof Watershed Coho Salmon Radio Telemetry	USFWS
07-509	Kasilof Watershed Steelhead Trout Radio Telemetry	USFWS
08-502	Tustumena Lake Coho Salmon Assessment	USFWS
08-503	Kasilof River Steelhead Radio Telemetry	USFWS
08-504	Crooked and Nikoli Creeks Steelhead Weirs	USFWS

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in Southcentral Alaska. Abbreviations for investigators are: ADF&G=Alaska Department of Fish and Game, ECO=Ecotrust, HDR=HDR Alaska, and NPS=National Park Service Service.

Project Number	Project Title	Investigators	Budget ($000) 2012	2013
	Copper River Salmon			
10-502	Tanda Creek Salmon Assessment	NPS	$67.4	$69.5
10-503	Copper River Chinook Salmon Assessment	NPS	$373.0	$373.0
10-505	Long Lake Salmon Assessment	NPS	$12.0	$12.7
10-552	Copper River Subsistence Harvest Validation	HDR, ECO, ADF&G	$42.9	$0.0
	Total Southcentral Alaska Monitoring Program		$495.3	$455.2

Table 3. Southcentral Alaska project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-500	Copper River Chinook Salmon RFID Feasibility	$76.4			
	Harvest Monitoring and Traditional Ecological Knowledge Projects				
12-550	Upper Copper R. Changing Environments & Subsistence		$44.6		$37.4

Table 4. Southcentral Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ECO=Ecotrust, and NVE=Native Village of Eyak.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends Projects		
12-500	NVE	Copper River Chinook Salmon RFID Feasibility	$0.0	$4.0
		Harvest Monitoring and Traditional Ecological Knowledge Projects		
12-550	ECO	Upper Copper R. Changing Environments & Subsistence	$0.0	$20.6

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Southcentral Alaska, 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends Projects					
12-500	Copper River Chinook Salmon RFID Feasibility	Yes	$76.4	$74.5	$0.0	$0.0
	Harvest Monitoring and Traditional Ecological Knowledge Projects					
12-550	Upper Copper R. Changing Environments & Subsistence	Yes	$82.0	$86.6	$0.0	$0.0
	Total		$158.4	$161.1	$0.0	$0.0
	Guideline		$135.0			
	TRC Recommendation		$158.4	$161.1	$0.0	$0.0

Project Number:	12-500
Project Title:	Feasibility of remote streambed RFID readers for long-term salmon population monitoring on the Copper River
Geographic Region:	Southcentral Alaska
Information Type:	Stock Status and Trends
Principal Investigator:	Keith van den Broek, Native Village of Eyak
Co-Investigator(s):	Jason J. Smith, LGL Alaska Research Associates, Inc.

Project Cost: **2012:** $76,401 **2013:** $74,503

Recommendation: Fund

Issue

Management of Copper River salmon is complex due to inter-annual variation in the size and timing of stocks, fisheries that target a mixture of species and intra-specific stocks, and difficulties in estimating abundance due to the physical characteristics of the drainage. The Native Village of Eyak, in partnership with Alaska Department of Fish and Game and LGL Alaska Research Associates, Inc., and funded through the Fisheries Resource Monitoring Program (Monitoring Program) and Alaska Sustainable Salmon Fund, have conducted multiple radio telemetry studies focused on the spawning distribution and stock-specific run timing of both Chinook and sockeye salmon (Monitoring Program projects 02-015, 05-502, and 05-501; Alaska Sustainable Salmon Fund project 45850). These studies have been hugely successful in providing a baseline of previously unknown information, but have also highlighted a substantial level of variability in these parameters between years. It is also unclear how much these populations will change over time, particularly in the context of climate change. Much longer-term or follow-up studies are warranted, but unfortunately the high cost of radio telemetry programs can be prohibitive. Even once the expensive receiver infrastructure is in place, the recurring high cost of tags, aerial surveys, maintenance, and personnel results in an incremental annual program cost at an average of $250,000 to represent only a very small (<1%) proportion of the total run. Also, esophageal radio tags can be stressful to fish, and a fairly high percentage fail or result in unknown fates. Up to 5% of the total Chinook salmon run is already being marked through project 10-503 using passive radio frequency identification (RFID) transponders encapsulated on a T-bar style tag, referred to as a T-bar anchor-passive integrated transponder tag (tag). This may provide an opportunity to monitor Chinook salmon passage into tributaries for a small investment in infrastructure and a very low recurring incremental cost. However, emerging technologies need to be tested and refined, and feasibility of this approach assessed before large-scale application can be pursued. This project builds upon project 10-503, updates previous research supported by the Monitoring Program, and, in the long term, could support a 2012 Multi-Region Priority Information Need by providing data to document "Changes in subsistence fishery resources and uses, in the context of climate change…".

Objective

To develop and assess the feasibility of using remote RFID readers and streambed antennas on select tributaries of the Copper River for long-term monitoring of spawning distribution and stock-specific run timing.

Methods

A remote RFID reader system would be installed in a single channel at Alaska Department of Fish and Game's Gulkana River counting tower site. The system would consist of a 134.2 kHz FDX RFID transceiver/logger, external pass-by antenna array and power supply. The transceiver and power supply would be housed in a weatherproof enclosure located on the island adjacent to the counting tower. Antennas would be anchored directly to the substrate, immediately downstream of the vinyl counting substrate. The system would be operated from 1 June to 15 August 2012-2013, and would continuously monitor for the presence of tags. Each tag passing the antenna array would be decoded and logged by the transceiver, and logged data would be downloaded on-site from the transceiver to a laptop computer once or more per day. Data would be cross-reference with tagging data from Baird Canyon, and each tagged Chinook salmon would be identified by tagging date and time.

Overall system efficacy and detection efficiency would be tested by comparison of logged transceiver detections with visual counts of marked fish from the counting tower by Alaska Department of Fish and Game and Native Village of Eyak technicians. Each tag visually observed but not recorded by the transceiver would be identified as a "failure to detect", while each tag both visually observed and logged would be identified as a "confirmed detection". The system would be tested and fine-tuned using tags attached to fishing lures and retrieved by rod and reel at varying depths and speeds across the full breadth of the antenna array, throughout the duration of the experiment, but only data from tagged salmon would be used to calculate overall detection efficiency of the system. Proportion of tagged Chinook salmon returning to the Gulkana River would be calculated by dividing the number of tags deployed at Baird by the number of tags detected at the Gulkana site. The number of tag detections would be an expanded count, calculated by dividing the number of actual detections by the detection efficiency of the system, and multiplying this number by the proportion of the total run migrating via the represented channel (using Alaska Department of Fish and Game expanded tower counts by channel). Migration rate from Baird Canyon to the Gulkana tower would be calculated for all detected tags. If multiple detections exist for a tag, only the first detection would be used. A run timing profile would be calculated for the Gulkana River based on detected tag dates at Baird Canyon and would be compared with historic data from radiotelemetry studies to assess major changes since the last study concluded in 2004.

Partnerships and Capacity Building

This project has been discussed with representatives from the U.S. Fish and Wildlife Service, U.S. Forest Service, Alaska Department of Fish and Game, Native Village of Eyak and LGL Alaska Research Associates, Inc. Mark Somerville at Alaska Department of Fish and Game's Glennallen office has offered support in allowing a system to be installed at the Gulkana counting tower site, and is excited about future partnership potential. All plans and resulting information would be shared with the Ahtna Tene Nene C&T Committee and Gulkana Village Council. Bureau of Land Management would be consulted as landowner and co-manager of the counting tower site.

LGL Alaska Research Associates, Inc. would provide technical review of data post-processing and statistical analyses. Hiring preference would be given to Alaska Natives and local residents, with particular effort made on this project to source a technician with extensive knowledge of RFID systems. This project would continue to build upon Native Village of Eyak's ability to conduct fisheries research and management activities on the Copper River. Native Village of Eyak's Copper River Chinook escapement monitoring program, Project 10-503, is currently funded through 2013. If detection of tags at the Gulkana site is successful, a tributary monitoring objective may be added to the proposal to continue the fish wheel mark-recapture project for the 2014 Request for Proposals. This would greatly enhance

the scope of the existing monitoring program to allow concurrent long-term monitoring of low resolution spawning distribution and stock-specific run timing for Chinook salmon, at a very low incremental cost to main stem mark-recapture efforts. It would also offer the potential to leverage spawning distribution studies for other anadromous species captured in mark-recovery fish wheels (sockeye, coho, steelhead, whitefish, and lamprey) for a very low cost of about $4 per tag.

Justification

This project would evaluate the use of radio frequency identification readers to monitor escapement of Chinook salmon into Copper River tributaries. If successful, this could allow long term monitoring of tributary escapements and might contribute to an understanding of climate change effects on a subsistence fishery resource, which is a 2012 priority information need. The investigators have successfully conducted other Monitoring Program projects, and there would be a high level of partnership and capacity building in conducting this project. Although this would be a feasibility study, the investigators demonstrated that they were knowledgeable of the challenges they would face with known limitations in available passive integrated transponder tag and radio frequency identification equipment in attempting to obtain high detection rates of passive integrated transponder tagged Chinook salmon. Their proposed methods are basically sound, although there are a few areas that would need to be more fully developed if this project is funded. These include training their technician in tower counting techniques, designing a tower counting schedule for their technician that increases opportunities to observe marked Chinook salmon, and exploring ways to improve techniques for testing and adjusting the radio frequency identification reader and antenna. The investigators were responsive to comments and suggestions provided in the review of the original proposal. They have agreed to conduct all feasibility work at the Gulkana tower site and, while they did not reduce their requested budget from that in the proposal after examining ways to reduce costs, their requested budget is reasonable for the proposed work.

Project Number:	12-550
Project Title:	Upper Copper River, Changing Environments and the Contemporary Subsistence Fisher
Geographic Region:	Southcentral Alaska
Information Type:	Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator:	Erica McCall Valentine, Ecotrust
Co-Investigator(s):	Robbin La Vine, Alaska Department of Fish and Game

Project Cost: **2012:** $81,967 **2013:** $86,575

Recommendation: Fund

Issue

This project addresses the U.S. Fish and Wildlife Service, Office of Subsistence Management's priority information need for federal subsistence fisheries in Southcentral Alaska: document the "harvest, use and associated contextual information for salmon and non-salmon by species in communities of the Copper River basin, updating previous research supported by the Fisheries Resource Monitoring Program (Monitoring Program). In addition, this project addresses two of the four goals of the Monitoring Program's strategic plan for Southcentral Alaska: "Assess and monitor subsistence fisheries to document and provide for subsistence uses; and promote public support and involvement for fisheries monitoring." Finally, this proposal addresses the Multi-Regional Priority Information Need on climate change and contemporary subsistence fishing patterns.

The research will also provide a social context for the harvest survey data that is currently being collected by the National Park Service on four communities within the Copper River watershed: Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center (including the Silver Springs census-designated place). These study communities harvest within both the state and federal subsistence fishery areas and are therefore under the management authority of the State of Alaska and the National Park Service (the designated federal subsistence fishing authority in this area). All four communities are resident zone communities of the Wrangell St. Elias National Park and Preserve.

Objective

The project's overall research question, "What factors (social, cultural, demographic, economic, environmental) affect and/or influence contemporary subsistence salmon and non-salmon harvest and use patterns by residents of the Upper Copper River watershed over the course of a year?" is addressed by the following four project objectives:

1. Consolidate, synthesize and summarize the qualitative and quantitative data on all area resident subsistence fishing activities of the Upper Copper River basin, drawing upon existing traditional ecological knowledge (TEK) and harvest monitoring survey projects.
2. Describe the characteristics and trends of the contemporary salmon and non-salmon subsistence fisheries of the Upper Copper River basin.
3. Document the subsistence effort, harvest, processing and distribution of fish by four Copper River Basin families in the communities of Mentasta, Slana/Nabesna Road, Chistochina, and Copper Center (one family per community) over the course of one year, providing context to key respondent interviews and the NPS-led Copper Basin Community Harvest Assessment survey data.

4. Identify which factors most impact resident subsistence effort and harvest of salmon and non-salmon and discuss whether these factors can be addressed through management strategies.

Methods

Five methods (literature review, participant observation, key respondent interviews, case study families, and biographical mapping) will aid in describing the characteristics and trends of the contemporary salmon and non-salmon fisheries within the Upper Copper River basin.

A literature review will address Objectives 1 and 2 by identifying historical trends in the salmon and non-salmon fisheries, provide background to and further describe the contemporary subsistence fishery of the Upper Copper River watershed, and help frame questions for key respondent interviews and identify lines of inquiry for the ethnographic fieldwork.

Through participant observation, primary ethnographic data including subsistence harvest, use and distribution, study year environmental and climate-related observations, climate-related effects on harvests of salmon and other non-salmon species, seasonal movement, spawning areas, interactions with other fish and wildlife, trends in abundance and contemporary management systems will be collected. Eight families – two in each of the four study communities – will participate in this portion of the study. This method will contribute to addressing Objectives 2 and 3, while providing a foundation for addressing Objective 4.

As a means of verifying and augmenting data acquired through the literature review, participant observation and other recent harvest assessment projects (i.e. the National Park Service's 2010-2011 Copper Basin Harvest Assessment project), project investigators will also conduct semi-structured key respondent interviews with sixteen families – four families in each of the study communities. The key respondent interviews will meet Objectives 2 and 3, and provide data for the completion of Objective 4.

Through case study families, four families – one in each study community – will systematically document their subsistence salmon and non-salmon fishing activities over the course of one year. Subsistence harvests and use will be documented through photography, maps, journals and quarterly review interviews with investigators. This research method will address Objectives 2 and 3, and will contribute to the fulfillment of Objective 4.

Biographical mapping will geo-spatially reference data derived from and incorporated within the analysis of the above described methodologies – participant observation, key respondent interviews, and family case studies. The biographical maps will visually display (and therefore analyze) subsistence harvest, use, and distribution of salmon and non-salmon species within the Copper River. The biographical mapping method will address Objectives 2-4.

Partnerships and Capacity Building

This project further facilitates partnerships between non-profits, state agencies, federal agencies and Tribal councils within the Copper River watershed. Project investigators will partner with the Ahtna Heritage Foundation to conduct key respondent interviews and participant observations and to translate (as needed), summarize, transcribe (as needed) and catalogue digital audio recordings. The families participating in the year-round documentation of subsistence use and effort will be identified with the assistance from local tribal councils, local Alaska Native and community organizations and/or local fishery managers. Project investigators have extensive relationships with project partners throughout the basin which inherently strengthens the consultations and capacity building components of this project.

Justification

The proposed research responds to a 2012 Request for Proposals priority information need to investigate the harvest, use, and associated contextual information for salmon and non-salmon by species in communities of the Copper River Basin. The project will improve previous studies of traditional ecological knowledge by interviewing diverse Alaska Native and non-Native residents from a range of age groups and fishing participation levels. The research objectives are clear and achievable. The investigators have the ability to complete the work. The results should illuminate aspects of local knowledge not often captured in traditional ecological knowledge studies, which tend to focus on past knowledge and techniques. Focusing on current social contexts will develop information about changing knowledge and use patterns, which should prove beneficial in management decisions dependent upon understanding contemporary alterations to harvest levels and participation rates.

SOUTHEAST ALASKA OVERVIEW

Issues and Information Needs

For the Southeast Alaska Region, the 2012 Request for Proposals was focused on three priority information needs:

- Reliable estimates of sockeye salmon escapement. Stocks of interest include: Gut Bay, Red, Kah Sheets, Salmon Bay, Sarkar, Lake Leo, and Hoktaheen.
- In-season subsistence harvest assessment of sockeye salmon. Stocks of interest include: Hatchery Creek, Gut Bay, Red, Kah Sheets, Salmon Bay, Sarkar, Kanalku, and Hoktaheen.
- Contributions to the genetic stock identification baseline of Chatham Strait sockeye salmon.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 59 projects have been funded in the Southeast Alaska Region, and 11 will still be operating during 2012 (Tables 1 and 2). Ten of the ongoing projects address sockeye salmon assessments in various systems, and the remaining project addresses eulachon timing, distribution, and relative abundance in the Yakutat area.

Projects Forwarded for Investigation Plan Development

Five proposals for research in the Southeast Alaska Region were submitted to the Office of Subsistence Management for funding consideration in 2012. In March 2011, the Technical Review Committee reviewed these proposals and recommended four for development of investigation plans. Investigators used comments from the Technical Review Committee review of proposals to develop investigation plans. Detailed budgets submitted with each investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigators (**Tables 3 and 4**).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. The U.S. Forest Service anticipates having sufficient funds for ongoing projects in 2012, but would not be able to fund any of the 2012 project investigation plans submitted for the Southeast Alaska Region unless additional Department of Agriculture funding becomes available.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the four investigation plans, the Technical Review Committee recommended funding all four of the proposed projects (Table 5) and prioritized them in the following descending order:

12-601	Hoktaheen Lake Sockeye Salmon Stock Assessment	$	152,533
12-602	Lake Leo Sockeye Salmon Stock Assessment (Option 2)	$	31,498
12-651	Changing Use Patterns in Subsistence Salmon Fisheries	$	61,174
12-600	Eek Lake Sockeye Salmon Stock Assessment	$	84,525
	Total	$	329,730

The four projects recommended for funding by the Technical Review Committee comprise a strong Monitoring Plan for the region by addressing strategically important information needs based on sound science and by promoting cooperative partnerships. Each project recommended for funding in the Southeast Alaska Region in 2012 is summarized below in priority order (see Executive Summaries for more details on all projects).

12-601 Hoktaheen Lake Sockeye Salmon Stock Assessment. This four-year project would provide annual estimates of escapement, run timing, and harvests (subsistence and sport) for the sockeye salmon run to the Hoktaheen Lake system. Mark-recapture methods and a video weir system would be used to estimate escapement and run timing. The sockeye salmon run to this system receives heavy fishing pressure, and fish can be very susceptible to harvest since they tend congregate in Hoktaheen Cove until water conditions allow migration into the lake system. This run supports an important subsistence fishery for residents of Hoonah, Pelican and Elfin Cove. Information provided by this project would allow managers to better match subsistence fishing opportunities to sockeye salmon production trends. This project would address a priority information need identified in the 2012 Request for Proposals.

12-602 Lake Leo Sockeye Salmon Stock Assessment. This four-year project would identify spawning locations and provide annual estimates of escapement and run timing for the sockeye salmon run to the Lake Leo systems. Mark-recapture methods would be used on the spawning grounds within Lake Leo would to estimate escapement. The sockeye salmon run to this system usually receives relatively low fishing pressure, but fish can be very susceptible to harvest since they tend to congregate at the marine terminus of the outlet creek (Leo's Anchorage) until water levels allow migration into the lake system. While this run is harvested by residents of the Sitka area, they usually only fish it while traveling to and from more productive systems. Information provided by this project would allow managers to better match subsistence fishing opportunities to sockeye salmon production trends. This project would address a priority information need identified in the 2012 Request for Proposals.

12-651 Changing Use Patterns in Subsistence Salmon Fisheries. This two-year project would document changes in subsistence salmon fisheries by residents of Hoonah and Klawock. Work would be focused on sockeye salmon populations in the Hoktaheen and Klawock drainages. Data collection would be comparable to ongoing Monitoring Program projects investigating climate change impacts in Northwest Alaska (project 10-125) and the Yukon River (project 10-250). Household harvest surveys and key respondent interviews with Hoonah and Klawock residents would be used to document changes in subsistence salmon fisheries, and these observations would be compared with those made during previous research conducted within these communities. This project would address a priority information need identified in the 2012 Request for Proposals.

12-600 Eek Lake Sockeye Salmon Stock Assessment. This four-year project would provide annual estimates of escapement for the sockeye salmon run to the Eek Lake system. Mark-recapture methods would be used on the spawning grounds with Eek Lake to estimate escapement. The sockeye salmon run to this system supports an important subsistence sockeye salmon fishery for Hydaburg residents, and has provided from 7% to 56% of the total community harvest for Hydaburg. Information provided by

this project would allow managers to better match subsistence fishing opportunities to sockeye salmon production trends. While this project would not address a priority information need identified in the 2012 Request for Proposals, Eek Lake supports an important subsistence sockeye salmon fishery for Hydaburg residents.

Table 1. Summary of Fisheries Resource Monitoring Program projects completed in Southeast Alaska since 2000. Abbreviations used by investigators are: ACA=Angoon Community Association, ADFG=Alaska Department of Fish and Game, CCTHITA=Central Council of Tlingit & Haida Indian Tribes of Alaska, HCA=Hydaburg Cooperative Association, HIA=Hoonah Indian Association, KCA=Klawock Cooperative Association, OVK=Organized Village of Kake, STA=Sitka Tribe of Alaska, TST=Third Sector Technologies, USFS=USDA Forest Service, WCA=Wrangell Cooperative Association, and YTT=Yakutat Tlingit Tribe.

Project Number		Project Title	Investigators
		Estimation of Sockeye Salmon Escapement	
00-043		Klawock Lake Sockeye Salmon Assessment	ADFG, KCA
00-044		Falls Lake Sockeye Salmon Stock Assessment	ADFG, OVK
01-125		Gut Bay, Kook, and Hoktaheen L Sockeye Salmon Escapement Index	ADFG, OVK
01-126		Kanalku, Hasselborg and Sitkoh Lakes Sockeye Stock Assessement	ADFG
01-127		Thoms, Salmon Bay, Luck Lakes Sockeye Salmon Esc Index	ADFG, WCA
01-128		Klag Bay Sockeye Salmon Stock Assessment	ADFG, STA, USFS
01-130		Hetta Lake Sockeye Salmon Stock Assessment	ADFG, HCA
01-175		Salmon Lake Sockeye and Coho Salmon Stock Assessment	ADFG, STA, NSRAA, USFS
01-179		Virginia Lake Sockeye Salmon Assessment	USFS
02-012		Neva and Pavlof Sockeye Salmon Stock Assessment	USFS, HIA
02-017		Redfish Bay Sockeye Salmon Stock Assessment	STA, ADFG, USFS
03-007		Eek Lake Sockeye Salmon Stock Assessment	HCA, ADFG
04-604		Klawock Lake Sockeye Salmon Assessment	ADFG, KCA
04-605		Kanalku, Sitkoh Lakes Sockeye Salmon Stock Assessment	ADFG, ACA
04-606		Hetta Lake Sockeye Salmon Stock Assessment	ADFG, HCA
04-607		Falls, Gut, Kutlaku Subsistence Sockeye Stock Assessment	ADFG, OVK
04-608		Salmon Lake Sockeye Salmon Stock Assessment	STA
04-609		Klag Bay Sockeye Salmon Stock Assessment	STA, ADFG, USFS
05-601		Kook Lake Sockeye Salmon Assessment	ADFG, ACA, USFS
05-603		Klawock Lake Sockeye Salmon Assessment	ADFG, USFS
06-601		Neva Lake Sockeye Salmon Assessment	USFS
06-602		Kutlaku Lake Sockeye Salmon Assessment	ADFG, OVK
07-601	[a]	Hatchery Creek Sockeye Salmon Assessment	OVK, USFS
07-604		Klag Bay Sockeye Salmon Assessment	STA
07-606		Hetta Lake Sockeye Salmon Assessment	ADFG
07-607		Kanalku Lake Sockeye Salmon Assessment	ADFG, ACA
07-608		Klawock Lake Sockeye Salmon Assessment	ADFG, KCA
07-609		Falls Lake Sockeye Salmon Assessment	ADFG, OVK
08-600		Karta River Sockeye Salmon Assessment	OVKa
		Documentation of Subsistence Use Patterns for Salmon	
00-015		SE Alaska Subsistence Fisheries Database Development	ADFG
00-045		SE Tribes Traditional Subsistence Territory Mapping	USFS, OVK, ACA, HIA
01-091		East Alsek River Salmon Historical Use and TEK	YTT
01-103		SE Subsistence Fisheries GIS Database	ADFG
01-104		Kake Sockeye Salmon Subsistence Harvest Use Pattern	ADFG, OVK
01-105		Klawock River and Sarkar L Sockeye Salmon Harvest Use Patterns	ADFG, KCA
02-038		SE Subsistence Fisheries GIS Database Development	ADFG, CCTHITA, TST
02-049		Wrangell Salmon Subsistence Harvest Use Pattern	ADFG, WCA, USFS
02-104		Hoonah and Klawock Salmon Survey	ADFG, CCTHITA, TST
04-651	[a]	SE Alaska Salmon TEK and Subsistence Monitoring	STA, ADFG
04-652		Subsistence TEK Database	ADFG, STA
06-651	[a]	Southeast Alaska Survey of Customary Trade in Seafood	CCTHITA
07-651		Hydaburg Sockeye Salmon Customary and Traditional System	HCA, PVT
08-651		Maknahti Island Subsistence Herring Fishery Assessment	STA

Table 1 continued.

Project Number	Project Title	Investigators
	Prince of Wales Island Steelhead	
01-105	POW Island Steelhead/Rainbow Trout Harvest Use Pattern	ADFG
05-604	Prince of Wales Steelhead Assessment	ADFG, OVKa
08-650	POW Island Steelhead Trout Subsistence Harvest Survey	OVKa, HCA
	Estimation of Non-salmon Species	
07-610	Behm Canal Eulachon Genetics	USFWS
08-607	Unuk River Eulachon Assessment	USFS

[a] Final Report in preparation.

Table 2. Summary of ongoing 2011 projects funded under the Fisheries Resource Monitoring Program in Southeast Alaska. Abbreviations for investigators are: ACA=Angoon Community Association, ADFG=Alaska Department of Fish and Game, HCA=Hydaburg Cooperative Association, HIA=Hoonah Indian Association, OVK=Organized Village of Kake, OVKa=Organized Village of Kasaan, STA=Sitka Tribe of Alaska, USFS=U.S. Forest Service, and YSB=Yakutat Salmon Board.

Project Number	Project Title	Investigators	Budget 2012	Budget 2013
	Stock Status and Trends Projects			
10-600	Karta River Sockeye Salmon Assessment	OVKa	$152.2	$161.4
10-601	Hatchery Creek Sockeye Salmon Assessment	USFS, OVKa	$175.2	$173.8
10-603	Yakutat Eulachon Surveys	USFS, YSB	$29.9	$31.6
10-604	Klag Lake Sockeye Salmon Assessment	STA	$134.5	$141.2
10-605	Sitkoh Lake Sockeye Salmon Assessment	USFS, ACA, ADFG	$70.8	$72.8
10-606	Hetta Lake Sockeye Salmon Assessment	HCA	$171.9	$169.1
10-607	Kanalku Lake Sockeye Salmon Assessment	ADFG, ACA, USFS	$197.1	$207.0
10-609	Falls Lake Sockeye Salmon Assessment	USFS, OVK	$177.7	$186.5
10-610	Kook Lake Sockeye Salmon Assessment	USFS, ACA, ADFG	$123.4	$129.9
10-611	Redoubt Lake Sockeye Salmon Assessment	USFS	$187.3	$190.9
10-612	Neva Lake Sockeye Salmon Assessment	USFS, HIA, ADFG	$25.0	$25.0
			$149.0	$153.1
	Total Southeast Monitoring Program		$1,594.0	$1,642.3

Table 3. Southeast Alaska funding recommendations by the Technical Review Committee (TRC) for the 2012 Fisheries Resource Monitoring Program.

Project Number	Title	Requested Budget ($000) Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-600	Eek Lake Sockeye Salmon Stock Assessment	$84.5			
12-601	Hoktaheen Lake Sockeye Salmon Stock Assessment	$54.4		$98.1	
12-602	Lake Leo Sockeye Salmon Stock Assessment (Option 1 or 2)	$13.0		$18.5	
	Harvest Monitoring and Traditional Ecological Knowledge				
12-651	Changing Use Patterns in Subsistence Salmon Fisheries		$61.2		

Table 4. Southeast Alaska local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: ADFG=Alaska Department of Fish and Game, HCA=Hydaburg Cooperative Association, and USFS=U.S. Forest Service.

Project Number	Lead Organizatio	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends Projects		
12-600	HCA	Eek Lake Sockeye Salmon Stock Assessment	$39.0	$0.0
12-601	USFS	Hoktaheen Lake Sockeye Salmon Stock Assessment	$0.0	$0.0
12-602	USFS	Lake Leo Sockeye Salmon Stock Assessment (Option 1 or 2)	$0.0	$0.0
		Harvest Monitoring and Traditional Ecological Knowledge		
12-651	ADFG	Changing Use Patterns in Subsistence Salmon Fisheries	$0.0	$0.0

Table 5. Southeast Alaska funding recommendations by the Technical Review Committee (TRC) for the 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC		Requested Budget ($000) 2010	2011	2012	2013
	Stock Status and Trends						
12-600	Eek Lake Sockeye Salmon Stock Assessment	Yes	*	$84.5	$68.5	$68.5	$68.5
12-601	Hoktaheen Lake Sockeye Salmon Stock Assessment	Yes		$152.5	$130.6	$135.1	$140.1
12-602	Lake Leo Sockeye Salmon Stock Assessment (Option 2)	Yes		$31.5	$32.9	$30.0	$31.4
	Harvest Monitoring and Traditional Ecological Knowledge						
12-651	Changing Use Patterns in Subsistence Salmon Fisheries	Yes		$61.2	$35.1	$0.0	$0.0
	Total			$329.7	$267.1	$233.6	$240.0
	Guideline			$0.0			
	TRC Recommendation			$329.7	$267.1	$233.6	$240.0

* = Yes with modification

Project Number:	12-601
Project Title:	Hoktaheen Lake Subsistence Sockeye Salmon Stock Assessment
Geographic Area:	Southeast Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Jack C. Lorrigan, U.S. Forest Service
Co-Investigator:	Robert Starbard, Hoonah Indian Association

Project Cost: **2012:** $152,533 **2013:** $130,583 **2014:** $135,050 **2015:** $140,051

Recommendation: Fund

Issue

Monitoring the stock status and in-season harvest of sockeye salmon (*Oncorhynchus nerka*) at the Hoktaheen Lake system has been identified as a priority information need for the Southeast Alaska region. Sockeye salmon returning to Hoktaheen Lake, on western Yakobi Island, are an important subsistence resource for the residents of Hoonah, Pelican, and Elfin Cove. Sockeye salmon congregate at Hoktaheen Cove and wait for water conditions that are conducive to migration to the lake system (e.g., above-average high tides or other high water events). Fish may hold in the cove for extended periods of time, especially during dry years, and may be susceptible to heavy fishing pressure. Despite the potential for overharvest, monitoring of escapement and harvest has been limited. Previous escapement estimates were limited to indices that lacked an established relationship to overall escapement and harvest information has consisted of voluntary, post-season, reports that have not been validated. To allow managers to maximize subsistence uses of sockeye salmon, a stock assessment program is needed to monitor escapement. In addition, without an in-season assessment of sockeye salmon harvest, managers may be forced to manage the Hoktaheen system more conservatively, which could result in more limited harvest opportunity for subsistence users.

Objectives

1. Estimate the escapement of sockeye salmon into Hoktaheen Lake using mark-recapture methods and a video weir system.
2. Estimate the age, sex, and length distribution of sockeye salmon in the Hoktaheen Lake escapement population with an estimated coefficient of variation less than 5% for each estimate.
3. Estimate the subsistence and sport harvest of sockeye salmon at Hoktaheen Cove with an estimated coefficient of variation less than 15%.

Methods

1. Estimate the escapement of sockeye salmon into Hoktaheen Lake using mark-recapture methods and a video weir system.

Sockeye salmon escapement will be estimated using mark-recapture methods. We will construct a weir/trap near Hoktaheen Cove to count and capture sockeye salmon. A portion of the fish captured in the trap will be marked with an adipose fin clip before being released upstream of the weir. Salmon will be recaptured as they pass through a net weir, with an underwater video chute, placed upstream from the initial weir. This mark-recapture design will allow us to estimate a total escapement of sockeye salmon into the system before they disperse to spawning areas in one of the lakes or streams. Additional recapture

events at spawning grounds will also be conducted to validate the escapement estimate from the net weir. Escapement will be estimated using Chapman's modification of the Peterson two-sample model. Separate escapement estimates will be calculated for video weir and spawning ground recaptures.

2. Estimate the age, sex, and length distribution of sockeye salmon in the Hoktaheen Lake escapement population with an estimated coefficient of variation less than 5% for each estimate.

We will describe the biological structure of the population of adult sockeye salmon returning to the Hoktaheen system by collecting age, sex, and length data. We will collect the age, sex, and length data from sockeye salmon caught in the fish trap. The sample size goal will be 600 sockeye salmon, distributed throughout the escapement period. Fish will be removed from the trap with a dip net and identified to species. Sex will be determined. The length of each sockeye salmon will be measured from the mid-eye to the fork of the tail to the nearest millimeter (mm). The age of each fish will be determined by scale analysis. We will collect three scales from the preferred area on the left side above the lateral line and these will be attached to a gum card. Scale samples will be prepared for analysis and analyzed at the Alaska Department of Fish and Game's Salmon Aging Laboratory in Douglas, Alaska. Salmon age will be reported following the European aging system, where freshwater and saltwater years are separated by a period (e.g., 1.3 denotes a fish with one freshwater and three ocean years. The freshwater year does not include the first year spent in the gravel during egg incubation and hatching. We will estimate the proportion of the escapement population that is in each age class. We will use standard summary statistics on length measurements among each age-sex class.

3. Estimate the subsistence and sport harvest of sockeye salmon at Hoktaheen Cove with an estimated coefficient of variation less than 15%.

We will estimate the overall harvest of to Hoktaheen sockeye salmon population by interviewing subsistence and sport fishers at the marine terminal area. We will attempt to interview all fishers to achieve a complete census of harvest. However, if any interviews are missed, we will estimate harvest using a single-stage sampling design. The sampler will introduce him/her self to each group, give a brief explanation about the harvest survey, and will ask fishers the amount of time they spent fishing and the number and species of fish caught. The harvest estimates from the user interviews will be compared with subsistence/personal use permit harvest report data. The comparison will help determine if current harvest reports are adequately portraying sockeye salmon harvest at Hoktaheen.

Partnerships/Capacity Building

Hoonah Indian Association will employ local field technicians, including a crew leader, for the project. Hoonah Indian Association also hires field technicians for a sockeye salmon stock assessment project at Neva Lake, so this will provide additional jobs for locals interested in working in the field of natural resources. The Hoktaheen project may provide opportunity for Neva Lake technicians to broaden their experience with a different system. The U.S. Forest Service will provide training opportunities for field technicians, including first aid, survival training, and bear safety. Field work will build experience with fish identification, use of video weir equipment, data management, and fisheries management. Any technicians interested in learning more about natural resources management will be able to assist with data analysis and report writing to better prepare them for future work in the field. We will work with Hoonah Indian Association and other community leaders to present project details at local events or meetings. Presentations will include an explanation of how escapement and harvest information affects subsistence users and project results will be provided. Hoonah residents have complained about being inadequately informed about regulatory changes. We could provide updates on any regulatory changes that could affect residents, such as daily and annual possession limits.

Justification

Hoktaheen Lake provides sockeye subsistence harvest opportunities for the residents of Hoonah, Pelican and Elfin Cover. This proposal addresses the priority information need of sockeye salmon abundance estimation and harvest assessment of Hoktaheen Lake in the 2012 Request for Proposals. Sockeye salmon returns will be estimated using a traditional weir and net weir and underwater video camera. The project will build on the escapement information previously collected at Hoktaheen Lake (2001 through 2004) through Monitoring Program project 01-125. Periodic monitoring of this system, rather than a long-term continuous monitoring commitment, would be sufficient to evaluate changes in the sockeye salmon population and ensure escapement and subsistence opportunities are adequately met.

Project Number:	12-602
Project Title:	Lake Leo Subsistence Sockeye Salmon Stock Assessment
Geographic Area:	Southeast Alaska
Data Type:	Stock Status and Trends
Principal Investigator:	Jack C. Lorrigan, U.S. Forest Service
Co-Investigator:	Jeff Feldpausch, Sitka Tribe of Alaska

Project Cost: **2012:**$31,498 **2013:**$32,926 **2014:**$29,995 **2015:**$31,384

Recommendation: Fund

Issue

Estimating sockeye salmon escapement at Lake Leo has been identified as a priority information need for the Fisheries Resource Monitoring Program, Southeast Region. Current data on the system is limited to voluntary harvest reports, and managers have no means of monitoring escapement trends. On average, the system receives relatively low fishing pressure, but overharvesting may occur under some environmental conditions. Subsistence fishermen from Sitka pass Leo's Anchorage on their way to Klag Bay and Ford Arm to harvest higher allowable bag limits. If fish are present at Leo's there is concern they could be mixed with those other harvests. Sockeye salmon congregate at the marine terminal area of the Lake Leo outlet creek (Leo's Anchorage) and wait for increased water levels (e.g., above-average high tides, rain events) to enter the lake. Salmon may be vulnerable to harvest in this area and may remain there for an extended period of time, especially during dry conditions. Escapement estimates are needed to assess population trends and make informed management decisions.

Objectives

1. Locate primary sockeye salmon spawning areas around Lake Leo and within any input streams.
2. Estimate the escapement of sockeye salmon into Lake Leo using mark-recapture methods on spawning grounds.
3. Estimate the age, sex, and size distribution of sockeye salmon in the Lake Leo escapement with an estimated coefficient of variation for primary age classes less than 10%.

Methods

1. Locate primary sockeye salmon spawning areas around Lake Leo and within any inlet streams.

We will identify primary sockeye salmon spawning areas with boat and walking surveys around the lake and inlet streams. Weekly boat surveys will begin in mid-August to look for congregations of sockeye salmon along the shoreline of Lake Leo and near the mouths of any inlet streams. If we are unable to locate an adequate amount of spawning area, radio transmitters will be implanted in a sample of sockeye salmon, and individuals will be tracked to determine movement patterns and to help identify any additional spawning areas.

Estimate the escapement of sockeye salmon into Lake Leo using mark-recapture methods on spawning grounds.

We will estimate the escapement of sockeye salmon into Lake Leo using mark-recapture methods on beach and stream spawning grounds. Each year we will attempt to estimate escapement at all spawning areas to provide information on the whole-system escapement. The mark-recapture project will consist of four to five two-day sampling trips that consist of marking on day one and recaptures on day two. We will use a two-stage analysis to estimate the escapement of sockeye salmon into Lake Leo. In the first stage, we will calculate a two-sample Peterson estimate for each sampling trip. The Peterson estimates from stage one will then be incorporated into a modified Jolly-Seber estimator for multiple mark-recapture events in an open population.

Estimate the age, sex, and size distribution of sockeye salmon in the Lake Leo escapement with an estimated coefficient of variation for primary age classes less than 10%.

We will collect age, sex, and length information from a sample of sockeye salmon on the spawning areas to describe the biological structure of the population. The sampling goal for Lake Leo will be 600 fish. For each unmarked fish sampled, we will determine the sex based on jaw or kype characteristics and body morphology, measure the length of the fish (nearest mm) from the mid-eye to the fork of the tail, and collect scale samples. Three scales will be collected from the preferred area of each fish and will be attached to a gum card. Scale samples will be prepared for analysis and analyzed at the ADF&G Salmon Aging Laboratory in Douglas, Alaska. Salmon age will be reported following the European aging system, where freshwater and saltwater years are separated by a period (e.g., 1.3 denotes a fish with one freshwater and three ocean years). The freshwater year does not include the first year spent in the gravel during egg incubation and hatching.

Partnerships/Capacity Building

The Sitka Tribe of Alaska is a federally recognized tribal government for approximately 4,100 tribal members. Sitka Tribe of Alaska will use its weir crew from the Klag Bay stock assessment project for the Lake Leo project. Working at Lake Leo will help broaden the crew's knowledge of fisheries management by using a different method of estimating escapement (i.e., mark-recapture on the spawning grounds). The U.S. Forest Service will provide training opportunities for field technicians, including first aid, survival training, and bear safety. Field work will build experience with fish identification, data management, and fisheries management. Any technicians interested in learning more about natural resources management will be able to assist with data analysis and report writing to better prepare them for future work in the field.

We will work with Sitka Tribe of Alaska and other community leaders to present project details at local events or meetings. Presentations will include an explanation of how escapement information affects subsistence users and project results will be presented.

Justification

Lake Leo provides sockeye subsistence harvest opportunities for the residents of Sitka on their way to and from other sockeye salmon systems. Lake Leo is within the boundaries of the Tongass National Forest and sustains subsistence fishing effort from Federally qualified subsistence users. The need for escapement estimates of sockeye salmon in Lake Leo was included as a priority information need in the 2012 Request for Proposals. Sockeye salmon escapement will be estimated using mark-recapture methods. Periodic monitoring of this system, rather than a long-term continuous monitoring commitment, would be sufficient to evaluate changes in sockeye salmon population and ensure escapement and subsistence opportunities are adequately met.

Project Number: 12-651
Title: Changing Use Patterns in Subsistence Salmon Fisheries, Southeast Alaska
Geographic Region: Southeast Alaska
Data Type: Harvest Monitoring/Traditional Ecological Knowledge
Principal Investigator: Lauren Sill, Alaska Department of Fish and Game

Project Cost: **2012**: $61,174 **2013**: $35,128 **2014**: $0 **2015**: $0

Recommendation: Fund

Issue

This project will explore changing subsistence use patterns of salmon, with a focus on sockeye salmon *Oncorhynchus nerka* in Hoonah and Klawock. These two communities are located within the Tongass National Forest and rely on sockeye salmon streams where information gaps have been identified by the Fisheries Resource Monitoring Program. The project responds to a multi-regional priority information need to document "Changes in subsistence fishery resources and uses, in the context of climate change where relevant, including but not limited to fishing seasons, species targeted, fishing locations, fish quality, harvest methods and means, and methods of preservation. Include management implications."

Sockeye salmon return to southeast Alaska from June through early September and in many places are the first salmon to return to freshwater streams. They are harvested in the subsistence, commercial, sport, and personal use fisheries with a variety of gear. Harvests occur in both fresh and salt waters. In the recent past, the majority of harvests in Hoonah have come from Hoktaheen Cove and Neva River, while Klawock residents rely on the Sarkar and Klawock Rivers. Reported sockeye salmon harvests in both communities have generally decreased over the last 15 years. The reasons for the declines are not well understood, but are likely due to a combination of sociocultural, economic, and environmental factors. In each community, this project will explore these changes in community harvest trends and patterns of use of sockeye salmon, focusing on harvest amounts and times, fishing locations, harvest methods and means, and methods of preservation. Understanding the causes and magnitude of changing use patterns will aid in robust management of Southeast sockeye salmon stocks. The location of the communities, one in northern Southeast and one in southern Southeast, will provide for intra-regional comparison. In addition, to complement previous studies (projects 10-125 and 10-250), this project will strive to collect comparable data sets for Southeast Alaska for analysis to facilitate inter-regional comparisons of climate change as they relate to subsistence fisheries.

Objectives

1) Evaluate recent changes in the harvest and use of sockeye salmon by residents of Hoonah and Klawock.
2) Synthesize literature and data sets describing the subsistence fisheries at Hoktaheen and Klawock Lake, with an emphasis on changes in the fisheries.
3) Describe specific factors contributing to changes in both study communities.
4) Identify general themes that emerge independently in each study community as well as those that are shared between the two.

Method

(1) A synthesis of literature and data sets describing subsistence fisheries at Hoktaheen Cove and Klawock Lake with a focus on changes within will meet Objective 2. (2) Semi-structured key respondent interviews specifically address Objectives 1, 3, and 4. They will be conducted with 5–10 respondents in each community, representing a mixture of ages, gender and family/clan lines. Generally, the interviews will focus on: environment-related observations, environment-related effects on harvest of sockeye salmon, social changes within the community, regulatory factors affecting harvest of salmon, as well as basic demographic information, participation in commercial fisheries, family history, and personal histories, as they relate to fish harvesting and processing. (3) A mapping component will be included in the interview process to document current and historic harvest use areas. (5) A household survey will be used to meet Objectives 1, 3, and 4. A recall survey will be administered to a random sample of 50% of the households in each community. The survey will cover topics such as demographics, participation in commercial and subsistence fisheries, harvest, use and sharing of salmon, processing of fish, methods, means, location and timing of harvest, observation of change and household reporting of salmon harvests on permits. Harvest data gathered from household surveys will be included in the Alaska Subsistence Fisheries Database. Working with the Division of Commercial Fisheries, we will also attempt to update or modify the permit data based on the household survey results. Analysis of the surveys will include a discussion of permit data and permit reporting, along with a set of recommendations to improve the subsistence salmon harvest monitoring program, if results suggest improvements are necessary.

All of the information gathered from the household surveys will be available for review as preliminary findings presented to the communities during the fall of 2013. The aggregated mapping data will be presented at the community level to ensure that data recorded reflects the harvest locations of the community at large.

Partnerships/Capacity Building

This project will entail working closely with the tribal governments of Klawock and Hoonah, to include drafting interview protocols and household survey questions, and review of the draft final report and research findings. This will result in increased organizational capacity and expertise in terms of understanding changing patterns of subsistence use of sockeye salmon both within the study community as well as in comparison to geographically distinct communities and will assist these organizations in participating in federal fisheries management of their resources. In addition, we will work with the tribal governments to identify local research assistants who will be hired and trained in survey administration and will assist with various aspects of project design and administration. Community meetings will be held to engage residents in designing the information gathering process, insights into how the data was analyzed and the draft results that were obtained. Copies of the report will be sent to all residents who participate in the project. Additional opportunities for capacity building will be sought throughout the duration of the project.

Justification

The investigation plan is focused on addressing a priority information need in the 2012 Request for Proposals. The objectives are clearly stated. The investigator appears to be qualified to conduct the research. The budget is adequate to conduct the work. The tribal councils in Hoonah and Klawock have approved the project and will receive direct funding to support the completion of tasks by local research assistants, described in the investigation plan.

Project Number: 12-600
Title: Eek Lake Subsistence Sockeye Salmon Stock Assessment Project
Geographic Region: Southeast Alaska
Data Type: Stock Status Trends
Principle Investigator: Anthony Christianson, Hydaburg Cooperative Association
Co-Investigator: Cathy Needham, Kai Environmental Consulting Services

Project Cost **2012:** 84,525.00 **2013:** 68,467.00 **2014:** 68,467.00 **2015:** 68,467.00

Recommendation: Fund with modification

Issue

Hydaburg Cooperative Association is proposing to assess the escapement of sockeye salmon into one of Hydaburg's most important subsistence system, Eek Lake. This information will continue to allow HCA and resource management agencies to monitor actual harvest in Hetta, and compare the percentage of harvest back to escapement estimates in order to manage the system more accurately. This proposal addresses priorities set forth in the 2012 Request for Proposals and the Strategic Plan for the Subsistence Fisheries Resource Monitoring Program (2006) by addressing the highest priority species (sockeye salmon). It also assesses the next highest priority information need for the community.

Objectives

1. Estimate escapement of sockeye salmon adults into Eek Lake using mark-recapture methods so that the estimate coefficient of variation is less than 20%
2. Estimate the age, sex and length composition of the sockeye salmon spawning in Eek Lake with a coefficient of variation less than 20% for the principle age class.

*Note that a concurrent objective covered in the Hetta Lake Sockeye Assessment Project is:

3. Estimate the annual sockeye subsistence harvest of Eek Inlet sockeye salmon with a creel census program in conjunction with the Hetta Lake Project.

Methods

Each year the crew will conduct at least 5 mark-recapture events on the Eek Lake spawning grounds. Fish will be seined at the mouth of Eek Lake's inlet creek and marked with a unique marking scheme designated for each mark-recapture event. Fish will then be recaptured on the spawning ground using dip nets, and observed for marks. Data will be analyzed to estimate the spawning population of sockeye salmon returning to Eek Lake. In addition, approximately 600 fish will be sampled on the spawning grounds for age, sex and length data. Fish will be measured and sexed on site. Scales will be removed and sent to the Alaska Department of Fish and Game to be read to determine age. Bi-weekly in-season reports of harvest and success of mark-recapture events will be shared with state and federal agencies. Annual reports will be produced after each field season, and a final report including all four seasons will be produced at the end of the project.

Partnership/Capacity Building

Since 2001, Hydaburg Cooperative Association has been working with Alaska Department of Fish and Game to build capacity on Fisheries Resource Monitoring Program projects. The 2010 field season marked the first year that Hydaburg Cooperative Association became the primary investigator for the Hetta Lake Subsistence Sockeye Salmon Stock Assessment project. Hydaburg Cooperative Association will continue to work with a contracted biologist to assist with reporting Hydaburg Cooperative Association has accomplished this goal and demonstrates community control level of involvement. The Alaska Department of Fish and Fame will still offer scale reading services to the project.

Justification

Eek Lake provides sockeye subsistence harvest opportunities for the residents of Hydaburg. This system is in close proximity to significant commercial fisheries, the potential for competing harvest is high. Currently only one year (2003) of Eek Lake escapement data exists. This project would provide another four years of information. Periodic monitoring of this system over time would help fisheries managers better evaluate changes in the sockeye salmon population and ensure escapement and subsistence opportunities are adequately met. While the core of this project is complete, several details in the investigation plan need to be clarified before this project is funded. The investigators need to ensure the project objectives representative of the project's scope, the budget needs to be justified or reduced and the mark-recapture model assumptions need to be clarified. If this project is funded a revised budget and investigation plan will need to be provided.

MULTI-REGIONAL OVERVIEW

Issues and Information Needs

For the Multi-regional category, the 2012 Request for Proposals was focused on four priority information needs:

- Changes in subsistence fishery resources and uses, in the context of climate change where relevant, including but not limited to fishing seasons, species targeted, fishing locations, fish quality, harvest methods and means, and methods of preservation. Include management implications.
- Develop models based on long-term relationships between ocean conditions and production for Bering Sea and Gulf of Alaska Chinook salmon stocks to better understand and respond to changes in run abundance.
- An indexing method for estimating species-specific whitefish harvests on an annual basis for the Kuskokwim and Yukon drainages. Researchers should explore and evaluate an approach where sub-regional clusters of community harvests can be evaluated for regular surveying with results being extrapolated to the rest of the cluster, contributing to drainage-wide harvest estimates.
- Evaluation of conversion factors used to estimate edible pounds from individual fish, and from unorthodox units such as tubs, sacks, or buckets.

Projects Funded Under the Fisheries Resource Monitoring Program

Since the inception of the Monitoring Program in 2000, 14 projects have been funded in the Multi-regional category, and one of these projects is ongoing during 2012 (Tables 1 and 2). The ongoing project (08-701) provides for monitoring water temperature at many of the field project sites funded by the Fisheries Resource Monitoring Program, as an information baseline for multiple applications, including climate change assessment.

Projects Forwarded for Investigation Plan Development

Three proposals for research in the Multi-Regional category were submitted to the Office of Subsistence Management for funding consideration in 2012. In March 2011, the Technical Review Committee reviewed these proposals and recommended two for development of investigation plans. One of these was subsequently withdrawn by the investigator, while investigators for the other one used comments from the Technical Review Committee review of their proposal to develop an investigation plan. The detailed budget submitted with that investigation plan allowed identification of funds requested by Alaska Native, State, Federal, and other organizations; funds that would be used to hire local residents; and matching funds from investigators (Tables 3 and 4).

Available Funds

Federal Subsistence Board guidelines direct initial distribution of funds among regions and data types. While regional budget guidelines provide an initial target for planning, they are not rigid allocations. Upon review and evaluation, the Technical Review Committee, Regional Advisory Councils, Interagency Staff Committee and Federal Subsistence Board have the opportunity to address the highest priority projects across regions. For 2012, approximately $135,000 is available for funding new projects in the Multi-regional category.

Recommendations for Funding

The mission of the Monitoring Program is to identify and provide information needed to sustain subsistence fisheries on Federal public lands for rural Alaskans through a multidisciplinary, collaborative program. It is the responsibility of the Technical Review Committee to develop the strongest possible monitoring plan for each region and across the entire state. After reviewing the investigation plan, the Technical Review Committee recommended funding the proposed project (Table 5):

12-700	Yukon and Kuskokwim Inconnu Genetic Baseline	$16,788

The project recommended for funding in the Multi-regional category in 2012 is summarized below (see Executive Summary for more details on this project).

12-700 Yukon and Kuskokwim Inconnu Genetic Baseline. This three-year project would assess the genetic population structure and develop and evaluate a genetic baseline for inconnu (also referred to as sheefish) from the Yukon and Kuskokwim rivers. Inconnu is one of four important whitefish species harvested in subsistence fisheries in the Yukon and Kuskokwim River drainages and is a very valuable subsistence resource because of its year-round availability. This project would analyze samples from three to seven populations of inconnu collected through other efforts. Samples from three populations (upper Yukon Flats, Sulukna River, and Big River) are currently available for analysis, while samples from four others (Alatna River, Tanana River, upper Innoko River, and Highpower Creek) have not yet been collected. Availability of samples from these four populations would depend on whether Monitoring Program projects 12-200 (Alatna River) and 12-312 (Highpower Creek) are funded, and whether joint efforts by U.S. Fish and Wildlife Service and Alaska Department of Fish and Game being planned for the upper Innoko and Tanana rivers are successful. Additionally, data from project 10-104 (Hotham Inlet and Selawik Lake) would be used to examine inconnu population structure across western Alaska. This project would address a priority information need identified in the 2012 Request for Proposals and the Whitefish Strategic Plan.

Table 1. Summary of projects previously funded under the Fisheries Resource Monitoring Program in Multi-regional Alaska since 2000. Abbreviations used for investigators were: ADFG=Alaska Department of Fish and Game, AITC=Alaska Inter-Tribal Council, EA=Elizabeth Andrews, NPS=National Park Service, USFWS=U.S. Fish and Wildlife Service.

Project Number		Project Title	Investigators
00-016		Information Access of AYK Fish Data	ADFG
00-017		Statewide Subsistence Harvest Strategy	ADFG, AITC
01-010		Regulatory History of Alaska Salmon Regulations	ADFG, EA
01-106		Validity and Reliability of Fisheries Harvest	ADFG, AITC, NPS
01-107		Implementation of Statewide Fisheries Harvest Strategy	ADFG, AITC
01-154		Project Information and Access System	ADFG
02-043		Alaska Subsistence Fisheries Database GIS Integration	ADFG
02-069		Shared Fishery Database	ADFG
04-701		Develop Shared Fishery Database	ADFG
04-703	[a]	Hatching Success of Eulachon Eggs	USFS
04-751		Subsistence Harvest Database Update and Report	ADFG
05-702		Whitefish Genetic Species Markers	USFWS
06-701	[a]	Dolly Varden Stock Composition	USFWS

[a] Final Report in preparation.

Table 2. Summary of ongoing 2012 projects funded under the Fisheries Resource Monitoring Program in Multi-regional Alaska. Abbreviations for investigator is: ARRI=Aquatic Restoration and Research Institute.

Project Number	Project Title	Investigators	Budget ($000) 2012	Budget ($000) 2013
08-701	Temperature Monitoring	ARRI	$23.7	$0.0

Table 3. Mult-regional project costs, by organization (Alaska Native, State, Federal, other), for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012.

Project Number	Title	Budget ($000s) Alaska Native	State	Federal	Other
	Stock Status and Trends Projects				
12-700	Yukon and Kuskokwim Inconnu Genetic Baseline			$16.8	

Table 4. Multi-regional local hire and matching funds for investigation plans submitted to the Fisheries Resource Monitoring Program for funding consideration in 2012. Abbreviations used are: USFWS=U.S. Fish and Wildlife Service.

Project Number	Lead Organization	Title	Funding ($000s) Local Hire	Matching
		Stock Status and Trends Projects		
12-700	USFWS	Yukon and Kuskokwim Inconnu Genetic Baseline	$0.0	$0.0

Table 5. Funding recommendations by the Technical Review Committee (TRC) for Multi-regional category, 2012 Fisheries Resource Monitoring Program.

Project Number	Title	TRC	Requested Budget ($000) 2012	2013	2014	2015
	Stock Status and Trends Projects					
12-700	Yukon and Kuskokwim Inconnu Genetic Baseline	Yes	$16.8	$49.9	$23.3	$0.0
	Total		$16.8	$49.9	$23.3	$0.0
	Guideline		$135.0			
	TRC Recommendation		$16.8	$49.9	$23.3	$0.0

Project Number:	12-700
Project Title:	A Genetic Baseline for Inconnu from the Yukon and Kuskokwim Rivers
Geographic Region:	Multi-Regional
Information Type:	Stock Status and Trends
Principal Investigator:	Jeffrey B. Olsen, U.S. Fish and Wildlife
Co-Investigator(s):	Randy J. Brown, U.S. Fish and Wildlife Service John K. Wenburg, U.S. Fish and Wildlife Service Ray Hander, U.S. Fish and Wildlife Service Lisa Stuby, Alaska Department of Fish and Game, Aaron Dupuis, Tanana Chiefs Conference

Project Cost: **2012:** $16,788 **2013:** $49,896 **2014:** $23,316

Recommendation: Fund

Issue

Inconnu (sheefish) *Stenodus leucichthys* contribute to subsistence fisheries in both the Yukon and Kuskokwim rivers. Despite the importance of inconnu as a subsistence resource in both rivers, relatively little information is available on the number and spatial distribution of discrete populations (population structure) and the impact of subsistence harvest on those populations. In this regard, genetic data is useful for not only describing population structure but also as a baseline for estimating population-specific harvest rates in a mixed-stock fishery. There are seven locations presently thought to be spawning sites for the majority of inconnu in both the Yukon and Kuskowim rivers. These sites include the upper Yukon Flats, the Sulukna, Alatna, and Tanana, upper Innoko rivers in the Yukon River drainage and Big River and High Power Creek in the Kuskokwim River drainage. It is not clear however if inconnu exhibit natal site fidelity to these spawning sites, although radio telemetry data suggests adults return multiple times to the same location to spawn. If distinct spawning populations exist the extent to which each population is available to, and impacted by, the fishery will likely vary depending the timing and location of the fishery. This study would assess genetic population structure of inconnu in the Yukon and Kuskokwim rivers and develop and evaluate a genetic baseline for monitoring the harvest of Yukon/Kuskokwim inconnu.

Objectives

1. Develop and test genetic markers for inconnu.
2. Describe and evaluate population structure of inconnu from the Yukon and Kuskokwim rivers. The data from this region will also be combined with data from the Kobuk and Selawik rivers (Monitoring Program project10-104) to describe population structure across western Alaska
3. Develop and test a genetic baseline for estimating the population composition in a mixed population sample of inconnu in the Yukon and Kuskokwim rivers.

Methods

Objective 1: Over 30 microsatellite markers have been identified from inconnu. Eight microsatellites have been tested and at least 10 more will be tested for Project 10-104. All microsatellites used for project 10-104 would be applied to populations in this study. In addition, the 12 microsatellites not tested in project 10-104 may be examined here if more loci are needed to provide adequate genetic variation.

Objective 2: Microsatellites would be used to describe and evaluate population structure among collections from putative spawning populations in the Yukon and Kuskokwim rivers. The goal is to examine population structure by sampling the seven locations thought to support the majority of inconnu spawners. These locations include the upper Yukon Flats, the Sulukna, Alatna, Tanana, and upper Innoko rivers in the Yukon River drainage and Big River and High Power Creek in the Kuskokwim River drainage. We presently have samples from the upper Yukon Flats (N=142), Sulukna River (N=177) and Big River (N=80). We anticipate receiving collections from at least some of the remaining four locations in the summer and fall of 2011 and 2012. Assuming a target sample size of 200 for the remaining collections, approximately 1,200 samples would be used to estimate and evaluate population structure. In addition, the data from Project 10-104 would be incorporated with data collected in this study to examine inconnu population structure across western Alaska.

In the event that we do not acquire samples from all seven locations, we would reduce the scope and cost of the project accordingly. We feel the most likely alternative is that we receive some samples from all but the Tanana River. However, at the very least this project would examine inconnu population structure using the collections currently on hand (Sulukna River, upper Yukon Flats, and Big River). These three collections would help reveal the extent of population structure in western Alaska when combined with the samples from Project 10-104, Genetic Mixed-Stock Analysis and Composition of Inconnu from the Hotham Inlet and Selawik Lake Winter Subsistence Gillnet Fishery.

Objective 3: The genetic data derived from objective 2 would be evaluated for mixed-stock fishery analysis in the Yukon and Kuskokwim rivers using computer simulation.

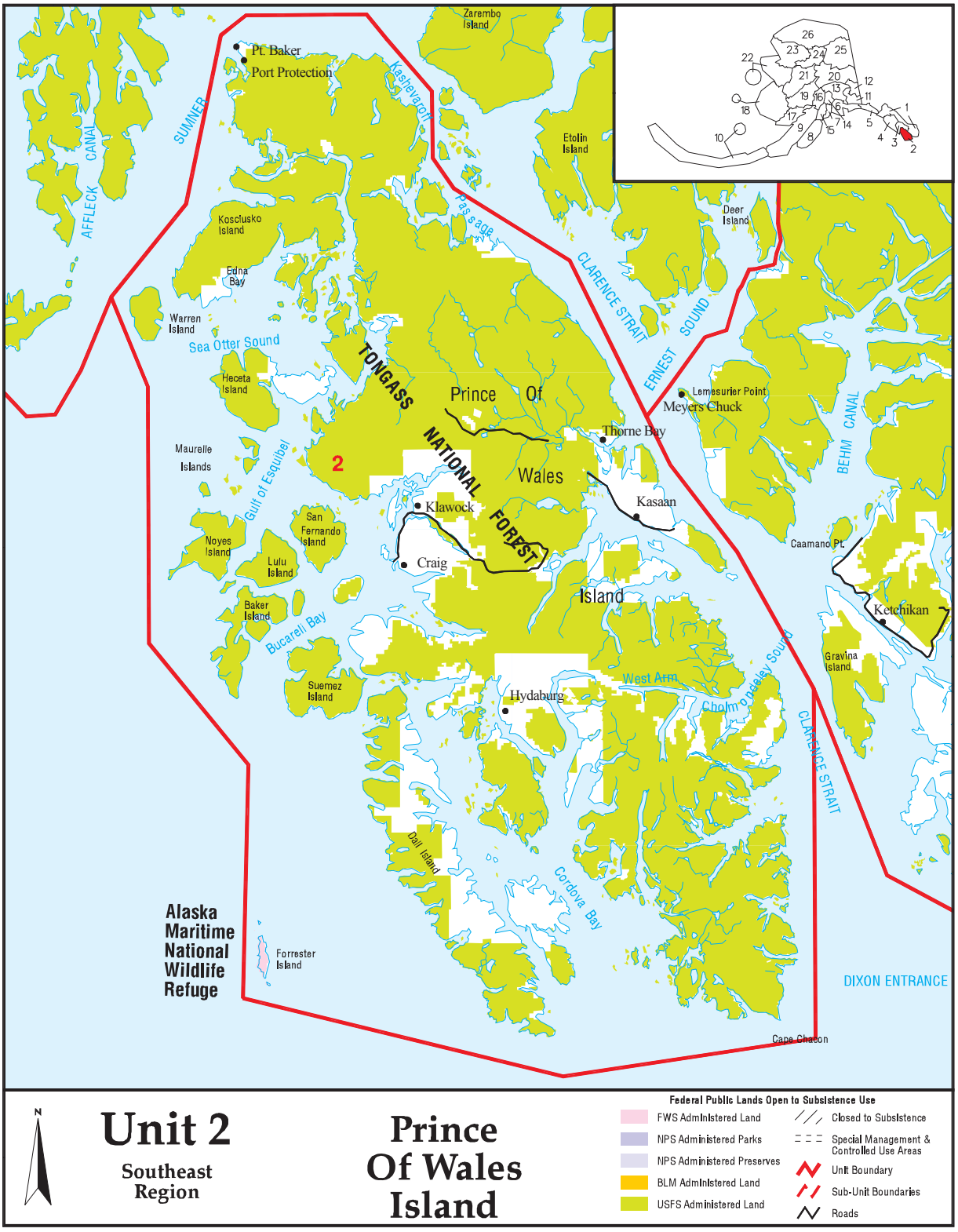
Partnerships and Capacity Building

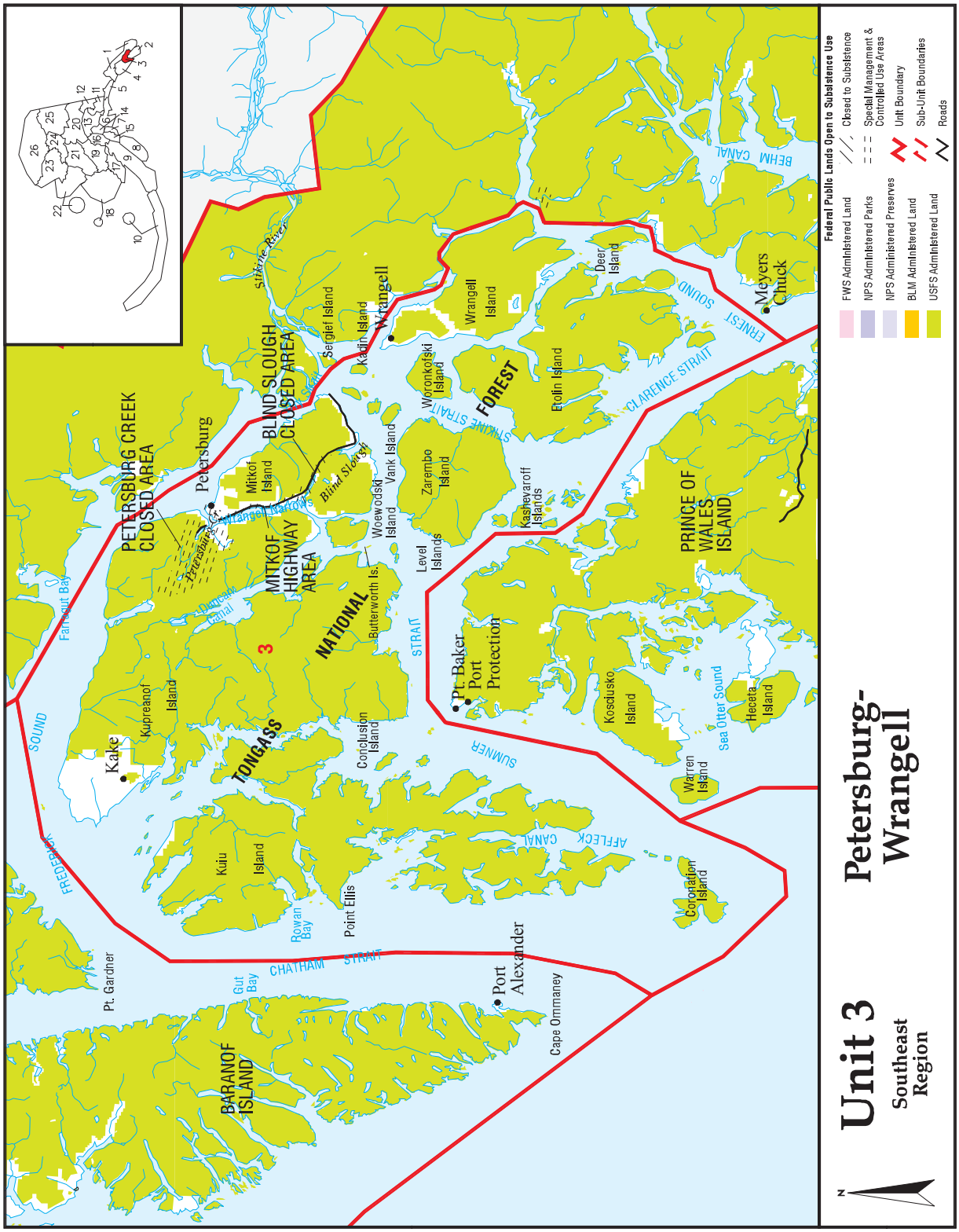
We have discussed the project with John Burr (Alaska Department of Fish and Game, Yukon Area sport fish management biologist) who has expressed support for the conceptual proposal and currently plans to participate in collecting samples from the upper Innoko River in 2011. This project would build capacity within the Tanana Chiefs Conference by strengthening relationships between them and the U.S. Fish and Wildlife Service. Also, the proposed Alatna River inconnu Monitoring Program project (Project12-200) includes the involvement of subsistence fishers from Alatna to sample fish and collect fin tissue for genetic analysis. The results of this study would contribute to a better understanding of the population structure of western Alaska inconnu and the genetic baseline would help subsistence fishery managers better assess the population-specific impacts of a mixed-stock subsistence fishery.

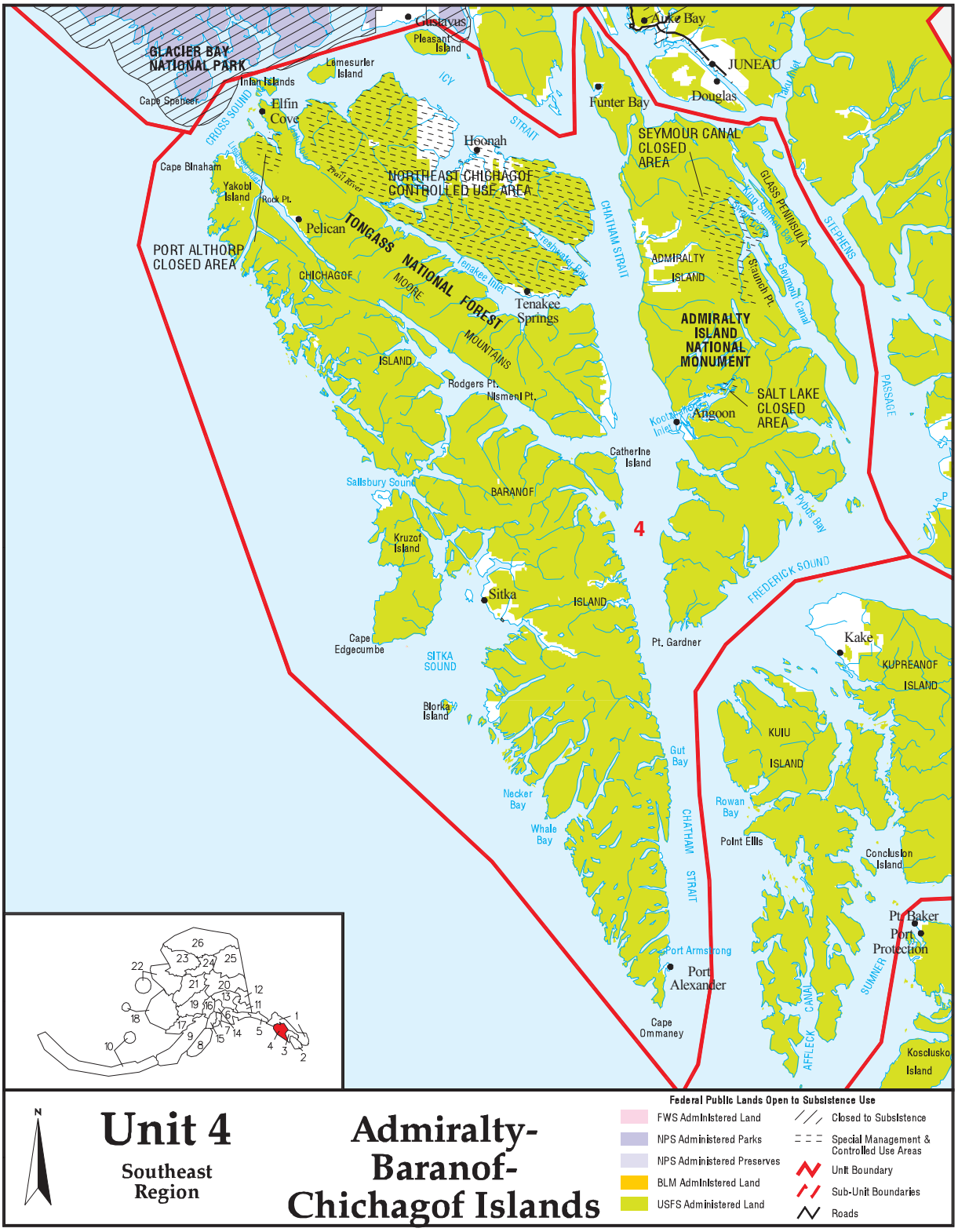
Justification

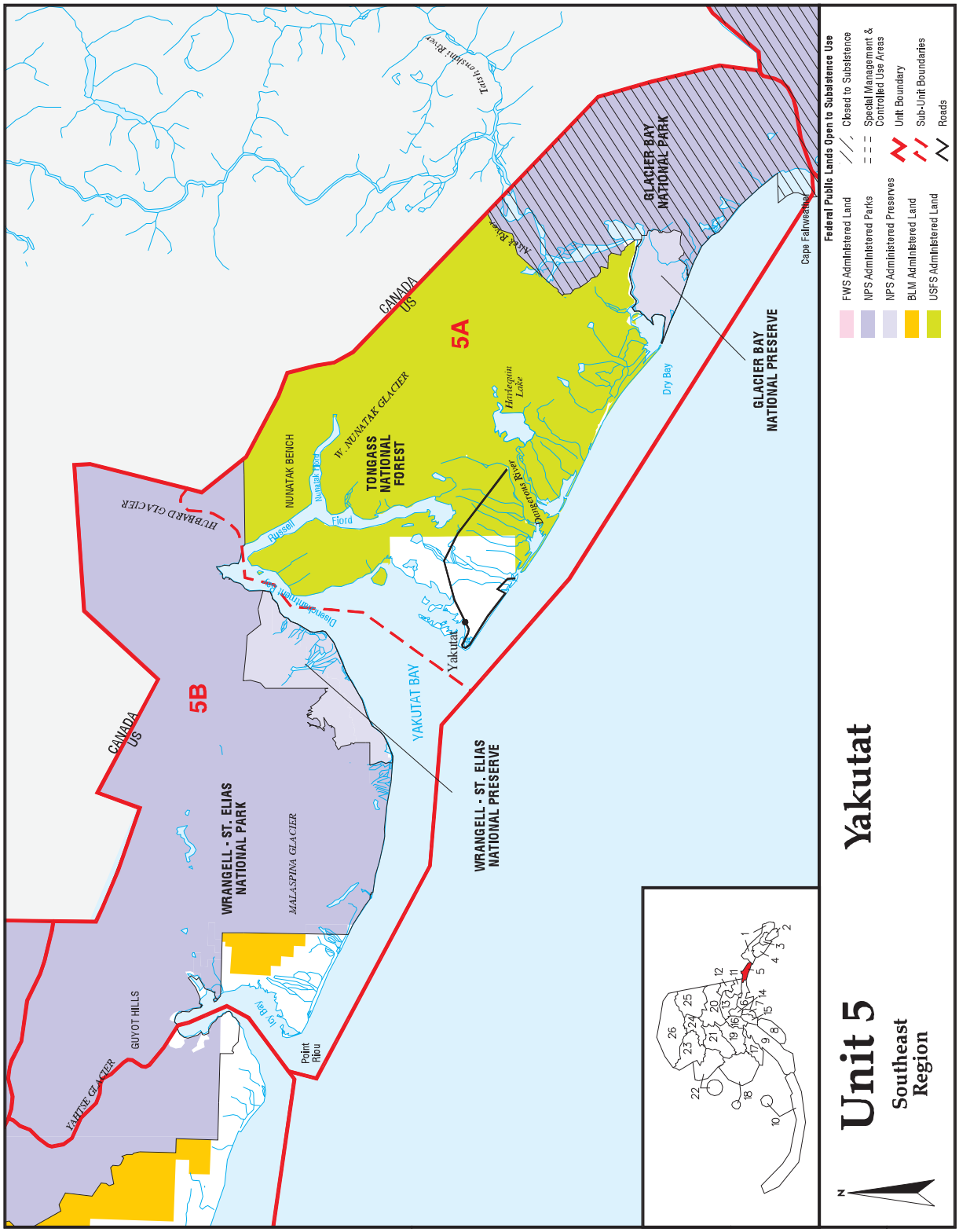
This project directly addresses a priority information need in the 2012 Request for Proposals. Data from this project would be used with data from Hotham Inlet and Selawik Lake, collected as part of Monitoring Program project 10-104, to examine inconnu population structure across western Alaska. All the investigators are well-qualified. The Conservation Genetics Laboratory investigators are currently conducting a similar Monitoring Program project on cisco (project 10-209, Genetic Stock Assessment of Yukon Delta Bering Cisco Commercial Harvest). Project objectives should be achievable with the proposed budget, and the methods used would be technically sound.

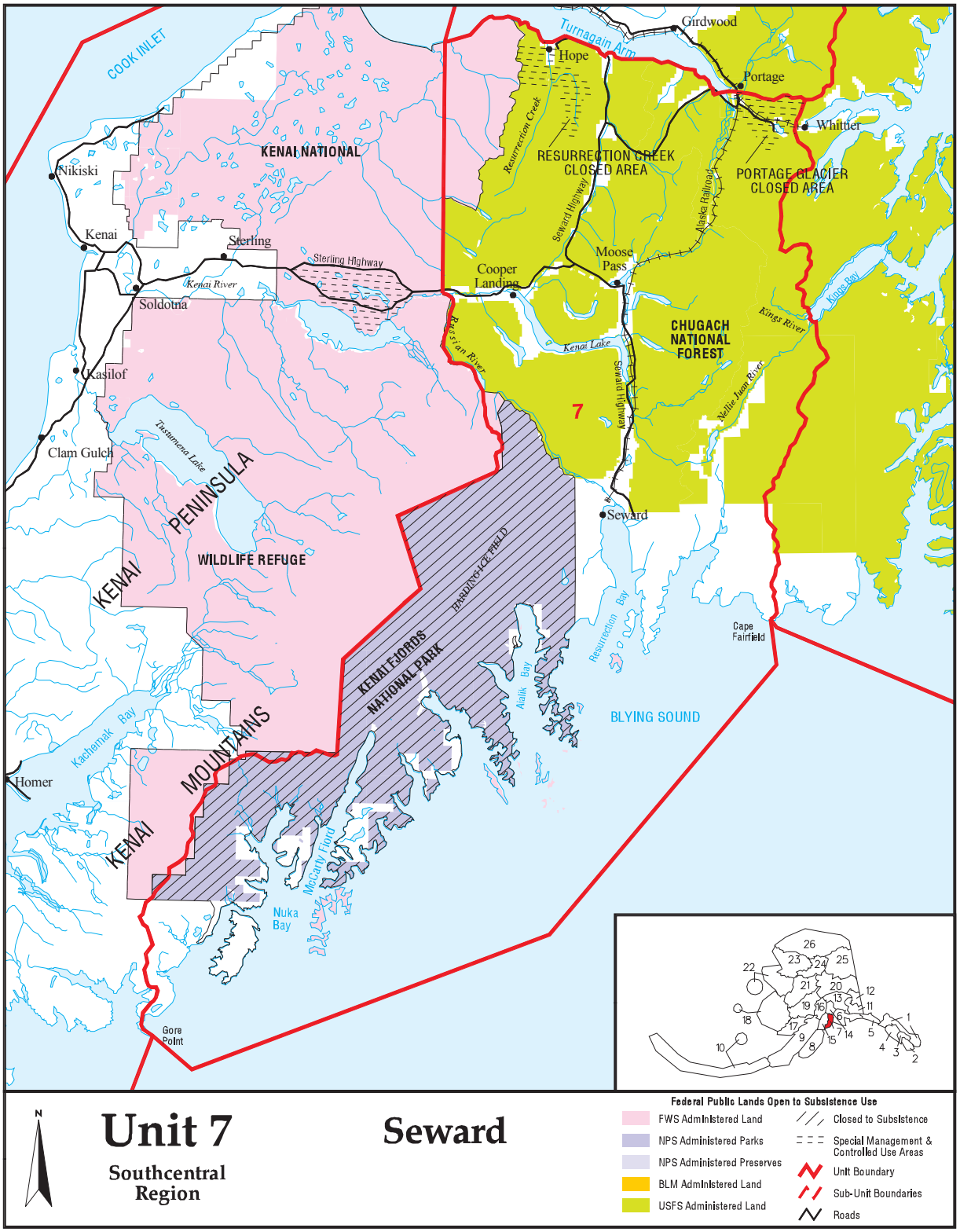
KLONDIKE GOLD RUSH NATIONAL HISTORICAL PARK
1D
Skagway
Klukwan
Haines
CANADA
US
Cape Fairweather
GLACIER BAY NATIONAL PARK
1C
Gustavus
Auke Bay
Juneau
Elfin Cove
CHICHAGOF ISLAND
Hoonah
Pelican
Tenakee Springs
ADMIRALTY ISLAND NATIONAL MONUMENT
TONGASS
Angoon
Hood Bay
BARANOF
Sitka
Sitka Sound
ISLAND
Pt. Gardner
Kake
Kupreanof
Kuiu Island
Petersburg
Mitkof Island
1B
Wrangell
Wrangell Island
Etolin Island
ANAN CREEK DRAINAGE
SALMON RIVER DRAINAGE
Hyder
1A
FOREST
MISTY FJORDS NATIONAL MONUMENT
REVILLAGIGEDO ISLAND
Ketchikan
Saxman
Annette Island
Metlakatla
PRINCE OF WALES ISLAND
Klawock
Craig
Kasaan
Hydaburg
Pt. Baker
Dixon Entrance
Chatham Strait
Frederick Sound
Sumner Strait
Clarence Strait
Tongass Narrows
Lynn Canal
Glacier Bay
Stikine River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
Unit 1
Southeast Region
Southeast Mainland


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

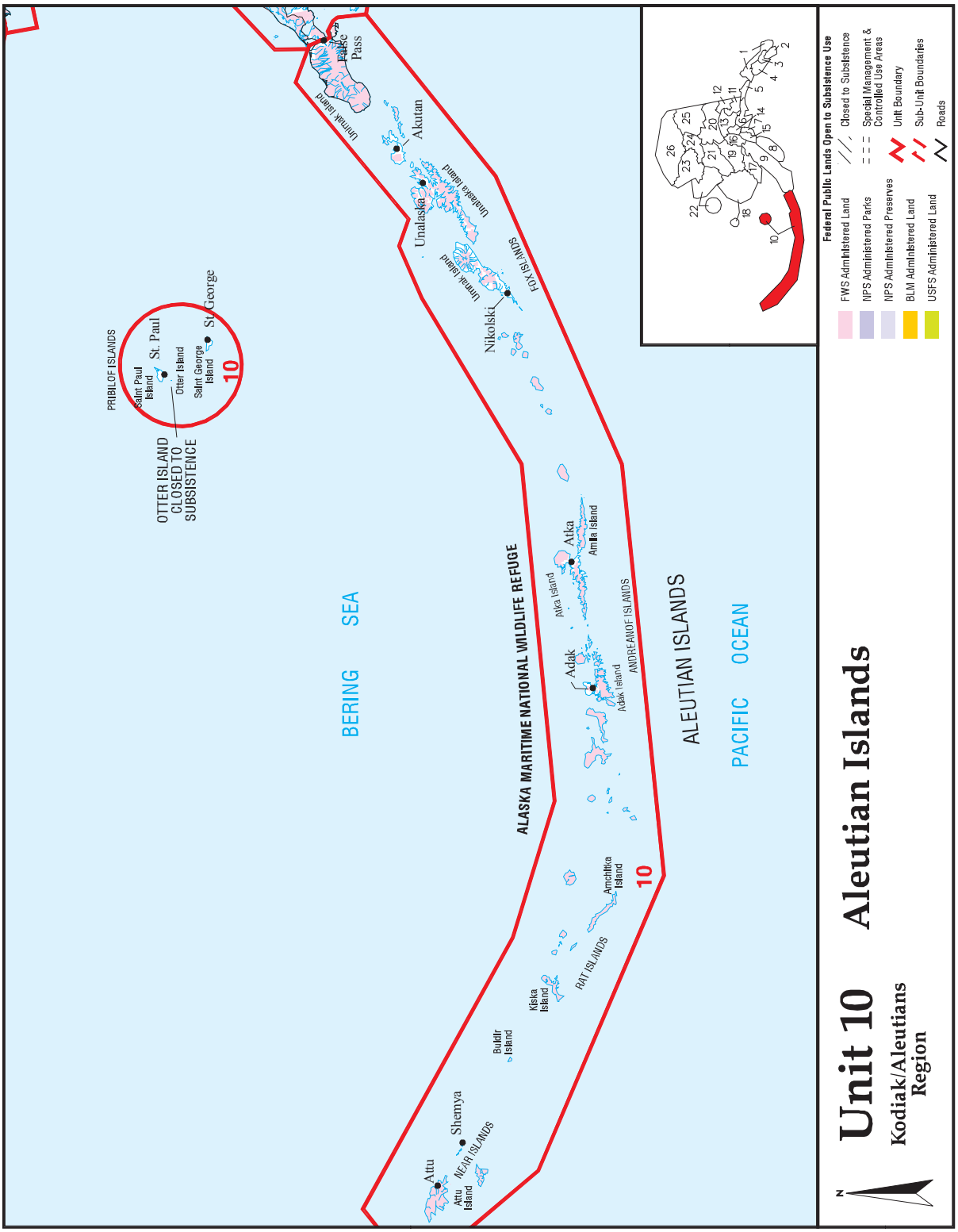

Unit 3
Southeast Region
Petersburg-Wrangell
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
N
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
Farragut Bay
Duncan Canal
Wrangell Narrows
Blind Slough
Stikine River
Mitkof Island
Kupreanof Island
Kuiu Island
Sergief Island
Kadin Island
Woronkofski Island
Wrangell Island
Etolin Island
Deer Island
Vank Island
Woewodski Island
Zarembo Island
Kashevaroff Islands
Level Islands
Butterworth Is.
Conclusion Island
Kosciusko Island
Warren Island
Heceta Island
Coronation Island
Point Ellis
Rowan Bay
Gut Bay
FREDERICK SOUND
CHATHAM STRAIT
SUMNER STRAIT
STIKINE STRAIT
CLARENCE STRAIT
ERNEST SOUND
BEHM CANAL
AFFLECK CANAL
Sea Otter Sound
3

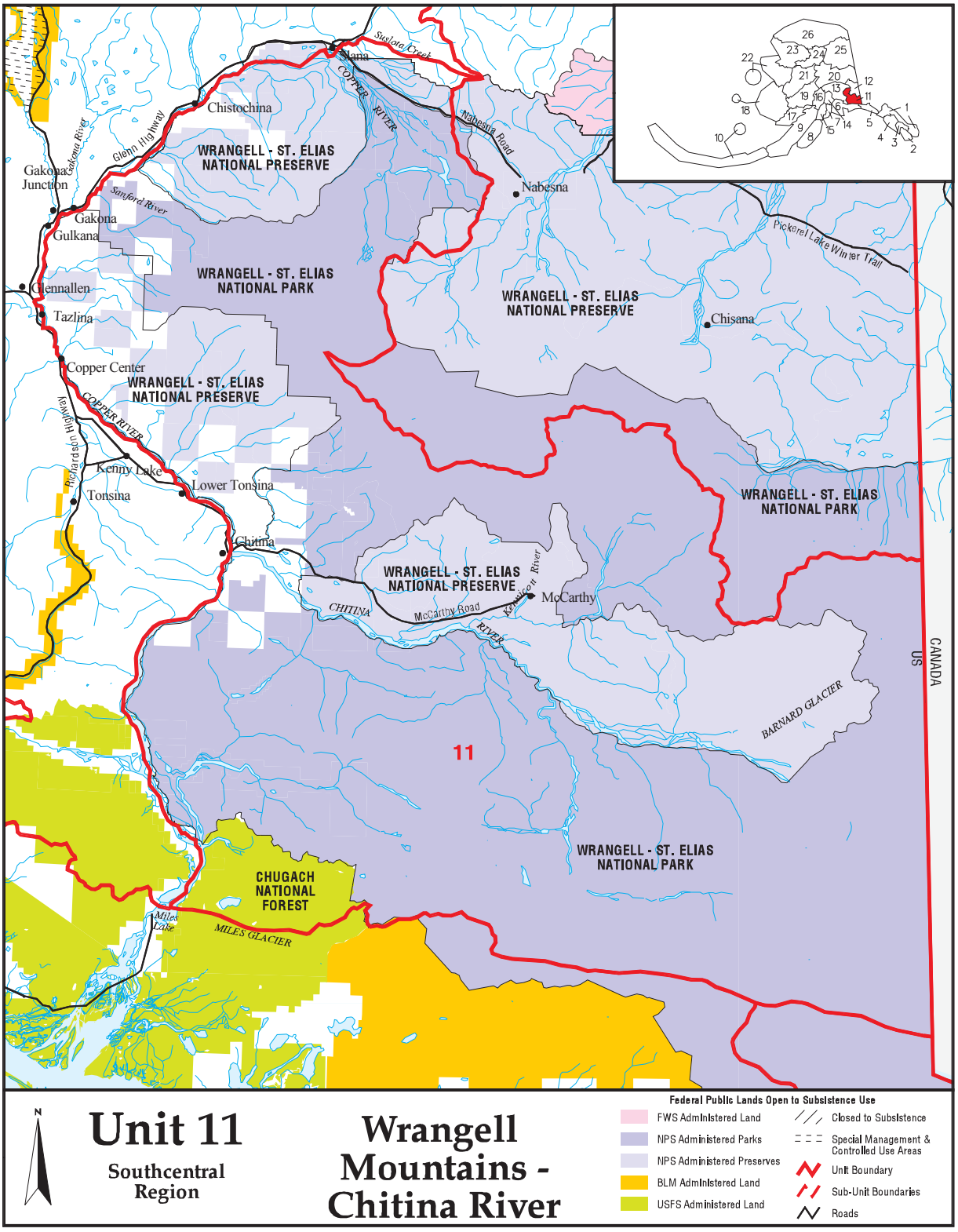

GLACIER BAY NATIONAL PARK
Gustavus
Pleasant Island
Lemesurier Island
Inian Islands
Cape Spencer
CROSS SOUND
Elfin Cove
ICY STRAIT
Funter Bay
Auke Bay
JUNEAU
Douglas
Hoonah
SEYMOUR CANAL CLOSED AREA
Cape Bingham
Yakobi Island
Rock Pt.
NORTHEAST CHICHAGOF CONTROLLED USE AREA
Pelican
TONGASS NATIONAL FOREST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

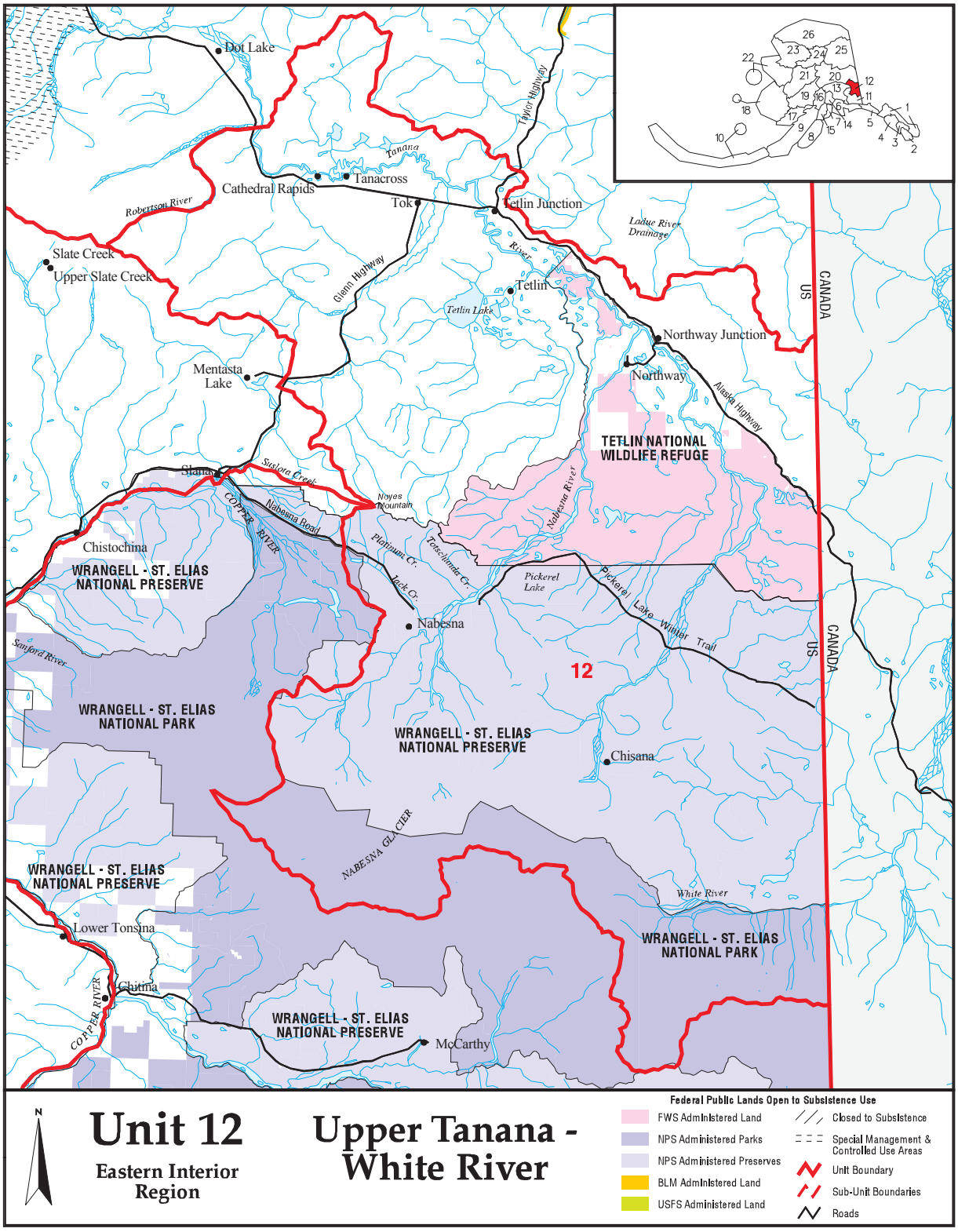

Unit 5
Southeast Region
Yakutat
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
5A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

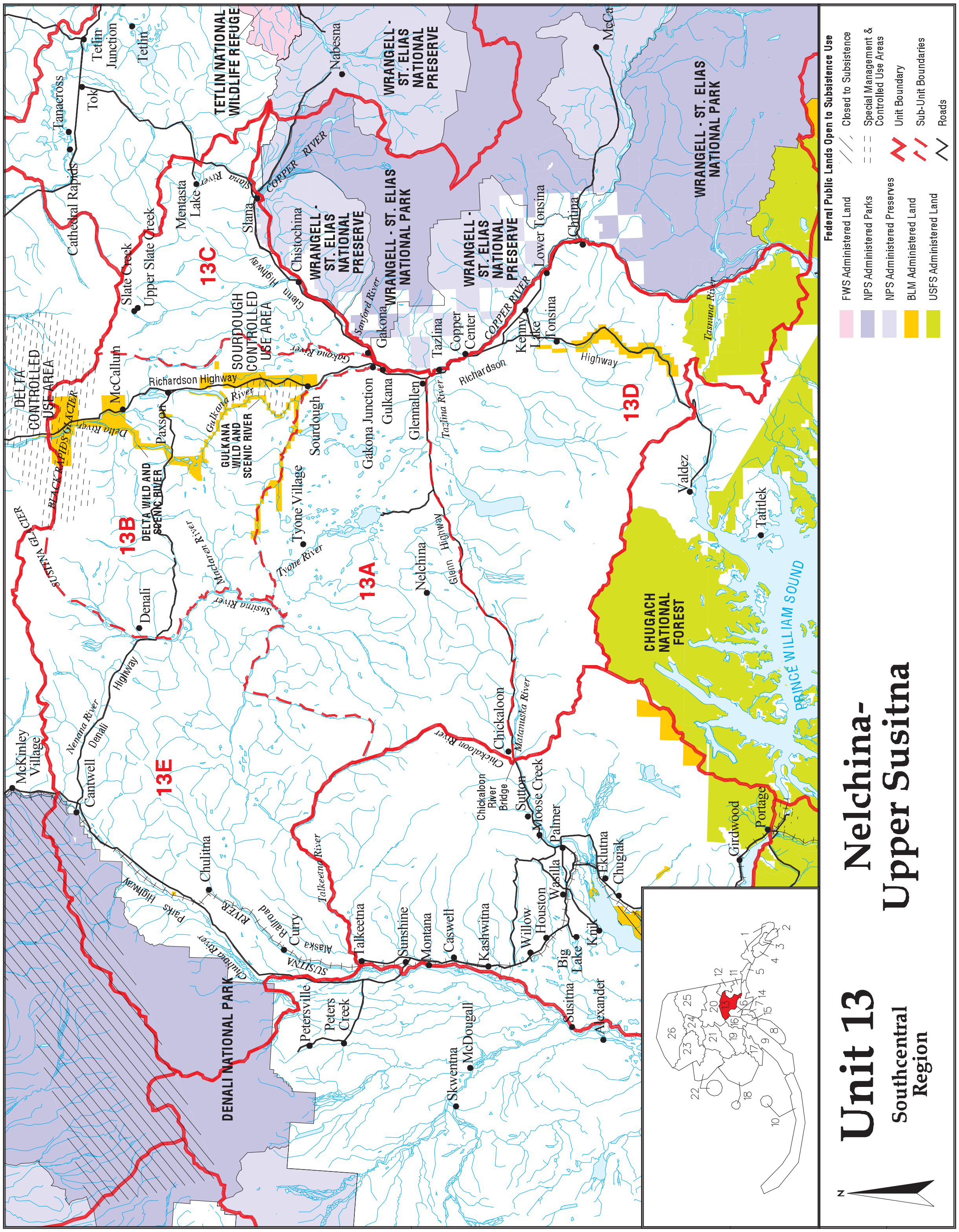

COOK INLET
Turnagain Arm
Girdwood
Hope
Portage
Whittier
Nikiski
Kenai
Sterling
Soldotna
Kenai River
Sterling Highway
KENAI NATIONAL
RESURRECTION CREEK CLOSED AREA
PORTAGE GLACIER CLOSED AREA
Resurrection Creek
Seward Highway
Alaska Railroad
Moose Pass
Cooper Landing
Kenai Lake
Russian River
CHUGACH NATIONAL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

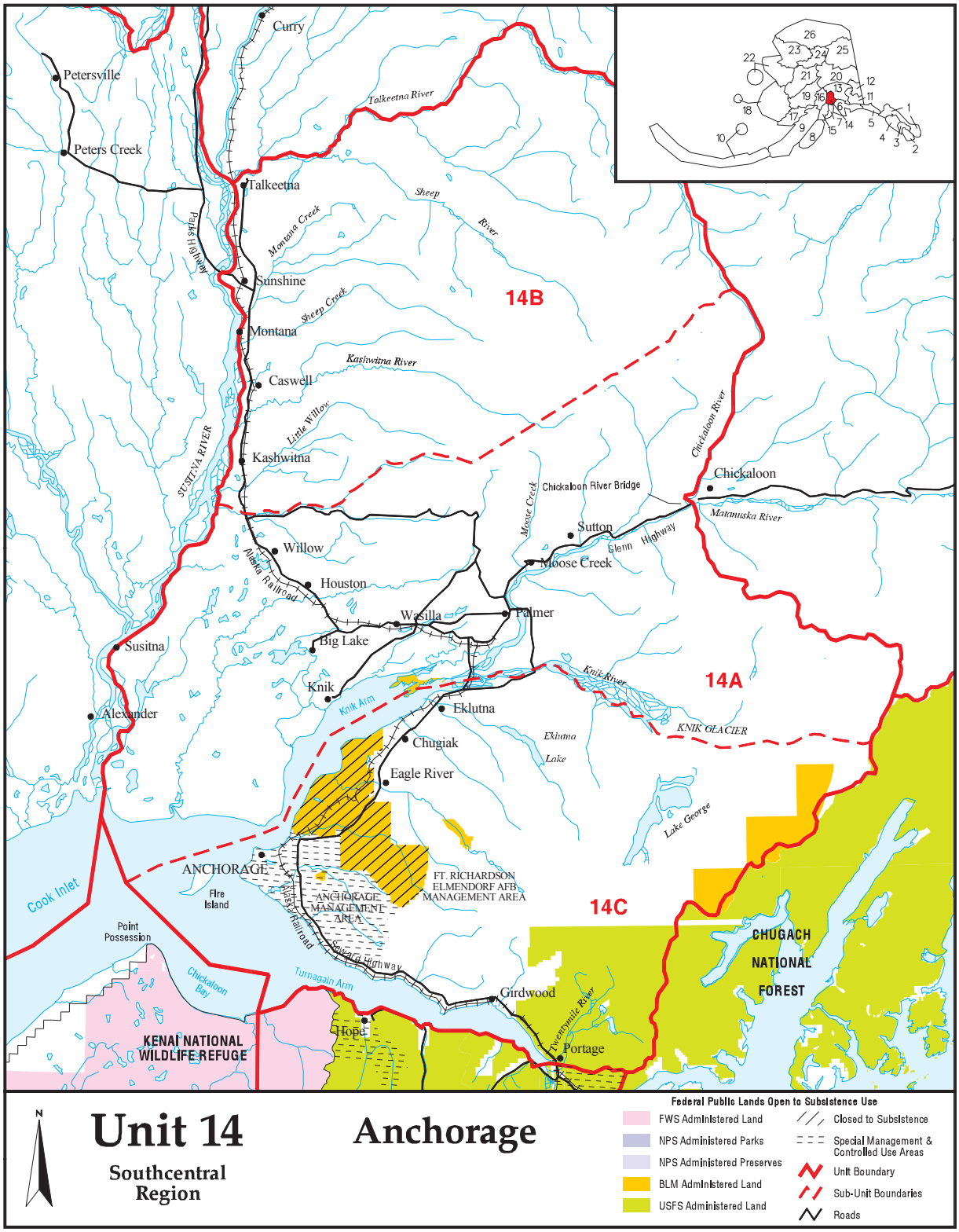
KENNEDY ENTRANCE
BARREN ISLANDS
ALASKA MARITIME NATIONAL WILDLIFE REFUGE
STEVENSON ENTRANCE
Cape Douglas
Naknek
King Salmon
Shuyak Island
Ban Island
Afognak Island
Marmot Is.
Danger Bay
Raspberry Island
Koncor
Aleneva
Marmot Bay
Whale Passage
Whale Island
Spruce Island
Viekoda Bay
Uganik Island
Uganik 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
Kiliuda Bay
Old Harbor
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
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads

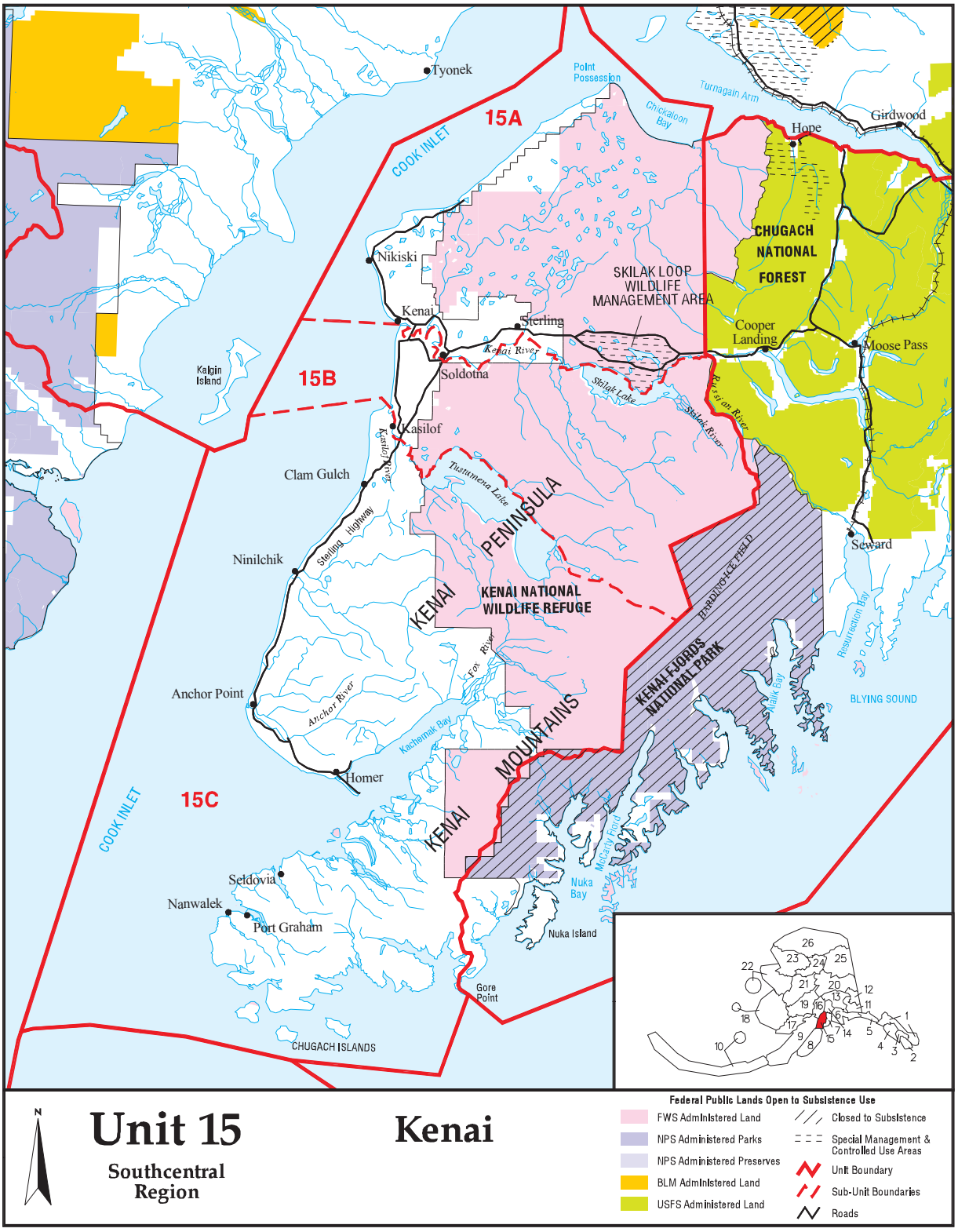

Unit 10
Aleutian Islands
Kodiak/Aleutians Region
N
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries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

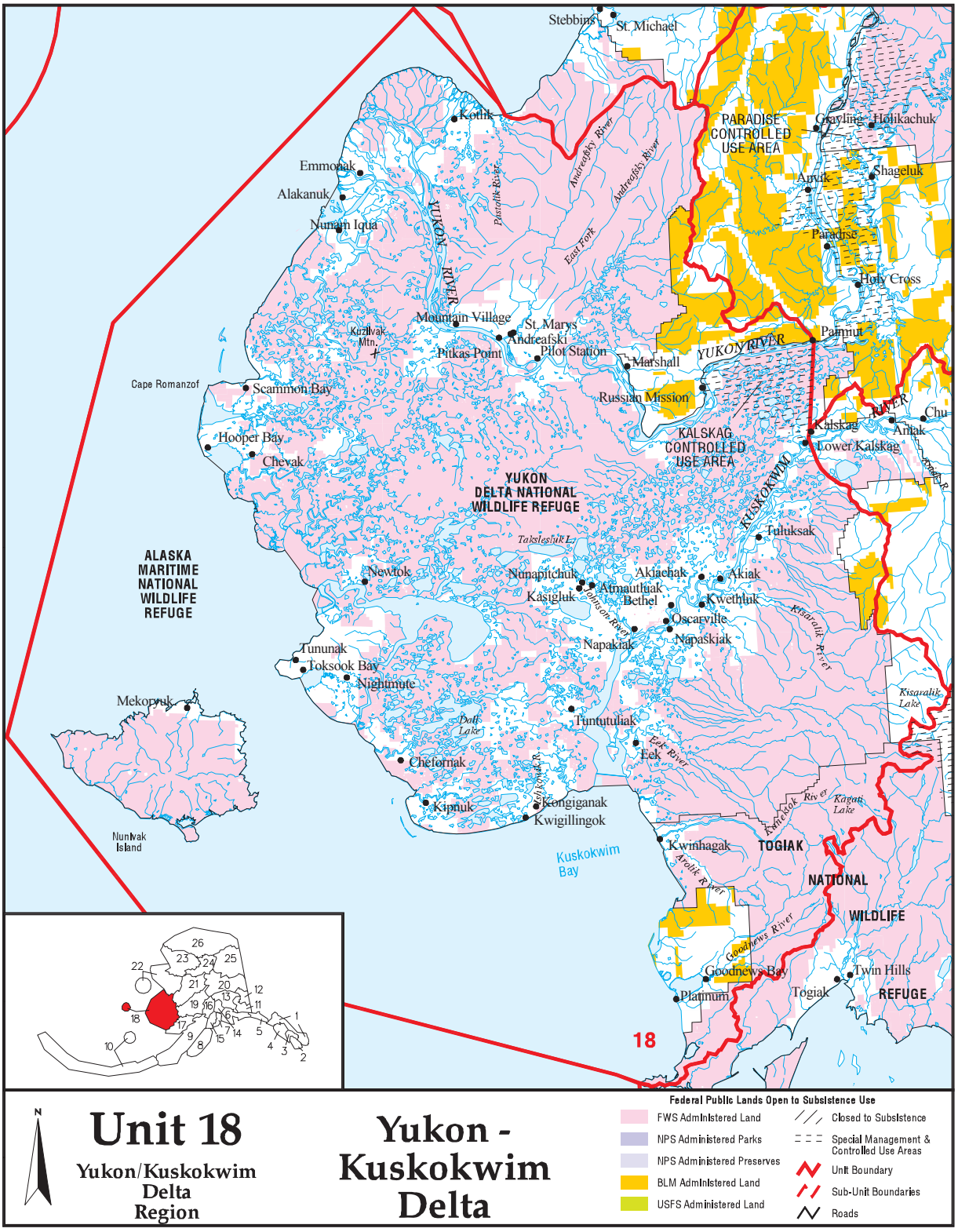

Unit 11
Southcentral Region
Wrangell Mountains - Chitina River
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary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

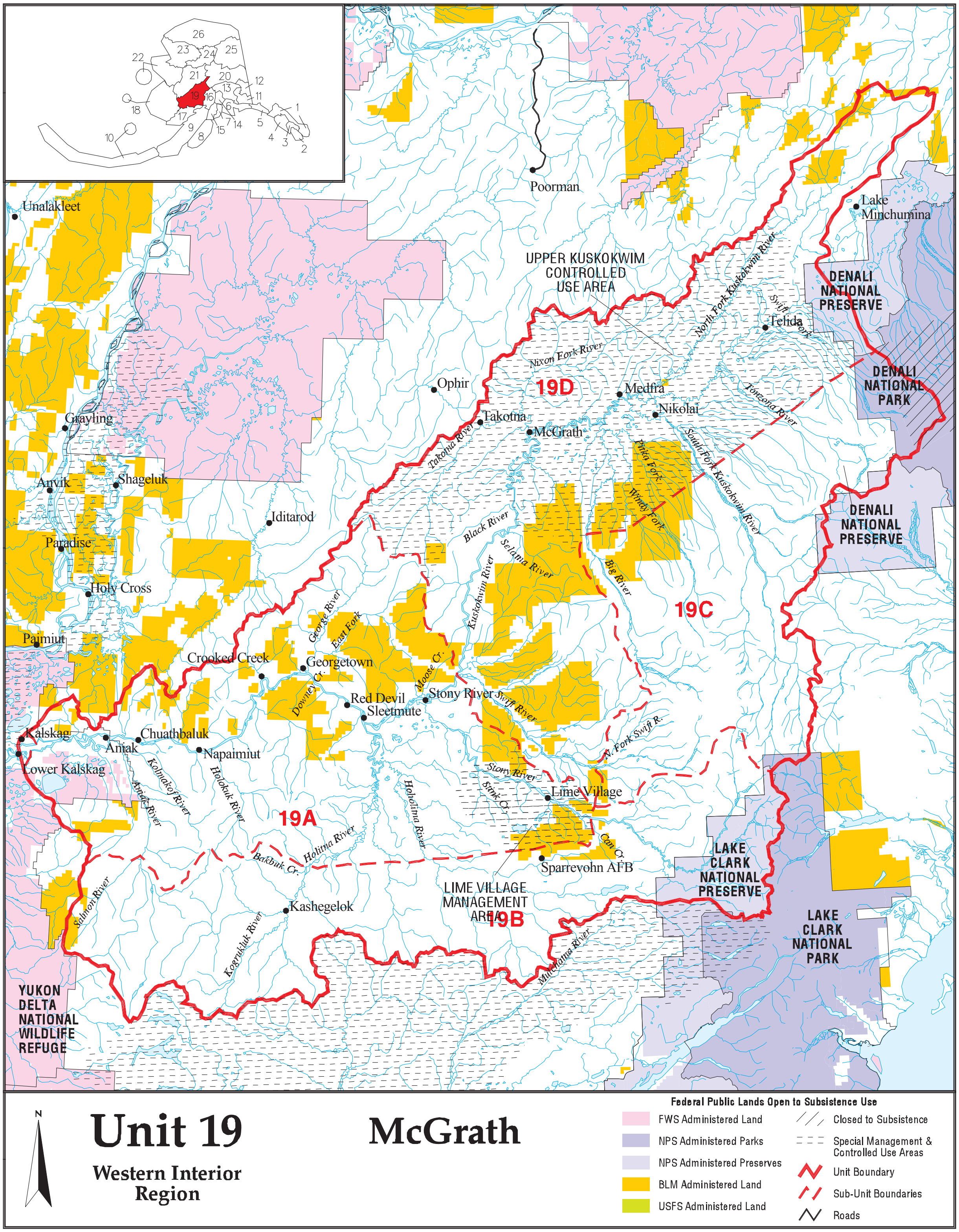

Dot Lake
Taylor Highway
Tanana
Tanacross
Cathedral Rapids
Robertson River
Tok
Tetlin Junction
Ladue River Drainage
Slate Creek
Upper Slate Creek
Glenn Highway
River
Tetlin
Tetlin Lake
Northway Junction
Northway
Alaska Highway
Mentasta Lake
TETLIN NATIONAL WILDLIFE REFUGE
Slana
Sistuna Creek
Noyes Mountain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

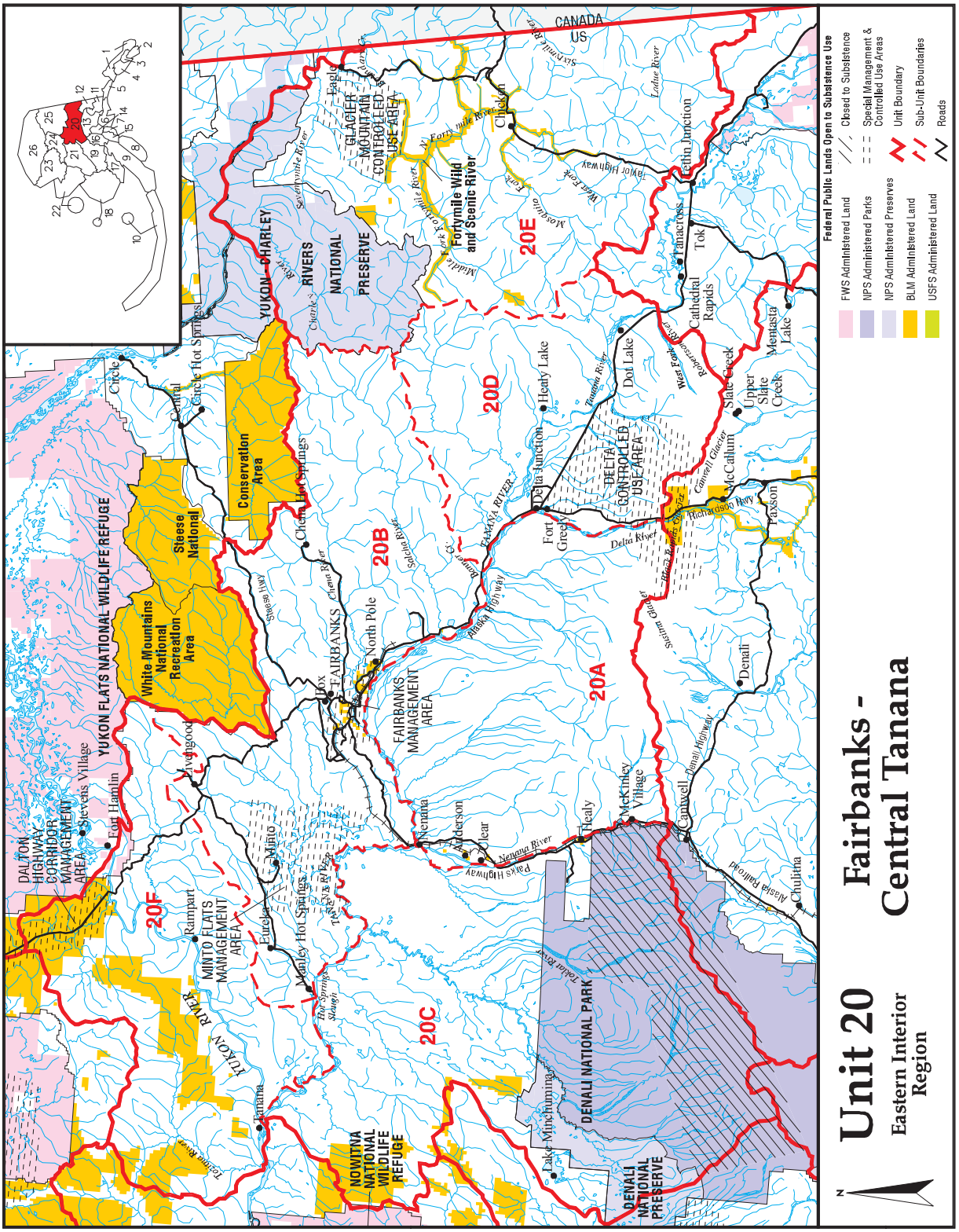

Unit 13
Nelchina-Upper Susitna
Southcentral Region
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
13A
13B
13C
13D
13E
DENALI NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
TETLIN NATIONAL WILDLIFE REFUGE
CHUGACH NATIONAL FOREST
DELTA CONTROLLED USE AREA
SOURDOUGH CONTROLLED USE AREA
GULKANA WILD AND SCENIC RIVER
DELTA WILD AND SCENIC RIVER
PRINCE WILLIAM SOUND
Richardson Highway
Glenn Highway
Denali Highway
Parks Highway
Alaska Railroad
COPPER RIVER
SUSITNA RIVER
Valdez
Glennallen
Gulkana
Gakona
Copper Center
Tazlina
Paxson
Sourdough
McCarthy
Chitina
Tonsina
Slana
Tok
Talkeetna
Palmer
Wasilla
Cantwell
Chickaloon
Tatitlek
Girdwood
Portage


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


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
Kalgin Island
15B
Skilak Lake
Russian River
Skilak River
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
Aialik Bay
BLYING SOUND
Kachemak Bay
MOUNTAINS
Homer
15C
COOK INLET
KENAI
McCarty Fiord
Seldovia
Nuka Bay
Nanwalek
Port Graham
Nuka Island
Gore Point
CHUGACH ISLANDS
N
Unit 15
Southcentral Region
Kenai
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


Stebbins
St. Michael
Koyuk
Emmonak
Alakanuk
Nunam Iqua
YUKON RIVER
Paotsalik River
Andreafsky River
East Fork
PARADISE CONTROLLED USE AREA
Grayling
Holikachuk
Anvik
Shageluk
Paradise
Holy Cross
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Kuzilvak Mtn.
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
Akiachak
Akiak
Atmautluak
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
TOGIAK NATIONAL WILDLIFE REFUGE
Kagati Lake
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


Poorman
Unalakleet
Lake Minchumina
UPPER KUSKOKWIM CONTROLLED USE AREA
DENALI NATIONAL PRESERVE
Telida
North Fork Kuskokwim River
Swift Fork
Nixon Fork River
19D
Medfra
DENALI NATIONAL PARK
Ophir
Nikolai
Takotna
McGrath
Grayling
Takotna River
Tonzona River
South Fork Kuskokwim River
Shageluk
Anvik
Pitka Fork
Windy Fork
DENALI NATIONAL PRESERVE
Iditarod
Black River
Paradise
Selatna River
Big River
Holy Cross
Kuskokwim River
19C
George River
East Fork
Paimiut
Crooked Creek
Georgetown
Downey Cr.
Moose Cr.
Red Devil
Sleetmute
Stony River
Swift River
N. Fork Swift R.
Kalskag
Chuathbaluk
Aniak
Napaimiut
Lower Kalskag
Kolmakof River
Aniak River
Holokuk River
Holitna River
Stony River
Stink Cr.
Lime Village
19A
Holitna River
Bakbuk Cr.
Can Cr.
Sparrevohn AFB
LAKE CLARK NATIONAL PRESERVE
LIME VILLAGE MANAGEMENT AREA
19B
Kashegelok
Salmon River
Kogrukluk River
Mulchatna River
LAKE CLARK NATIONAL PARK
YUKON DELTA NATIONAL WILDLIFE REFUGE
N
Unit 19
Western Interior Region
McGrath
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 20
Eastern Interior Region
Fairbanks - Central Tanana
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads
CANADA
US
20A
20B
20C
20D
20E
20F
YUKON FLATS NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
White Mountains National Recreation Area
Steese National Conservation Area
YUKON-CHARLEY RIVERS NATIONAL PRESERVE
GLACIER MOUNTAIN CONTROLLED USE AREA
Fortymile Wild and Scenic River
MINTO FLATS MANAGEMENT AREA
FAIRBANKS MANAGEMENT AREA
DELTA CONTROLLED USE AREA
NOWITNA NATIONAL WILDLIFE REFUGE
DENALI NATIONAL PARK
DENALI NATIONAL PRESERVE
Circle
Central
Circle Hot Springs
Eagle
Chicken
Tanacross
Tok
Cathedral Rapids
Mentasta Lake
Slate Creek
Upper Slate Creek
McCallum
Paxson
Dot Lake
Healy Lake
Delta Junction
Fort Greely
Chena Hot Springs
North Pole
FAIRBANKS
Ester
Nenana
Anderson
Lear
Healy
McKinley Village
Cantwell
Denali
Chulitna
Stevens Village
Fort Hamlin
Livengood
Rampart
Manley Hot Springs
Tanana
Minchumina
Lake Minchumina
Alaska Railroad
Alaska Highway
Parks Highway
Richardson Hwy
Taylor Highway
Denali Highway
Steese Hwy
Elliott Hwy
Dalton Highway
Tanana River
Yukon River
Nenana River
Delta River
Gerstle River
Sixtymile River
Seventymile River
Fortymile River
Chena River
Salcha River
Goodpaster River
Tok River
Ladue River
Chena River
Tanana River
Tolovana River
Hot Springs Slough
Canwell Glacier
Black Rapids Glacier
Richardson Hwy
Alaska Highway
Taylor Highway
Dot Lake
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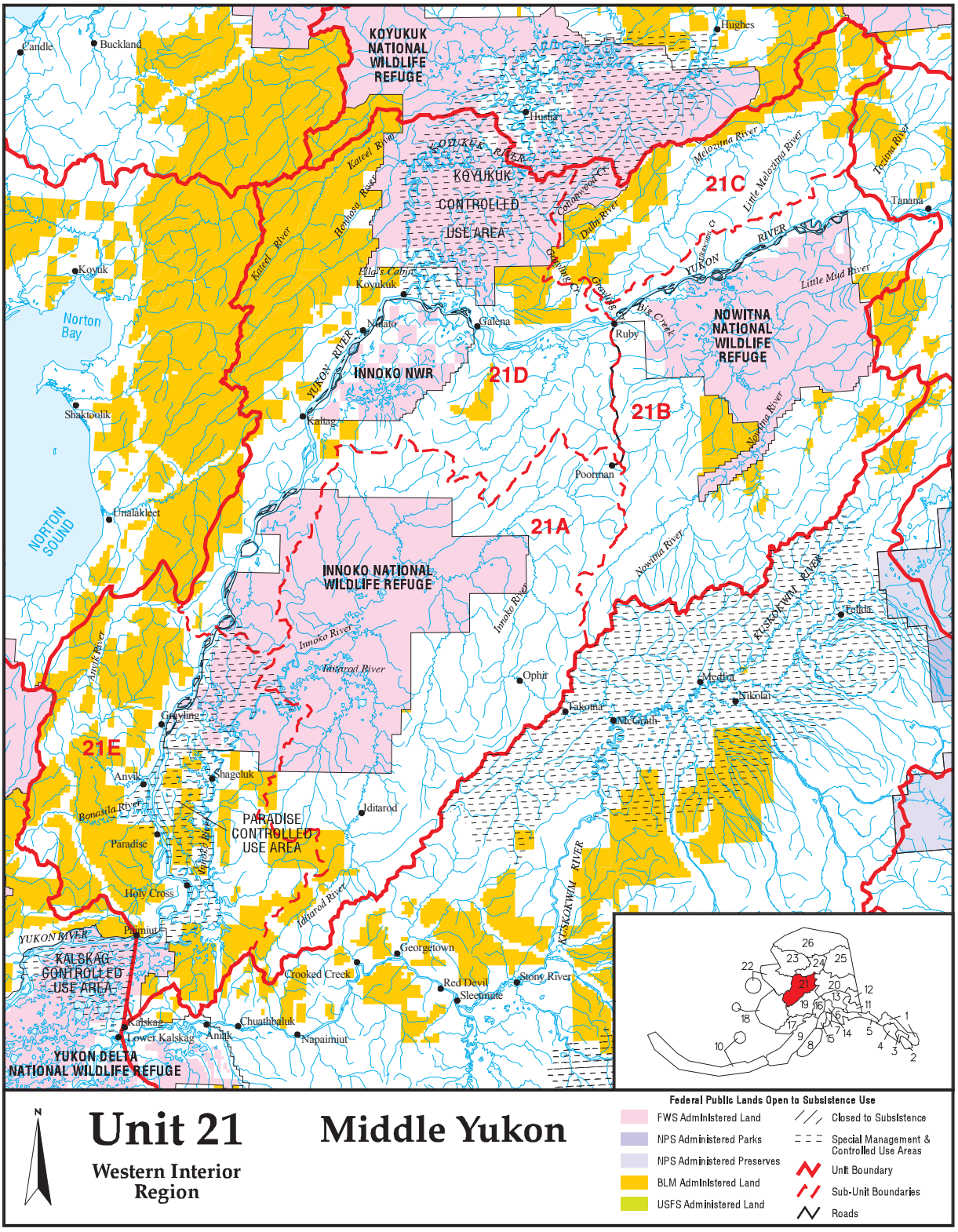
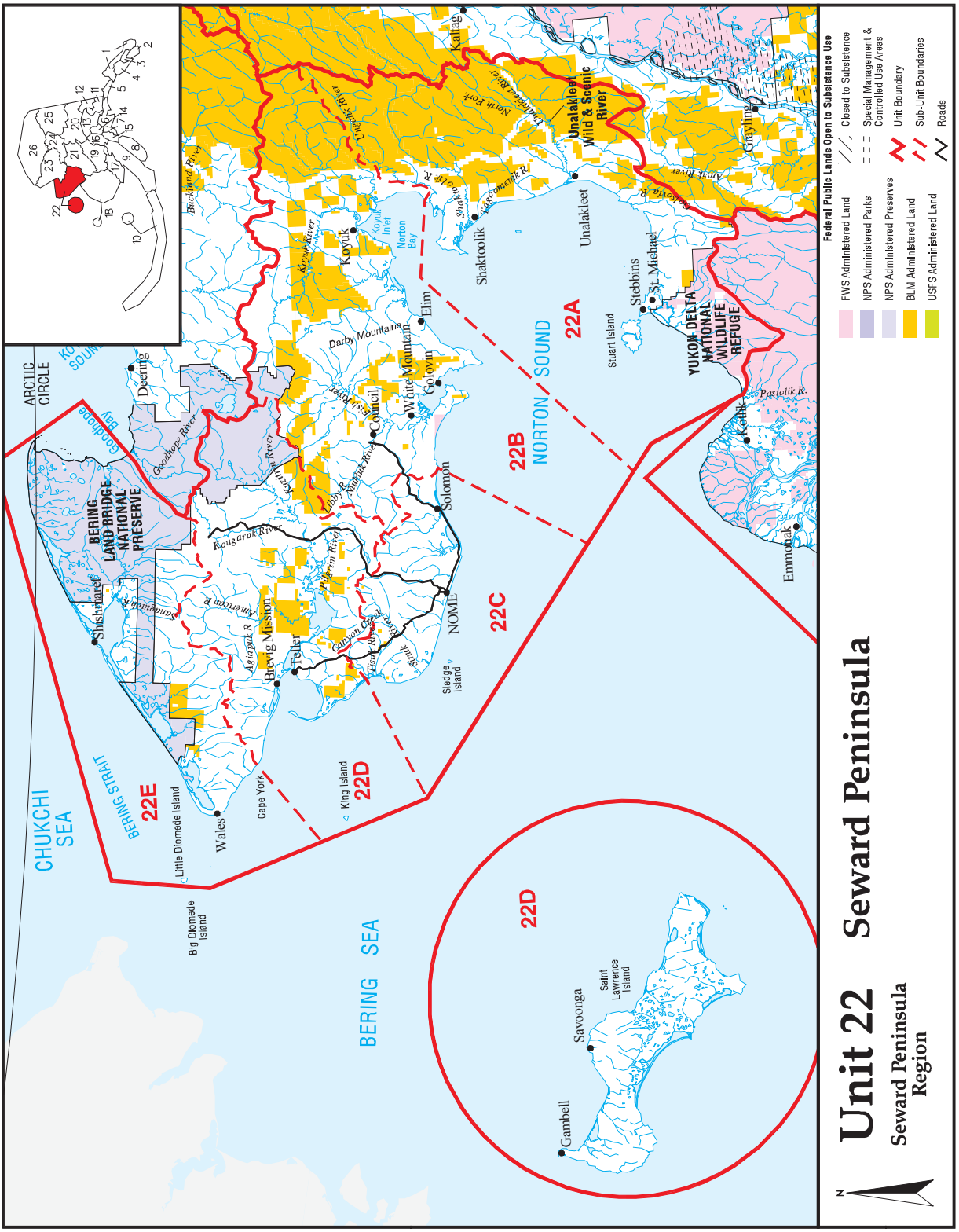
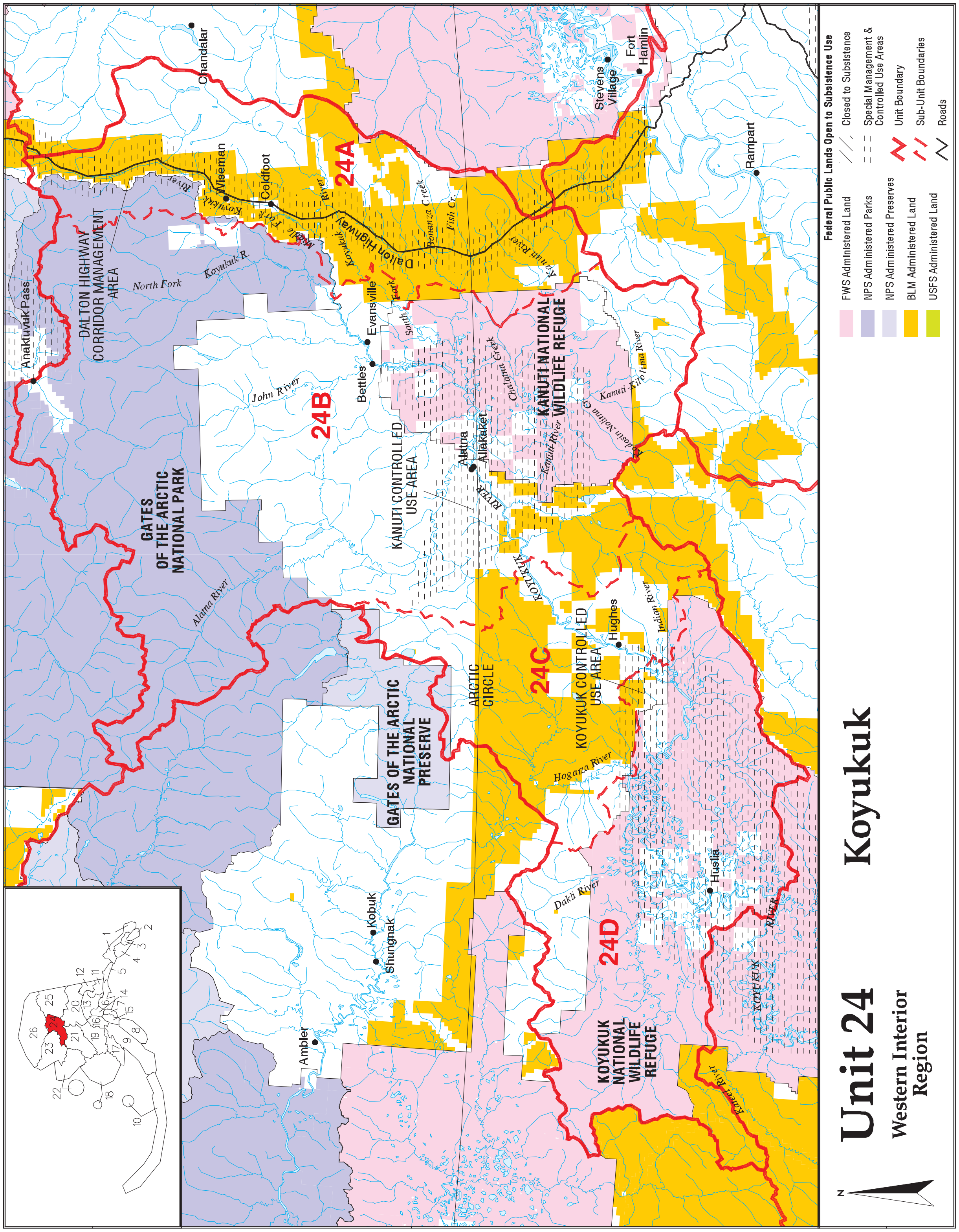
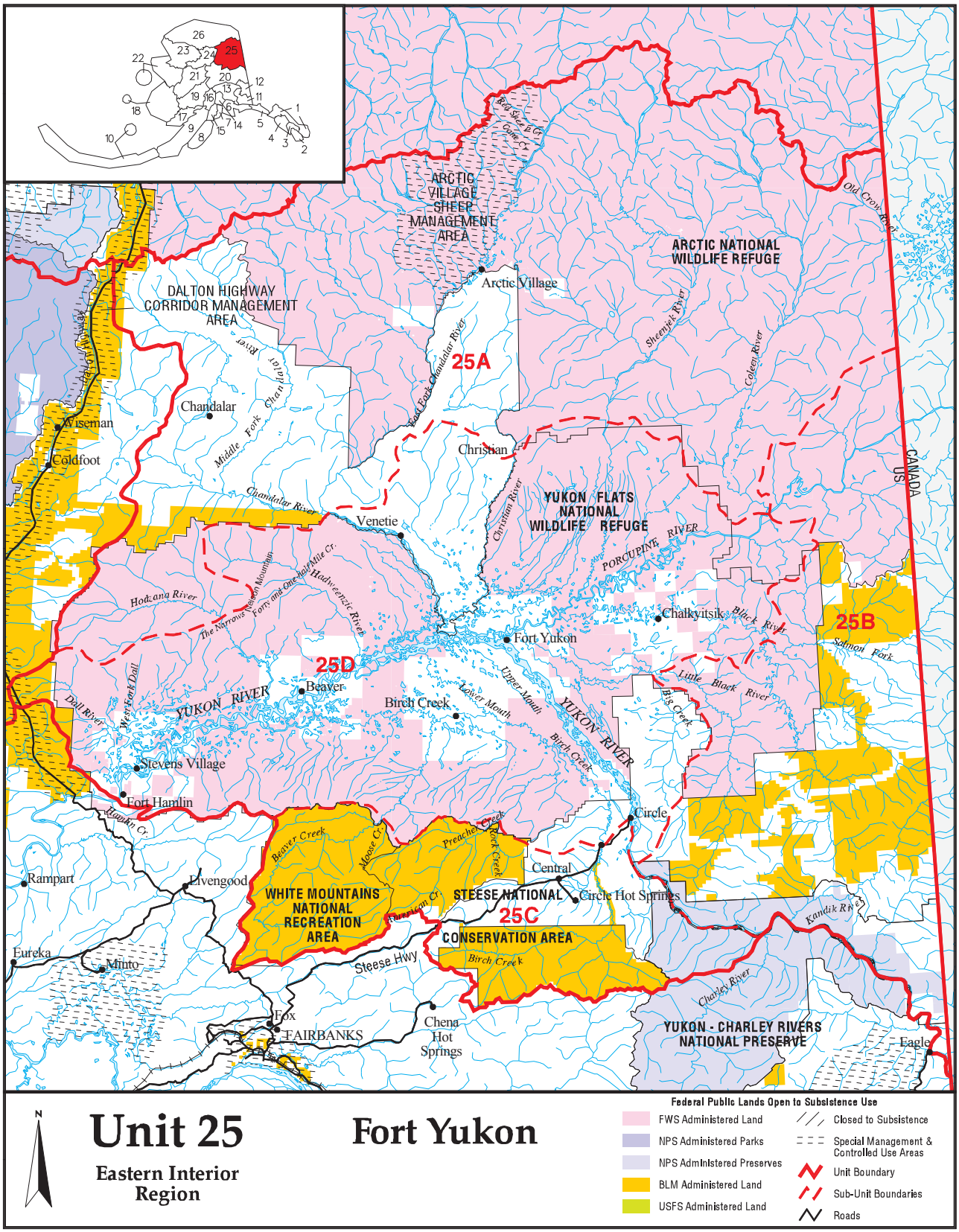
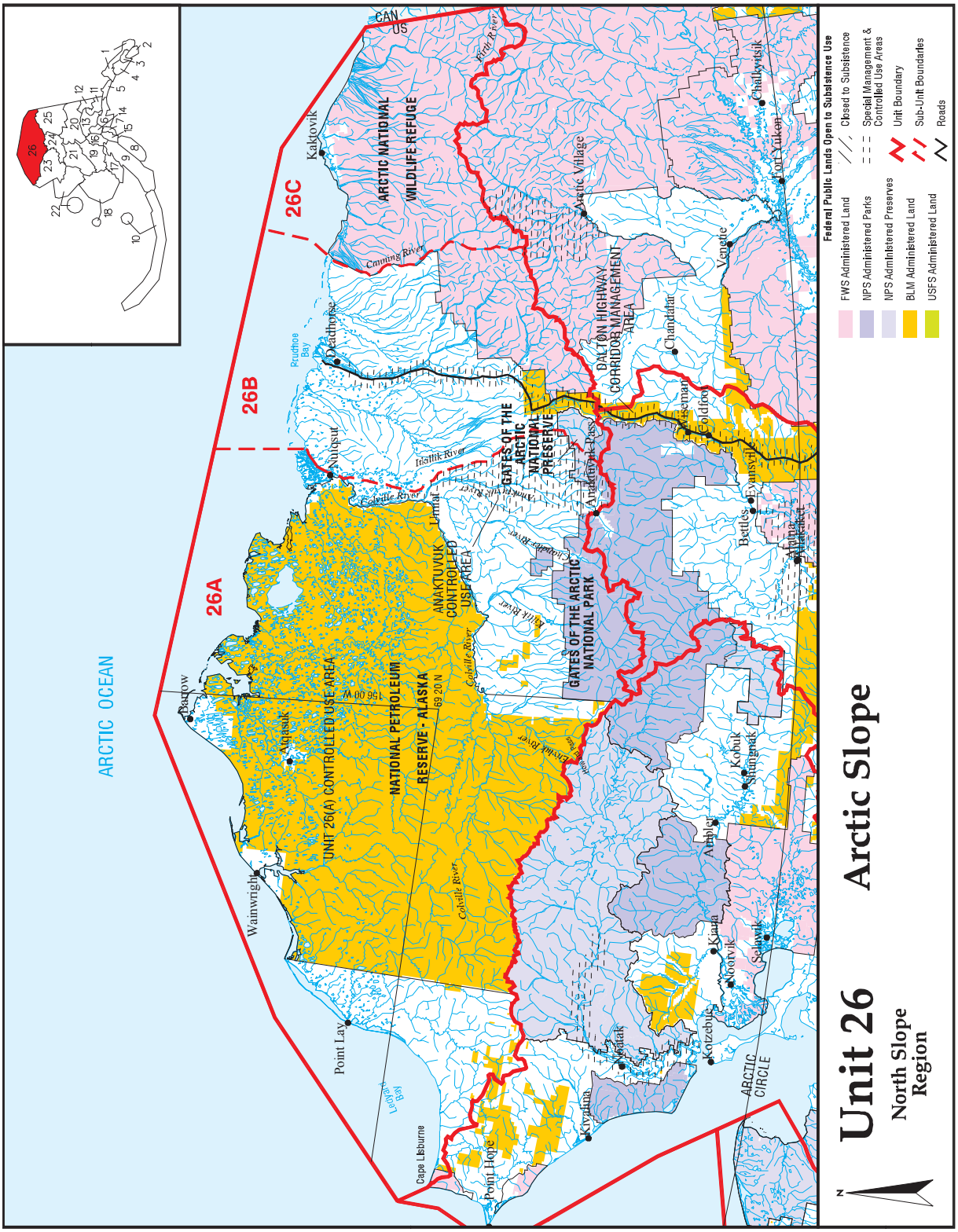

KOYUKUK NATIONAL WILDLIFE REFUGE
Candle
Buckland
Hughes
Huslia
KOYUKUK RIVER
KOYUKUK CONTROLLED USE AREA
Kateel River
Koyukuk
Norton Bay
Ella's Cabin
Koyukuk
Galena
Nulato
YUKON RIVER
INNOKO NWR
21D
21C
Melozitna River
Little Melozitna River
Tanana
Tozitna River
Dulbi River
Ruby
Big Creek
NOWITNA NATIONAL WILDLIFE REFUGE
Little Mud River
21B
Shaktoolik
Kaltag
Poorman
Nowitna River
NORTON SOUND
Unalakleet
21A
INNOKO NATIONAL WILDLIFE REFUGE
Innoko River
Iditarod River
Anvik River
KUSKOKWIM RIVER
Holy Cross
Ophir
Medfra
Nikolai
Takotna
McGrath
Grayling
21E
Anvik
Shageluk
Bonasila River
Iditarod
PARADISE CONTROLLED USE AREA
Paradise
Holy Cross
Iditarod River
YUKON RIVER
Paimiut
KALSKAG CONTROLLED USE AREA
Georgetown
Crooked Creek
Red Devil
Sleetmute
Stony River
Kalskag
Lower Kalskag
Chuathbaluk
Napaimiut
YUKON DELTA NATIONAL WILDLIFE REFUGE
N
Unit 21
Western Interior Region
Middle Yukon
Federal Public Lands Open to Subsistence Use
FWS Administered Land
NPS Administered Parks
NPS Administered Preserves
BLM Administered Land
USFS Administered Land
Closed to Subsistence
Special Management & Controlled Use Areas
Unit Boundary
Sub-Unit Boundaries
Roads


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


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
Dalton Highway
Anaktuvuk Pass
Chandalar
Wiseman
Coldfoot
Evansville
Bettles
Alatna
Allakaket
Hughes
Huslia
Stevens Village
Fort Hamlin
Rampart
Kobuk
Shungnak
Ambler
North Fork
Koyukuk R.
John River
Alatna River
Bonanza Creek
Fish Cr.
Kanuti River
Kanuti Kilolitna River
Kanuti Chalatna Creek
Hogatza River
Indian River
Dakli River
Kateel River
KOYUKUK
RIVER


ARCTIC VILLAGE SHEEP MANAGEMENT AREA
ARCTIC NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
Arctic Village
25A
Chandalar
Wiseman
Coldfoot
Christian
YUKON FLATS NATIONAL WILDLIFE REFUGE
CANADA
US
Venetie
Chalkyitsik
Fort Yukon
25B
25D
Beaver
Birch Creek
YUKON RIVER
Stevens Village
Fort Hamlin
Circle
Rampart
Ivengood
WHITE MOUNTAINS NATIONAL RECREATION AREA
STEESE NATIONAL CONSERVATION AREA
25C
Central
Circle Hot Springs
Eureka
Minto
Steese Hwy
Fox
FAIRBANKS
Chena Hot Springs
YUKON - CHARLEY RIVERS NATIONAL PRESERVE
Eagle
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
Arctic Slope
North Slope Region
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
ARCTIC NATIONAL WILDLIFE REFUGE
DALTON HIGHWAY CORRIDOR MANAGEMENT AREA
Barrow
Atqasuk
Wainwright
Point Lay
Point Hope
Cape Lisburne
Kivalina
Noatak
Kotzebue
Noorvik
Selawik
Kiana
Ambler
Shungnak
Kobuk
Bettles
Evansville
Allakaket
Alatna
Anaktuvik Pass
Coldfoot
Wiseman
Chandalar
Venetie
Arctic Village
Fort Yukon
Chalkyitsik
Kaktovik
Nuiqsut
Deadhorse
Prudhoe Bay
Colville River
Itkillik River
Anaktuvik River
Alatna River
Koyukuk River
Kobuk River
Noatak River
Kivalina River
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Sagavanirktok River
Dietrich River
Chandalar River
Porcupine River
Yukon River
Dalton Highway
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 CIRCLE
CAN
US

WP12-01 Executive Summary	
General Description	Proposal WP12-01 requests that prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized Alaska Department of Fish and Game (ADF&G) representative and that a copy of the ADF&G sealing certificate would then accompany the handicraft when sold. *Submitted by the Brown Bear Claw Handicraft Working Group*
Proposed Regulation	**Definitions and Utilization of Wildlife** *§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.* *(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.* *(ii) ~~[Reserved]~~* ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative.*** *(A)* ***A copy of the ADF&G sealing certificate must accompany the handicraft when sold.***
OSM Preliminary Conclusion	**Support**
OSM Conclusion	**Support** Proposal WP12-01 **with modification to** add language that old claws may be sealed if an affidavit is signed to verify that the brown bear was harvested by a Federally qualified subsistence user on Federal public lands. **Definitions and Utilization of Wildlife** *§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.* *(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.*

continued on next page

WP12-01 Executive Summary *(continued)*	
OSM Conclusion (Continued)	*(ii) ~~[Reserved]~~* ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative. Old claws may be sealed if an affidavit is signed indicating that the claws came from a brown bear harvested on Federal public lands by a Federally qualified user.*** ***(A) copy of the ADF&G sealing certificate must accompany the handicraft when sold.***
Southeast Regional Council Recommendation	**Oppose**
Southcentral Regional Council Recommendation	**Support**
Kodiak/Aleutians Regional Council Recommendation	**Oppose**
Bristol Bay Regional Council Recommendation	**Support**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Oppose**
Western Interior Regional Council Recommendation	**Defer**
Seward Peninsula Regional Council Recommendation	**Support**
Northwest Arctic Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-01 **with modification** to require an additional line on the sealing form to signify that the animal was harvested by a Federally qualified subsistence user, followed by a check box to signify if the harvester is Alaska Native. The Council thinks that more value may be attached to a handicraft product if authenticated as from an Alaskan subsistence user or Alaska Native.
North Slope Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Support** **1 Oppose**

STAFF ANALYSIS
WP12-01

ISSUES

Proposal WP12-01, submitted by the Brown Bear Claw Handicraft Working Group, requests that prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized Alaska Department of Fish and Game (ADF&G) representative and that a copy of the ADF&G sealing certificate would then accompany the handicraft when sold.

DISCUSSION

This proposal is a compromise reached by the members of the Brown Bear Claw Handicraft Working Group (Working Group). The proposal addresses concerns originally raised by the State of Alaska with Federal regulations that allow the sale of handicrafts that include brown bear claws from bears that are taken under Federal subsistence regulations. The Working Group suggested that deferred Proposals WP08-05 and WP10-02 be opposed (see deferred Proposal WP10-02), and that Proposal WP12-01 be submitted. The intent of the proposal is to protect subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. Having proof that the claws are from subsistence-harvested brown bears could provide added value to a handicraft, as it would clearly identify that the claws are from a legally harvested brown bear. Requiring that a copy of the sealing certificate accompany the handicraft would provide a method of tracking legally harvested brown bears, but also would require modification to the sealing certificate, which is managed by the State of Alaska, to include a place on the certificate indicating that the bear was harvested by a Federally qualified subsistence user.

Existing Federal Regulation

Definitions and Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park) , 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) [Reserved].

Proposed Federal Regulation

Definitions and Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) ~~*[Reserved]*~~ ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative.***

(A) ***A copy of the ADF&G sealing certificate must accompany the handicraft when sold.***

Existing State Regulations

5AAC 92.200. Purchase and sale of game

In accordance with AS 16.05.920(a) and 16.05.930(e), the purchase, sale, or barter of game or any part of game is permitted except as provided in this section.

Except as provided in 5AAC 92.031, a person may not purchase, sell, barter, advertise or otherwise offer for sale or barter:

(1) any part of a bear, except an article of handicraft made from the fur of a bear;

In 2005, the State of Alaska, Board of Game began to allow the sale of raw bear hides, with claws attached, harvested in specific predator control management areas under a State permit.

5 AAC 92.031. Permit for selling skins, skulls, and trophies

(c) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a black bear taken in an active predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(d) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a brown bear taken in an active brown bear predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(e) In this section, "active" means that predator control permits have been issued for the referenced predator control area during the current year.

Extent of Federal Public Lands

Proposed regulations would apply to all Federal public lands in Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26, as defined by Federal subsistence hunting regulations.

Customary and Traditional Use Determinations

The customary and traditional use determinations for brown bear for all units in the State are included in the **Appendix** of WP10-02 (Deferred) analysis.

Regulatory History

The Board has consistently rejected attempts to remove brown bear claws as a legal item with which Federally qualified users can make handicrafts for sale. Retaining the use of claws in handicrafts for sale is consistent with previous Board action, and is not expected to significantly increase harvests, as described in previous analyses.

The Board has provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of brown bears by Federally qualified subsistence users where required. The intent of the Board has been to allow Federally qualified subsistence users to fully utilize the above-listed parts of bears legally harvested under Federal subsistence regulations. It has not been the intent of the Board to create a commercial incentive to harvest bears based on the sale of bear handicrafts.

The following is a brief summary of regulatory actions taken by the Board regarding the sale of handicrafts made from bear parts.

May 2002 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of black bear (statewide regulation).

May 2004 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of brown bear taken in Eastern Interior, Bristol Bay, and Southeast regions. The Board also clarified its intent to maintain the Federal definition of "fur," which includes claws.

May 2005 — The Board adopted regulations that:

- Modified the definition of the term *handicraft*.
- Modified the definition of the terms *skin, hide, pelt, and fur*.
- Modified regulatory language to clarify that bear claws can be used in handicrafts for sale. (The previous language allowing the sale of handicrafts made with bear claws specifically referred to bear fur, with the reference to claws contained in the definition of fur. With the old language it was not obvious to most readers that the use of claws was permitted. This action by the Board did not authorize any new uses.)
- Allowed the sale of handicrafts in Units 1–5 made from bones, teeth, sinew, or skulls of bears taken in those units.

May 2006 — The Board rejected proposed regulations to prohibit the sales of handicrafts made from bear claws to businesses. However, the Board did adopt regulatory language that prohibits handicraft sales that constitute a "significant commercial enterprise."

May 2007 — The Board rejected proposed regulations that claws be removed from the Federal definition of fur and that sales of handicraft articles made from claws, bones, teeth, sinew, or skulls of black and brown bears be allowed for sale only between Federally qualified subsistence users statewide.

May 2008 — The Board deferred a proposed regulation governing the use of brown bear claws in handicrafts for sale. The proposal asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur. The proposal also stated that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users. The deferment pended on the formation of a working group to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. The working group would include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008:102-119).

May 2010 — The Board was presented with an update of the working group.

Brown Bear Claw Handicraft Working Group

The Brown Bear Claw Handicraft Working Group was composed of representatives from nine of the ten Councils, staff from ADF&G, and staff of Federal agencies. The working group met over several occasions between 2009 and 2011 to discuss a range of issues relating to brown bear claws including their uses in handicrafts, the feasibility of tracking, and potential changes to regulations. An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed[1]. A briefing was provided to the Councils during the Winter 2009 meeting cycle on the status of the working group, and Councils selected representatives to participate in the working group. The first working group meeting occurred in June 2009. Federal and State staff conducted further research and met twice in the summer of 2009 to discuss research questions and issues. Staff provided another briefing to the Councils on the status of the working group at the Fall 2009 Council meetings.

The working group met again in July 2010 and discussed changing the Federal subsistence regulations over the sale of handicrafts incorporating brown bear claws. The group posed that if these regulations were to change, that the new regulations not be burdensome to subsistence users. The working group also discussed the Convention on International Trade in Endangered Species agreement and sealing requirements, which affect subsistence users who wish to sell handicrafts that incorporate brown bear claws.

The working group came to consensus in July 2010 to recommend that the Board reject deferred Proposal WP10-02 that had been submitted in 2008 (numbered in 2008 as WP08-05) and submit a new proposal. The working group suggested the new proposal require sealing a brown bear only if the subsistence user intends to sell a handicraft incorporating brown bear claw(s). The results of the July 2010 meeting, including the working group's suggested proposal language, were taken to nine of the ten Councils during the Fall 2010 meeting cycle to seek input from the Councils. The Councils also were notified that a new proposal would come before them in the fall of 2011 and before the Board in January of 2012. The working group had requested that the Councils' comments and suggestions be brought back to the working group for their consideration prior to finalizing a proposal. The working group held a teleconference March 2011 to hear the comments and suggestions from the Councils. At its March 2011 meeting, the working group developed a new proposal, WP12-01, requesting that prior to selling a handicraft incorporating a brown bear claw, the hide or claws not attached to a hide, must be sealed by an authorized ADF&G representative. To assure that the handicraft came from a brown bear hide that had been harvested by a Federally qualified subsistence user, a copy of the ADF&G sealing certificate would be required to accompany the handicraft when sold.

Biological Background

Brown bears range throughout most of Alaska, except the islands of the Aleutian Chain west of Unimak and the southeast Alaska islands south of Frederick Sound. Brown bear populations throughout most of Alaska are generally stable and occupy all of their historic range (Miller 1993). Throughout the State, brown bear population densities are diverse and vary according to food availability. On the North Slope where food is scarce, bear densities can be as low as one bear every 300 miles. Brown bear densities as high as one brown bear per mile have been recorded in coastal areas with healthy salmon runs. Brown

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

bear density is moderate in interior Alaska where the average is one bear per 15–23 miles (Eide et al. 2008).

The following quote from *Ursus* (2002) may provide a clearer picture of the status of brown and other bears:

> Despite our rapidly increasing knowledge of bears, there are few places in the world where we really know how bear populations are faring…Assessments of bear populations often are based on records of dead animals and trends in habitat availability. These data produce dubious indications of population trends. Case studies relating to the trade in bear parts, sport harvests, and nuisance kills indicate that records of human-killed bears may not be accurate and may not necessarily reflect changes in population size. Increasing bear populations may continue to rise with increased levels of human exploitation (as long as it is below the maximum sustainable take), whereas declining populations may continue to plummet despite reduced exploitation. Ironically, bear populations that have been managed for sustained harvests have generally fared better than populations in which hunting has been prohibited, mainly because the former better controls illicit hunting than the latter (Garshelis 2002: 321–334).

There is no evidence to indicate that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears or that current Federal subsistence regulations adversely affect brown bear populations.

Current Events

This proposal was taken to all of the Federal Subsistence Regional Advisory Councils for their review and recommendation. Three of the ten Councils recommended opposing this proposal (Southeast, Kodiak-Aleutians, and Yukon-Kuskokwim Delta). Two of the three regions opposing the proposal would not be affected by the proposal as either selling handicrafts with brown bear claws is not allowed (Yukon-Kuskokwim and Kodiak-Aleutians). In the Southeast Region, sealing is already required in four of the five units in the region, Units 1-4. The Kodiak-Aleutians Council commented that it does not support selling handicrafts made with brown bear claws. The Yukon-Kuskokwim (Y-K) Delta Council also did not support the proposal and commented that in the Yupiit tradition that they don't mention the animal by name out of respect for the animal and don't make handicrafts from brown bears. They also noted that only 11 out of 56 villages in Unit 18, in the Y-K region, have a positive customary and traditional use determination for brown bear. It should be noted that selling handicrafts with brown bear claws is only allowed in Units 1-5, 9A-C, 9E, 12, 17, 20, 22, 23, 24B only that portion within Gates), 25, and 26.

The Western Interior Council has consistently chosen to not comment on all brown bear proposals due to cultural concerns associated with discussing brown bears, thus the Western Interior Council did not provide any comments and deferred the recommendation to other regions.

Nine of the ten Councils provided significant discussion and comments on the proposal. All of the nine Councils raised concerns regarding the requirement to seal brown bear hides and claws when in many regions sealing only occurs in regional centers. Traveling to another community to have the hide sealed is considered an imposition to the subsistence users. All nine of the ten Councils noted the need to have local sealers in the communities. Concerns also were raised regarding what would happen if someone wanted to use an old hide that had been hanging on the wall (as an example) for many years or use some old claws that had been around for some time. During the Brown Bear Handicraft Working Group discussions, these concerns had been raised and the State representative on the Working Group assured the group that ADF&G can designate locals in a community to be sealers and that an affidavit can be

Table 1. Handicraft, salvage, and sealing requirements for brown bears harvested under Federal Subsistence Management Regulations*

	Unit																			
Regulation	1	2	3	4	5	6–8	9	10–11	12	13–16	17	18	19	20	21	22	23	24	25	26
__.25(j)(7) Authorized to sell handicrafts made from skin, hide, pelt, or fur, including claws, of a brown bear taken from the below units:	X	X	X	X	X		A, B, C, E		X		X			X		X	X	B[1]	X	X
__.25(j)(7)(i) In Units 1-5, authorized to sell handicrafts made from skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from the below units:	X			X	X															
__.25(j)(2)(ii) The hide of brown bears need not be salvaged in units:					X		B				X	X	A[2], B		D	X	X	X		A
__.26(j)(2) You may not possess or transport from Alaska the untanned skin or skull of a bear unless both have been sealed; sealing is not required for bears taken in the below units unless removed from the area.					X		B, E				X	X	A, B[3]		D	X	X	X		A
__.26(j)(3) You must keep a bear skin and skull together until both are sealed; this provision and sealing is not required for bears taken in the below units unless removed from the area. If sealed, ADF&G will remove a rudimentary premolar tooth.					X		B, E				X	X	A, B[3]		D	X	X	X		A
__.26(j)(3)(ii) If the skin or skull of a bear taken in the below units are removed from the area, you must have it sealed in Bethel, Dillingham, or McGrath; ADF&G will retain the skin of the skull and front claws.							B				X	X	A, B[3]							
__.26(j)(3)(iii) If the skin or skull of a bear taken in the below units are removed from the area or taken for commercial tanning within the area, you must first have it sealed in Barrow, Galena, Nome, or Kotzebue; ADF&G will retain the skin of the skull and front claws.															D	X	X	X		A
__.26(j)(3)(iv) If the skin or skull of a bear taken in the below units are removed from the area, you must first have it sealed in Yakutat.					X															
__.26(j)(3)(v) If the skin or skull of a bear taken in the below units are removed from the unit, you must first have it sealed; ADF&G will retain the skin of the skull and front claws.							E													

* See 50 CFR 100 for exact regulatory text.
[1] only in that portion within Gates of the Arctic National Park; [2] portions of; [3] downstream of and including the Aniak River drainage.

signed when the hide or claws are sealed indicating that the brown bear was harvested by Federally qualified users on Federal public lands. This information provided some assurance to Council members that their concerns would be addressed.

Other Council comments provided were the following:

- Concerned with how to prevent copying sealing certificate multiple times
- Non-subsistence users are the problem; subsistence users are not the ones breaking the law, no evidence of poaching or misuse by subsistence users
- No conservation concerns to warrant this regulation
- Allows greater opportunity for the subsistence user
- Would be a hardship for subsistence users
- Having this regulation in place would make a handicraft more valuable to the purchaser if it can be authenticated as a legally harvested bear by a Federally qualified user
- Creates bureaucratic paperwork
- Benefits to subsistence users are few to none
- Proposal not supported by substantial evidence
- Adopting the proposal would encourage people to make handicrafts with brown bear claws and would provide income to people
- Subsistence users would be adversely affected because it requires an undue burden on subsistence users
- Benefits in being able to track handicrafts made from brown bear claws
- Suggestion was made that the artist be licensed to make brown bear claw handicrafts rather than worrying about sealing the hide and having the sealing certificate follow the handicraft
- Requires some paperwork, but it also would allow the artist to sell the handicraft more easily and make it legal
- The Federal program should have its own sealing program
- Concerned that the State might not modify its sealing certificate when if this regulation is passed
- If a subsistence resource like a brown bear is turned into a commercial product that is sold, then the users are going to need to recognize that they may have to comply with regulations
- No conservation concerns, but it benefits the biology and the information on the bears
- Would like the sealing certificate to include a box to check if the person harvesting the bear is an Alaska Native, thus allowing for the handicraft to potentially have increased value

Effects of the Proposal

Adopting the proposal would provide some protection to subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. By requiring that a copy of the sealing certificate accompany the handicraft, it would clearly identify that the claws are from a legally harvested brown bear. It is possible that having proof that the claws are from a subsistence-harvested brown bear could provide added value to a handicraft, as it would identify that the claws are from a legally-harvested brown bear. Adopting the proposal would only add an additional requirement of sealing the brown bear hide for those who are selling a handicraft incorporating a brown bear claw. In those units where sealing is already required (see **Table 1**), this proposal would have no substantial effect on subsistence users. If adopted, the proposal would require additional paperwork requirements to some subsistence users, which could be a burden to those users.

The sealing certificate would require modification so that there would be a space for indicating that the bear was harvested by a Federally qualified subsistence user. Sealing certificates are managed by the State of Alaska.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations, nor that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-01.

Justification

Previous action of the Board has been consistent with Section 803 of ANILCA, which includes the "making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption." This proposal would provide some protection to subsistence users who incorporate brown bear claws into handicrafts for sale by providing proof that the claws are from brown bears that were harvested by Federally qualified subsistence users. Requiring a copy of the sealing certificate to accompany the handicraft would clearly identify that the claws are from a legally-harvested brown bear. Value could be added to the handicraft, because the sealing certificate would identify that the claws are from a legally-harvested brown bear. Those subsistence users who harvest brown bears from units where sealing is already required would not be affected by this proposal. It is not anticipated that this proposal would adversely affect brown bear populations.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations and there is no evidence to indicate that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

Requiring that a copy of the sealing certificate accompany the handicraft would provide a method of tracking legally-harvested brown bears, but also would require modification to the sealing certificate, which is managed by the State of Alaska, to include a place on the certificate indicating that the bear was harvested by a Federally qualified subsistence user.

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP12-01 **with modification to** add language that old claws may be sealed if an affidavit is signed to verify that the brown bear was harvested by a Federally qualified subsistence user on Federal public lands.

Definitions and Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, 22, 23, 24B (only that portion within Gates of the Arctic National Park), 25, or 26.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) ~~[Reserved]~~ ***Prior to selling a handicraft incorporating a brown bear claw(s), the hide or claw(s) not attached to a hide, must be sealed by an authorized ADF&G representative. Old claws may be sealed if an affidavit is signed indicating that the claws came from a brown bear harvested on Federal public lands by a Federally qualified user.***

(A) copy of the ADF&G sealing certificate must accompany the handicraft when sold.

Justification

The OSM preliminary conclusion was modified due to concerns raised at the fall Regional Council meetings regarding what to do with old claws that are separated from the hide or claws attached to an old hide. The ADF&G representative at the Interagency Staff Committee meeting noted that the State requires the user to sign an affidavit indicating where the brown bear is harvested and in this case, if the harvest was by a Federally qualified user. The State representative also said that the sealing form would be modified to include a box to check that the brown bear was harvested by a Federally qualified user. The Councils also were concerned that subsistence users would experience hardships when sealing the brown bear hides and claws if they have to travel to another community to have the brown bear or claws sealed. The ADF&G representative to the Interagency Staff Committee noted that ADF&G can authorize sealers in local communities to allow for sealing to be less of a hardship for subsistence users. Reference to ADF&G authorizing sealers cannot be placed in a Federal regulation, but reference to the ability for local residents in rural communities to be ADF&G authorized sealers will be placed in the Federal regulation book (also referred to as the “handy dandy” book).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP12-01. The Council determined that this proposal was not necessary for the continuation of subsistence uses and trade of brown bears and the certification and tracking provision would be an unnecessary burden on subsistence users. The proposal formulation process was flawed because it appears to be a top down management directive developed by Federal and State employees to restrict subsistence users with only minimal Council involvement. Subsistence users of brown bears have managed for generations without any evidence of poaching or misuse of the resource. There is no evidence of a conservation issue with bears in the Southeast Alaska Region. The Council's feedback to the Board has been consistent in support of the continued subsistence use of brown bears. The need for the additional certification and tracking is not supported by any evidence and the present regulations provide for adequate control of the purchase and sale of subsistence harvested bear parts. Subsistence users of brown bears are simply practicing a way of life as they have for generations and are not making any significant amount of money from these bears; unlike the guides operating under State regulations. The current regulations allow the subsistence user to trade in brown bear parts but the proposed regulation will restrict this use and subject subsistence users to investigation and citation; resulting in a restriction to subsistence use. ANILCA specifies the non-wasteful subsistence use of wild renewable resources is the priority use and that includes the making and selling of handicraft articles out of byproducts of fish and wildlife resources for barter, sharing, and customary trade. This proposal is not necessary for those practices to continue.

Southcentral Subsistence Regional Advisory Council

Support Proposal WP12-01. Council members note traditional knowledge of the region's practices of harvesting bears and use of all parts, including claws, and that there are no conservation concerns regarding bear populations. The Council agrees that the proposal will clarify regulations but won't unnecessarily restrict subsistence users and concurred that it is appropriate to monitor sales. If some areas of the state do not concur, modifications can be sought at the regional level. The Council recognizes that the proposal is a recommendation resulting from the extensive efforts of the Brown Bear Claw Working Group.

Kodiak/Aleutians Subsistence Regional Advisory Council

Oppose Proposal WP12-01. The Council is opposed to the use and sale of brown bear claws in handicraft.

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP12-01 as presented by OSM. Brown Bear claw handicraft. While the proposal requires Federally qualified subsistence users to deal with additional paperwork, it will benefit rural subsistence users by providing a record of sales, garners State support for these sales, and may lead to some increase in sales since buyers would be able to transport these handicrafts to foreign countries without fear of the handicrafts being detained by Federal customs.

Yukon-Kuskokwim Subsistence Regional Advisory Council

Oppose Proposal WP12-01. This is another way to hinder artists and bury them in more paperwork. There needs to be more discussion with the public on his issue.

Western Interior Subsistence Regional Advisory Council

Defer Proposal WP12-01. The Council will defer to the Federal Subsistence Board. The Southeast and Kodiak Regional Advisory Councils are the drivers of this issue.

Seward Peninsula Subsistence Regional Advisory Council

Support Proposal WP12-01. The Council views this proposal as a first step in the sale of handicrafts. While not perfect, it is a step in the right direction. Issues will most likely arise, but it's important for the process to proceed and adjustments can be made later as needed.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-01 **with modification** to require an additional line on the sealing form to signify that the animal was harvested by a Federally qualified subsistence user, followed by a check box to signify if the harvester is Alaska Native. The Council thinks that more value may be attached to a handicraft product if authenticated as from an Alaskan subsistence user or Alaska Native. The Council does not find any conservation concerns, but notes that the proposal actually addresses conservation by providing harvest data and could result in more accurate reporting. The Council recognizes that the proposal represents the extensive efforts to reach a compromise by the Bear Claw Handicrafts Working Group.

North Slope and Northwest Arctic Subsistence Regional Advisory Councils

Support Proposal **WP12-01.** There were concerns expressed about sealing and who could be authorized to seal brown bear. Several Council members suggested providing opportunity to local people in rural areas to become authorized sealers.

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 on WP12-01
December 5, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-01: Develop a tracking program for federal subsistence harvested bear claws that are made into in to handicrafts for sale by federally qualified users.

Introduction: This proposal was submitted as a consensus agreement of the Brown Bear claw handicraft working group. The proposal requests all federal subsistence harvested brown bear claws, which are incorporated into handicrafts for sale, be tracked through use of the current department brown bear sealing program. If adopted, federal subsistence users who intend on selling brown bear claws incorporated into handicrafts will be required to have the bear hide sealed by the department. If adopted, a copy of the bear sealing document will be required to accompany the bear claw handicrafts when sold.

Sales of handicrafts made from brown bear claws, teeth, skulls, and bones present a particular problem, because these are potentially high value items, and allowing sales creates market incentives for illegal harvest in Alaska and other states. Adoption of this proposal will protect federal subsistence craftsmen and their clients by providing proof and a means of documenting their handicrafts were legally taken, legal to sale by federally qualified users only, and are legal to own by any customer. Additionally, if this proposal is adopted, the customers who purchase brown bear claw handicrafts from federally qualified users will have the security of written proof certifying the handicraft came from a legally harvested Alaskan brown bear, legally authorized harvester, and legally authorized artesian.

Changing federal regulation to provide documents which support the legal sales of federal subsistence harvested brown bear claw handicrafts should help eliminate illegal commercial markets and the masking of illegal sales in Alaska and elsewhere.

Impact on Subsistence Users: The Federal Subsistence Board's current allowance of brown bear handicraft sales was not based upon a determination that such sales are customary and traditional but instead upon the Board's unsupported argument that the Board can authorize any use if the take is customary and traditional (*see e.g.,* January 2, 2006, letter from Chairman Demientieff to Commissioner Campbell). Therefore, adoption of this proposal will not impact customary and traditional subsistence activities.

Adoption of this proposal will not interfere with continuing to allow federally qualified subsistence users to obtain such handicrafts for ceremonial, religious, and cultural purposes.

If adopted, federally qualified subsistence users who plan on selling handicrafts made from legally harvested brown bear claws will be required to have the hide sealed by the department, retain copies of the sealing certificate, and provide copies of the certificate to customers.

Opportunity Provided by State: Under 5 AAC 92.200, handicrafts made with bear fur may be sold to anyone, but sales of handicrafts made with claws, skulls, teeth, and bones are prohibited. Whole bear skins, with claws attached, taken in certain predator control areas may be sold under 5 AAC 92.031, but only after sealing and under terms of a permit issued for that bear skin.

Conservation Issues: The Federal Subsistence Board created a new market for bear claws and other high value bear parts which could readily masks illegal sales, thereby compounding problems with

the international trade of Endangered Species and contributing to the illegal harvest, overharvest, and waste of bears in other states and countries, as well as Alaska. Markets for high value bear handicrafts create a conservation concern because brown bears are protected under the Endangered Species Act in other states and Mexico, and the origin of brown bear products cannot be determined by visual inspection. Brown bears are also listed on Appendix II of the Convention International Trade of Endangered Species (CITES).

In Alaska, economic incentives associated with harvesting brown bears to make handicrafts create conservation concerns because brown bears develop slowly and have a low reproductive rate, making small populations extremely susceptible to overharvest. Allowing widespread sale of high value bear parts without any kind of tracking mechanism is an invitation to illegal harvests. Further, the existing regulations are unenforceable and inconsistent with sound wildlife management principles.

Enforcement Issues: This proposal will reduce enforcement issues created by the existing federal regulation by creating a tracking system which provides documents to accompany brown bear claws used for making handicrafts legally taken, utilized, and sold under federal subsistence regulations. Further, adoption of this proposal will significantly reduce the likelihood that federally-qualified subsistence users will face state prosecution for engaging in sales that are prohibited under state law when they occur on state or private lands.

Jurisdiction Issues: The Federal Subsistence Board lacks jurisdiction to allow sales of any wildlife handicrafts when and where such sales are not customary and traditional. In the past, the Federal Board has rejected this argument, asserting that if any use is customary and traditional then the Board can authorize any other use. The Board's argument is inconsistent with its litigation stance in the Chistochina Unit 12 moose case where it argued that "customary and traditional use" is related to "how resources are used after they are taken," and not to or a prerequisite condition for the taking itself." *State v. Fleagle,* (Case 3:06-cv-00107-HRH) Doc. 32 at 22.

Other Comments: The department appreciates the cooperative work the brown bear claw work group completed over the last two years. Providing for tracking would be an important first step to addressing some of the Department's concerns regarding conservation and enforcement. If brown bear harvests can be tracked over time, and bear parts or handicrafts can be traced to reported legal harvests, conservation concerns will be less likely to arise and managers will be better able to determine if or when legal sales are contributing to illegal sales or otherwise creating conservation concerns. It is noted that many of the specifics have not been mandated by this proposal in order to leave room to develop a workable program with local user input.

Recommendation: Support.

WRITTEN PUBLIC COMMENTS

Support. No justification was provided. *Gates of the Arctic Subsistence Resource Commission*

Oppose. The commission members identified several concerns as well as issues they felt were not adequately addressed by the proposal. In some communities it is not possible to seal the hide or claws locally. Residents of these communities might have to travel long distances to get their hides or claws sealed. If the sealing certificate could be photocopied, so that a copy could accompany each of the 20 claws that a bear has, what would prevent copies of the certificate from being used with claws that were not harvested under federal subsistence provisions. It is also unclear how these provisions would address brown bear claw handicrafts made using claws from bears that were harvested prior to the existence of this proposed regulation. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP10-02 (Deferred) Executive Summary	
General Description	Proposal WP10-02 (deferred proposal WP08-05) requested clarification of the existing Federal Subsistence management regulation governing the use of brown bear claws in handicrafts for sale. The proposal asked for the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users. *Submitted by the Alaska Department of Fish and Game*
Proposed Regulation	*§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur,* ***not*** *including claws, of a brown bear ~~taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25~~.* *(i) ~~In Units 1, 2, 3, 4, and 5~~,* ***If you are a Federally qualified subsistence user,*** *you may sell handicraft articles made from the ~~skin, hide, pelt, fur~~, claws, bones, teeth, sinew, or skulls of a brown bear* ***to another Federally qualified subsistence user*** *~~taken from Units 1, 4, or 5~~.* *(ii) [Reserved].*
OSM Conclusion	**Take no action**
Southeast Regional Council Recommendation	**Take no action**
Southcentral Regional Council Recommendation	**Take no action**
Kodiak/Aleutians Regional Council Recommendation	**Oppose**
Bristol Bay Regional Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**No action taken**
Western Interior Regional Council Recommendation	**Take no action**
Seward Peninsula Regional Council Recommendation	**Oppose**
Northwest Arctic Regional Council Recommendation	**Take no action**
Eastern Interior Regional Council Recommendation	**Take no action**

continued on next page

WP10-02 (Deferred) Executive Summary *(continued)*	
North Slope Regional Council Recommendation	**Take no action**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Take no action.** Grant permission to withdraw. Defer to Proposal 12-01 as recommended by working group.
Written Public Comments	**None**

STAFF ANALYSIS
WP10-02 *(DEFERRED WP08-05)*

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

Proposal WP10-02 was deferred by the Federal Subsistence Board (Board) at its May 2008 meeting at the suggestion of the ADF&G. The original deferment pended on the formation of a working group to address the issue of developing a method of tracking brown bear claws made into handicrafts for sale. In 2008, the Board voted unanimously to defer the proposal. The Board directed that the working group include representatives from all interested Subsistence Regional Advisory Councils (Councils) and State and Federal staff (FSB 2008:102-119). In 2010, the Board was presented with an update of the working group. The Board agreed to continue to defer WP10-02 until the working group could meet again and come to a consensus on a future plan or proposal.

The Brown Bear Claw Handicraft Working Group (Working Group) was composed of representatives from nine of the ten Councils, staff from ADF&G, and staff of Federal agencies. The Working Group met several times between 2009 and 2011 to discuss a range of issues relating to brown bear claws including their uses in handicrafts, the feasibility of tracking, and potential changes to regulations. An initial scoping meeting between Federal and State staff was held in January 2009; at that meeting a draft charge was developed[1]. A briefing was provided to the Councils (except Western) during the Winter 2009 meeting cycle on the status of the Working Group, and the Councils selected representatives to participate in the Working Group. The first Working Group meeting occurred in June 2009. Federal and State staff conducted further research and met twice in the summer of 2009 to discuss research questions and issues. Staff provided another briefing to the Councils (except Western) on the status of the Working Group at the Fall 2009 Council meetings.

The Working Group met again in July 2010 and discussed changing the Federal subsistence regulations concerning the sale of handicrafts incorporating brown bear claws. The group posed that if these regulations were to change, that the new regulations not be burdensome to subsistence users. The Working Group also discussed the Convention on International Trade in Endangered Species agreement and sealing requirements, which affect subsistence users who wish to sell handicrafts that incorporate brown bear claws.

The Working Group came to consensus in July 2010 to recommend that the Board reject deferred Proposal WP10-02 that had been submitted in 2008 (numbered in 2008 as WP08-05) and that a new proposal should be submitted. The Working Group suggested the new proposal (WP12-01) require sealing a brown bear only if the subsistence user intends to sell a handicraft incorporating brown bear claw(s). The results of the July 2010 meeting, including the Working Group's suggested proposal, were taken to nine of the ten Councils during the Fall 2010 meeting cycle to seek input from the Councils. The Councils also were notified that a new proposal would come before them in the fall of 2011 and before the Board

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

in January of 2012. The Working Group had requested that the Councils' comments and suggestions be brought back to the Working Group for their consideration prior to finalizing a proposal. The Working Group held a teleconference March 2011 to hear the comments and suggestions from the Councils. At its March 2011 meeting, the Working Group developed a new proposal, WP12-01, requesting that prior to selling a handicraft incorporating a brown bear claw, the hide or claws not attached to a hide, must be sealed by an authorized ADF&G representative. To assure that the handicraft came from a brown bear hide that had been harvested by a Federally qualified subsistence user, a copy of the ADF&G sealing certificate would be required to accompany the handicraft when sold.

No analysis was written regarding deferred Proposal WP08-05 (WP10-02). Nothing has changed since the analysis of Proposal WP08-05 was presented to the Board in May of 2008 (see **Appendix**).

Analysis of Proposal WP12-01 is presented separately.

OSM CONCLUSION

Take no action on Proposal WP10-02 (deferred proposal WP08-05).

Justification

Proposal WP08-05 (and subsequently WP10-02) was deferred by the Board pending the recommendations of the Brown Bear Claw Handicraft Working Group. The Working Group compromised on a proposed regulation that would address concerns originally raised by the State of Alaska with Federal regulations that allow the sale of handicrafts that include brown bear claws from bears that are taken under Federal Subsistence regulations. The recommendation of the Working Group is to oppose Proposals WP08-05/WP10-02 and for the Board to consider Proposal WP12-01 in place of Proposals WP08-05/WP10-02. Proposal WP12-01, submitted by the Working Group, would continue to allow selling a handicraft incorporating brown bear claws in specific units, while requiring sealing the brown bear hide only when the handicraft incorporating the claw(s) is sold. Analysis of Proposal WP12-01 is presented separately. The State of Alaska intends to request that the Board withdraw deferred proposals WP10-02 (WP08-05) at the January 2012 Board meeting (Yuhas 2011, pers. comm.).

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WP10-02 APPENDIX

STAFF ANALYSIS
WP08-05

ISSUES

Proposal WP08-05, submitted by the Alaska Department of Fish and Game (ADF&G), requests the removal of all unit-specific regulations related to the statewide sale of brown bear handicrafts made of skin, hide, pelt or fur and that sales of brown bear handicrafts made of claws, bones, teeth, sinew, or skulls should occur only between Federally qualified subsistence users.

It should be noted that within the Proposed Federal Regulation, the regulatory language, as presented, would preclude all sales of brown bear claws unless amended. This language is found in §___.25(j)(7) and includes "not including claws" which would supersede the language in the next passage which, as written, is intended to allow the sale of handicrafts that include brown bear claws only between Federally qualified subsistence users.

DISCUSSION

The proponent submitted this proposal in order to refine Federal regulations, which, in its view, allow for "unconstrained commercial sale of handicrafts made from brown bear parts" and create "market incentives for poaching." Between 2002 and 2007, the Federal Subsistence Board (Board) considered seven proposals regarding the sale of handicrafts made from some of the nonedible parts of bears. Throughout this period, the Board has consistently provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, and skulls of brown bear taken by Federally qualified subsistence users from units where these practices are considered appropriate.

The proponent's description of persons eligible to sell handicrafts made with these parts would increase the types of bear parts eligible for sale in much of the State, but would narrow sales only to those between Federally qualified rural residents.

Many of the proponent's requests are based on conservation concerns (ADF&G 2008). There are many well documented conservation concerns connected to the illegal trade of bear parts such as gall bladders, bile, and paws. These concerns exist because of the lucrative markets for what is referred to as the "traditional Chinese medicine" trade and Asian "wildlife cuisine" which includes the meat of bear paws (not including claws) (HSUS 2008, Garshelis and McLellan 2008, Garshelis 2002, Williamson and Phipps 1999). These types of illegal trade are a threat to bears in North America and around the world. On the other hand, there appears to be an absence of documentation regarding conservation concerns related to bear claws and bear claw handicrafts. This absence seems to indicate that the effects of the trade or sale of bear claws is not comparable to the trade and sale of bear gall bladders and paws.

Existing Federal Regulation

Definitions & Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, including claws, of a brown bear taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25.

(i) In Units 1, 2, 3, 4, and 5, you may sell handicraft articles made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of a brown bear taken from Units 1, 4, or 5.

(ii) [Reserved].

Proposed Federal Regulation

Definitions & Utilization of Wildlife

§___.25(j)(7) If you are a Federally qualified subsistence user, you may sell handicraft articles made from the skin, hide, pelt, or fur, ***not*** *including claws, of a brown bear ~~taken from Units 1–5, 9A–C, 9E, 12, 17, 20, or 25~~.*

(i) ~~In Units 1, 2, 3, 4, and 5~~, ***If you are a Federally qualified subsistence user,*** *you may sell handicraft articles made from the ~~skin, hide, pelt, fur~~, claws, bones, teeth, sinew, or skulls of a brown bear* ***to another Federally qualified subsistence user*** *~~taken from Units 1, 4, or 5~~.*

(ii) [Reserved].

Existing State Regulations

5AAC 92.200. Purchase and sale of game

In accordance with AS 16.05.920(a) and 16.05.930(e), the purchase, sale, or barter of game or any part of game is permitted except as provided in this section.

Except as provided in 5AAC 92.031, a person may not purchase, sell, barter, advertise or otherwise offer for sale or barter:

(1) any part of a bear, except an article of handicraft made from the fur of a bear;

In 2005, the State of Alaska, Board of Game began to allow the sale of raw bear hides, with claws attached, harvested in specific predator control management areas under a State permit.

5 AAC 92.031. Permit for selling skins, skulls, and trophies

(c) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a black bear taken in an active predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(d) After the skin and skull is sealed as required under 5 AAC 92.165(a) , a person may sell the untanned skin, with claws attached, and skull of a brown bear taken in an active brown bear predator control area listed in 5 AAC 92.125 only under a permit issued by the department.

(e) In this section, "active" means that predator control permits have been issued for the referenced predator control area during the current year.

Extent of Federal Public Lands

Proposed regulations would apply to all Federal public lands in Alaska, as defined by Federal Subsistence hunting regulations. Federal public lands represent approximately 60% of Alaska or 380,000 square miles.

Customary and Traditional Use Determinations

The customary and traditional use determinations for brown bear for all units in the State are included in **Appendix A**.

Regulatory History

The following is a brief summary of regulatory actions taken by the Board regarding the sale of handicrafts made from bear parts.

May 2002 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of black bear (statewide regulation).

May 2004 — The Board adopted regulations allowing the sale of handicrafts made from the "fur" of brown bear taken in Eastern Interior, Bristol Bay, and Southeast regions. The Board also clarified its intent to maintain the Federal definition of "fur," which includes claws.

May 2005 — The Board adopted regulations that:

- Modified the definition of the term *handicraft*.
- Modified the definition of the terms *skin, hide, pelt, and fur*.
- Modified regulatory language to clarify that bear claws can be used in handicrafts for sale. (The previous language allowing the sale of handicrafts made with bear claws specifically referred to bear fur, with the reference to claws contained in the definition of fur. With the old language it was not obvious to most readers that the use of claws was permitted. This action by the Board did not authorize any new uses.)
- Allowed the sale of handicrafts in Units 1–5 made from bones, teeth, sinew, or skulls of bears taken in those units.

May 2006 — The Board rejected proposed regulations to prohibit the sales of handicrafts made from bear claws to businesses. However, the Board did adopt regulatory language that prohibits handicraft sales that constitute a "significant commercial enterprise."

May 2007 — The Board rejected proposed regulations that claws be removed from the Federal definition of fur and that sales of handicraft articles made from claws, bones, teeth, sinew, or skulls of black and brown bears be allowed for sale only between Federally qualified subsistence users statewide.

Biological Background

Brown bears range throughout most of Alaska, except the islands of the Aleutian Chain west of Unimak and the southeast Alaska islands south of Frederick Sound. Brown bear populations throughout most of Alaska are generally stable and occupy all of their historic range (Miller 1993). Throughout the State, brown bear population densities are diverse and vary according to food availability. On the North Slope

where food is scarce, bear densities can be as low as one bear every 300 miles. Brown bear densities as high as one brown bear per mile have been recorded in coastal areas with healthy salmon runs. Brown bear density is moderate in interior Alaska where the average is one bear per 15–23 miles (Eide and Miller 1994 and 2003).

The following quote from *Ursus* (2002) may provide a clearer picture of the biological status of brown and other bears:

> Despite our rapidly increasing knowledge of bears, there are few places in the world where we really know how bear populations are faring…Assessments of bear populations often are based on records of dead animals and trends in habitat availability. These data produce dubious indications of population trends. Case studies relating to the trade in bear parts, sport harvests, and nuisance kills indicate that records of human-killed bears may not be accurate and may not necessarily reflect changes in population size. Increasing bear populations may continue to rise with increased levels of human exploitation (as long as it is below the maximum sustainable take), whereas declining populations may continue to plummet despite reduced exploitation. Ironically, bear populations that have been managed for sustained harvests have generally fared better than populations in which hunting has been prohibited, mainly because the former better controls illicit hunting than the latter (Garshelis 2002: 321–334).

Effects of the Proposal

Under current Federal subsistence regulations, brown bear fur with claws can only be used to make handicrafts for sale if the bears were harvested from units in Eastern Interior, Bristol Bay and Southeast Alaska. Other parts, such as bones teeth, sinew, or skulls can only be used in handicrafts for sale from brown bear taken in Southeast Alaska. The proponent's description of persons eligible to sell handicrafts made with these parts would increase the types of bear parts eligible for sale in much of the State, but would narrow all sales only to those between Federally qualified rural residents. The removal of unit-specific restrictions would negate the intent of the Board and the Regional Advisory Councils in recognizing the diverse customary and traditional uses of bears and bear parts throughout the State. These diverse customary and traditional uses are reflected in Regional Advisory Council recommendations. Three proposals (WP08-12, WP08-52 and WP08-53) which request the inclusion of Units 11, 23, 24B and 26 for eligibility to sell brown bear handicrafts with claws have been submitted for the 2008–2010 wildlife regulatory cycle and are analyzed separately.

Previous Board action provided for the sale of handicrafts made from bear claws by Federally qualified subsistence users to consumers including and other than Federally qualified subsistence users. Restricting sales solely to other Federally qualified rural residents, as proposed, will satisfy the need to use these products for regalia and cultural events in rural areas; however, the proposed regulatory language will not allow for handicraft sales to a variety of consumers, which is desired by subsistence users to support themselves and their families in a contemporary cash-subsistence economy.

The Board has also consistently rejected attempts to remove brown bear claws as a legal item with which Federally qualified users can make handicrafts for sale. Retaining the use of claws in handicrafts for sale is consistent with previous Board action, and is not expected to significantly increase harvests, as described in previous analyses.

The Board has provided for the sale of handicrafts made from the skin, hide, pelt, fur, claws, bones, teeth, sinew, or skulls of brown bears by Federally qualified subsistence users where appropriate. The intent of

the Board has been to allow Federally qualified subsistence users to fully utilize the above-listed parts of bears legally harvested under Federal subsistence regulations. It has not been the intent of the Board to create a commercial incentive to harvest bears based on the sale of bear handicrafts.

There is no known evidence to indicate that current Federal subsistence regulations adversely affect brown bear populations, nor that Federal subsistence regulations have led to an increased legal or illegal harvest of brown bears.

OSM CONCLUSION

Oppose proposal WP08-05.

Justification

Previous action of the Board has been consistent with Section 803 of ANILCA, which includes the "making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption." This proposal would unnecessarily restrict the subsistence uses of Federally qualified subsistence users as specified in ANILCA Section 803. There is no evidence to indicate that current Federal regulations adversely affect bear populations, nor has any been provided. Further, there has been no evidence provided to indicate that current Federal regulations have led to an increased legal or illegal harvest of bears. If adopted, this proposal would broaden the use of some of the nonedible parts of brown bear into regions where use is not allowed under current Federal regulations. The residents of a number of these regions have stated, through their Regional Subsistence Advisory Councils, they are opposed to inclusion in these regulations.

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WP08-05
APPENDIX A

The customary and traditional use determinations for brown bear for all units in the State are included below.

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
1	*Unit 1A—Rural residents of Unit 1A, except no Federal subsistence priority for residents of Hyder* *Unit 1B—Rural residents of Unit 1A, Petersburg and Wrangell, except no Federal subsistence priority for residents of Hyder* *Unit 1C—Rural residents of Unit 1C, Haines, Hoonah, Kake, Klukwan, Skagway, and Wrangell, except no Federal subsistence priority for residents of Gustavus* *Unit 1D—Rural residents of Unit 1D*	1 bear every four regulatory years by State registration permit only
2		
3		
4	*Rural residents of Unit 4 and Kake*	Unit 4, Chichagof Island south and west of a line that follows the crest of the island from Rock Point to Rodgers Point, including Yakobi and other adjacent islands; Baranof Island south and west of a line which follows the crest of the island from Nisnemi Point to the entrance of Gut Bay and including Kruzof and other adjacent islands—One bear every four regulatory years by State permit only
5	*Rural residents of Yakutat*	1 bear by Federal registration permit only
6	*No Federal subsistence priority*	No Federal open season
7	*No Federal subsistence priority*	No Federal open season

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
8	*Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, and Port Lions*	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.
9	*Unit 9A—Residents of Pedro Bay* *Unit 9B—Rural residents of Unit 9B* *Unit 9C—Rural residents of Unit 9C* *Unit 9D—Rural residents of Units 9D and 10 (Unimak Island)* *Unit 9E—Residents of Chignik, Chignik Lagoon, Chignik Lake, Egegik, Ivanof Bay, Perryville, Pilot Point, Ugashik, and Port Heiden/Meshik*	Units 9A, 9C, and 9D: *see Special Provisions* for the communities of False Pass, King Cove, Cold Bay, Sand Point, and Nelson Lagoon. Unit 9B, Lake Clark National Park and Preserve—Residents of Nondalton, Illiamna, Newhalen, Pedro Bay, and Port Alsworth only—1 bear by Federal registration permit only. The season will be closed when 4 females or 4 bears have been taken, whichever occurs first. Unit 9B remainder—1 bear by State registration permit only Unit 9E—1 bear by Federal registration permit only
10	*Unit 10—Rural residents of Units 9D and 10 (Unimak Island)*	No Federal open season. *See Special Provisions for the communities of False Pass, King Cove, Cold Bay, Sand Point, and Nelson Lagoon for Unit 10.*
11	*Unit 11, north of the Sanford River—Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Units 11 and 12* *Unit 11 remainder—Residents of Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, Tazlina, Tonsina, and Unit 11*	1 bear
12	*Rural residents of Unit 12, Dot Lake, Chistochina, Gakona, Mentasta Lake, and Slana*	1 bear
13	*Rural residents of Unit 13 and Slana*	1 bear—Bears taken within Denali National Park must be sealed within 5 days of harvest. That portion within Denali National Park will be closed by announcement of the superintendent after 4 bears have been harvested

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
14	*Unit 14A—All rural residents* *Units 14B and 14C—No Federal subsistence priority*	No Federal open season
15	*No Federal Subsistence priority*	
16	*No Federal subsistence priority*	
17	*Unit 17A—Rural residents of Unit 17, and rural residents of Akiak, Akiachak, Goodnews Bay and Platinum* *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 Nukakuk Lake, northeast to the point where the Unit 17 boundary intersects the Shotgun Hills—Rural residents of Kwethluk* *Unit 17B, that portion draining into Nuyakuk Lake and Tikchik Lake—Rural residents of Akiak and Akiachak* *Units 17B and 17C—Rural residents of Unit 17*	1 bear by State registration permit only *Contact ADF&G for permit details*
18	*Residents of Akiachak, Akiak, Eek, Goodnews Bay, Kwethluk, Mountain Village, Napaskiak, Platinum, Quinhagak, St. Marys and Tuluksak*	1 bear by State registration permit only
19	*Units 19A and 19B—Rural residents of Units 19 and 18 within the Kuskokwim River drainage upstream from and including) the Johnson River* *Unit 19C—No Federal subsistence priority* *Unit 19D—Rural residents of Units 19A and 19D, Tuluksak, and Lower Kalskag*	Units 19A and 19B, those portions which are downstream of and including the Aniak River drainage—1 bear by State Registration permit only Unit 19A remainder; Unit 19B remainder; and Unit 19D—1 bear Unit 19C—No Federal open season
20	*Unit 20E—Rural residents of Unit 12 and Dot Lake* *Unit 20F—Rural residents of Unit 20F, Stevens Village and Manley* *Unit 20 remainder—All rural residents*	Unit 20A—1 bear Unit 20E—1 bear Unit 20 remainder—1 bear
21	*Rural residents of Units 21 and 23*	Unit 21D—1 bear by State registration permit only Unit 21 remainder—1 bear
22	*Unit 22—Rural residents of Unit 22*	Units 22A, 22B, 22D, and 22E—1 bear by State registration permit only Unit 22C—1 bear by State registration permit only

Unit	C & T determination for Brown Bear	Harvest Limits for Brown Bear
23	*Rural residents of Units 21 and 23*	Unit 23, except the Baldwin Peninsula north of the Arctic Circle—1 bear by State registration permit only Unit 23 remainder—1 bear every four years
24	*Unit 24, that portion south of caribou mountain and on public lands within and adjacent to the Dalton Highway Corridor Management Area—Rural Residents of Unit 24 and Stevens Village* *Unit 24 remainder—Rural residents of Unit 24*	1 bear by State registration permit
25	*Unit 25D—Rural residents of Unit 25D* *Unit 25 remainder—Residents of Unit 25 and Eagle*	Units 25A and 25B—1 bear Unit 25C—1 bear Unit 25D—1 bear
26	*Rural residents of Unit 26, except the Prudhoe Bay-Deadhorse Industrial Complex), Anaktuvuk Pass, and Point Hope*	Unit 26A—1 bear by State registration permit only Unit 26B—1 bear Unit 26C—1 bear

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Take no action on Proposal WP10-02. The proponent requested the Council take no action as the issue will be addressed in Proposal WP12-01.

Southcentral Subsistence Regional Advisory Council

Take no action on Proposal WP10-02. ADF&G intends to withdraw this proposal with the permission of the Board. The Council prefers supporting WP12-01.

Kodiak/Aleutians Subsistence Regional Advisory Council

Oppose Proposal WP10-02. The Council is opposed to the use and sale of brown bear handicrafts. The Council supports the Bear Claw Working Groups's recommendation to oppose this proposal.

Bristol Bay Subsistence Regional Advisory Council

Oppose Proposal WP10-02. Neither the proposer nor the staff analysis supports adoption of this proposal. The Brown Bear claw working group also recommended that the proposal be rejected in favor of WP12-01 that requires sealing of subsistence taken brown bear if claws or other parts are to be used in handicrafts and sold. The Bristol Bay RAC opposed the proposal rather than taking no action.

Yukon-Kuskokwim Subsistence Regional Advisory Council

No action taken

Western Interior Subsistence Regional Advisory Council

Take no action on Proposal WP10-02. Based on the State's intention to withdraw and the recommendation of the working group.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP10-02. Proposal WP12-01 makes this proposal moot. The Council also wants subsistence users to benefit from the sale of handicrafts. They also want to send a strong message that they want to allow subsistence users the ability to sell brown bear claw handicrafts.

Eastern Interior Subsistence Regional Advisory Council

Take no action on Proposal WP10-02. ADF&G intends to withdraw this proposal with the permission of the Board. The Council prefers supporting WP12-01.

North Slope and Northwest Arctic Subsistence Regional Advisory Councils

Take no action on Proposal WP10-02. The State of Alaska will withdraw its proposal in favor of WP12-01. The Councils took no action.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP10-02(deferred WP08-05)
December 5, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP10-02 (Deferred WP08-05): Change the regulations regarding sale of brown bear handicrafts to allow sales of handicrafts made from brown bear fur in all units and to restrict sales of handicrafts made from claws, bones, teeth, or skulls to transactions between federally-qualified subsistence users.

Introduction: Existing federal regulations allow essentially unconstrained commercial sale of handicrafts made from bear parts taken in some units as a customary and traditional activity, despite a lack of substantial evidence demonstrating that such sales are a customary and traditional practice. The sale of such handicrafts is limited only by virtually unenforceable provision that prohibits sales constituting a "significant commercial enterprise." These regulations also allow the purchase of brown bear handicrafts by persons who are not federally-qualified subsistence users, despite such purchases being prohibited under state law and, as was pointed out at the Spring 2006 Federal Subsistence Board meeting, that sales can even occur over the Internet.

Sales of handicrafts made from brown bear claws, teeth, skulls, and bones present a particular problem, because these are potentially high value items, and allowing sales creates market incentives for illegal harvest in Alaska and other states.

Black bear handicraft sales, although not customary and traditional, do not create the high level of conservation concern raised by sales of brown bear handicrafts. Similarly, sales of brown bear handicrafts do not raise the same level of concern if limited to the skin or fur as defined in state regulations; and even sales of handicrafts made with claws and teeth do not currently raise extremely high levels of concern if limited to sales among federally-qualified users.

Changing the regulation to continue allowing the sale of brown bear fur products to anyone (state regulations allow sale of untanned brown bear hides), while limiting sales of handicrafts made with brown bear claws, teeth, bones, and skulls to sales to other federally-qualified subsistence users, should help eliminate commercial markets and the masking of illegal sales in Alaska and elsewhere. Unit specific restrictions on sales are almost impossible to enforce without tracking and documentation requirements and are not needed for lower value fur handicrafts. This proposal will eliminate the unit-specific sale allowances and render the regulations more user-friendly and more enforceable.

Impact on Subsistence Users: The Federal Subsistence Board's current allowance of brown bear handicraft sales was not based upon a determination that such sales are customary and traditional but instead upon the Board's unsupported argument that the Board can authorize any use if the take is customary and traditional (*see e.g.,* January 2, 2006, letter from Chairman Demientieff to Commissioner Campbell). Therefore, adoption of this proposal will not impact customary and traditional subsistence activities.

This proposal will continue to allow rural residents to: sell brown bear fur handicrafts to anyone (as allowed under State law); barter brown bear handicrafts with anyone under federal regulations; and sell brown bear handicrafts to other rural residents under federal regulations. Therefore, this proposed regulation change will not impair the ability of rural residents or urban Alaska Natives to obtain such handicrafts for ceremonial, religious, and cultural purposes.

Further, adoption of this proposal will significantly reduce the likelihood that federally-qualified subsistence users will face state prosecution for engaging in sales that are prohibited under state law when they occur on state or private lands.

Opportunity Provided by State: Under 5 AAC 92.200, handicrafts made with bear fur may be sold to anyone, but sales of handicrafts made with claws, skulls, teeth, and bones are prohibited. Whole bear skins, with claws attached, taken in certain predator control areas may be sold under 5 AAC 92.031, but only after sealing and under terms of a permit issued for that bear skin.

Conservation Issues: The Federal Subsistence Board created a new market for bear claws and other high value bear parts which could readily masks illegal sales, thereby compounding problems with the international trade of Endangered Species and contributing to the illegal harvest, overharvest, and waste of bears in other states and countries, as well as Alaska. Markets for high value bear handicrafts create a conservation concern because brown bears are protected under the Endangered Species Act in other states and Mexico, and the origin of brown bear products cannot be determined by visual inspection. Brown bears are also listed on Appendix II of the Convention International Trade of Endangered Species (CITES).

In Alaska, economic incentives associated with harvesting brown bears to make handicrafts create conservation concerns because brown bears develop slowly and have a low reproductive rate, making small populations extremely susceptible to overharvest. Allowing widespread sale of high value bear parts without any kind of tracking mechanism is an invitation to illegal harvests. Further, the existing regulations are unenforceable and inconsistent with sound wildlife management principles.

Enforcement Issues: This proposal will reduce enforcement issues created by the existing federal regulation in several ways: (1) by limiting the pool of eligible purchasers for high value bear parts, it will significantly reduce economic incentives for poaching in other states and countries as well as in Alaska; (2) by allowing the sales of brown bear fur handicrafts from any Game Management Unit, as presently allowed under state law, this proposal will eliminate unenforceable Unit-specific sales authorizations in existing regulation; and (3) the proposed regulation will reduce the likelihood that federally-qualified subsistence users will face prosecution for attempting to engage in sales on state or private lands that are prohibited under state law.

Jurisdiction Issues: The Federal Subsistence Board lacks jurisdiction to allow sales of any wildlife handicrafts when and where such sales are not customary and traditional. In the past, the Federal Board has rejected this argument, asserting that if any use is customary and traditional then the Board can authorize any other use. The Board's argument is inconsistent with its litigation stance in the Chistochina Unit 12 moose case where it argued that "customary and traditional use" is related to "how resources are used after they are taken," and not to or a prerequisite condition for the taking itself." *State v. Fleagle,* (Case 3:06-cv-00107-HRH) Doc. 32 at 22.

Recommendation: TAKE NO ACTION / GRANT PERMISSION TO WITHDRAW / DEFER TO PROPOSAL 12-01 AS RECOMMENDED BY WORKING GROUP

WP12-02 Executive Summary	
General Description	Proposal WP12-02 requests that only people 60 years of age or older, or disabled, be allowed to designate their harvest limit to another person. *Submitted by Michael Cronk of Tok*
Proposed Regulation	**§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.** *(e) Hunting by designated harvest permit.* *If you are a Federally qualified subsistence user (recipient)* ***who is 60 years of age or older, or disabled****, you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulations in §___.26.*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Kodiak/Aleutians Regional Council Recommendation	**Oppose**
Bristol Bay Regional Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Oppose**
Western Interior Regional Council Recommendation	**Oppose**
Seward Peninsula Regional Council Recommendation	**Oppose**
Northwest Arctic Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**

continued on next page

WP12-02 Executive Summary *(continued)*	
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** Proposal WP12-02 **with modification**. Adopt the proposal with modification to establish designated hunter beneficiary qualifications aligned with those approved by the Federal Subsistence Board for Unit 6. The State recommends this proposal be modified to require beneficiaries of the federal subsistence designated hunter program be blind, 65 years old or older, at least 70% disabled, or temporarily disabled. The State also recommends modifying this proposal to reflect the Unit 6 designated hunter possession limit adopted by the Federal Subsistence Board which to limits designated hunters to possession of only one bag limit at a time.
Written Public Comments	**2 support** Proposal WP12-02 **with modification** 1 **Oppose**

STAFF ANALYSIS
WP12-02

ISSUES

Proposal WP12-02, submitted by Michael Cronk of Tok, Alaska, requests that only people 60 years of age or older, or disabled, be allowed to designate their harvest limit to another person.

DISCUSSION

The proponent claims that statewide regulations allow a person to harvest an unlimited number of animals per hunting season as long as he or she first obtains a designated hunter permit. The proponent explains that he supported the adoption of a designated hunter regulation to allow hunters to harvest animals for elders and others unable to hunt for themselves. The proponent further describes the problems that now exist with the designated hunter system: increasing numbers of people that formerly did not hunt are now getting designated hunter permits and hunting; hunters gathering designated hunter permits in order to continue hunting after harvesting their individual harvest limit; and hunters receiving designated hunter permits for their children but not hunting with their children and thereby not passing on knowledge of how to hunt. The proponent declares that these uses were not the intent of the Federal Subsistence Board when adopting the regulation, the abuses will continue, and wildlife populations could suffer unless limits are added to the designated hunter system.

Existing Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(e) Hunting by designated harvest permit.

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit specific regulations in §___.26.

Proposed Federal Regulation

§___.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(e) Hunting by designated harvest permit.

If you are a Federally qualified subsistence user (recipient) ***who is 60 years of age or older, or disabled****, you may designate another Federally qualified subsistence user to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest*

report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulations in §___.26.

Relevant Federal Regulation

Unit-specific regulations that preclude or modify the designated hunter system exist for five management units. They are Units 6, 9, 22, 23, and 26 (see **Appendix A**).

Existing State Regulation

The State of Alaska provides for the transfer of harvest limits from one person to another through its proxy hunting program (5 AAC 92.011; see Appendix B). **Table 1** is a side-by-side comparison of the State's proxy system to the Federal designated hunter system.

Table 1. State Proxy System compared to Federal Designated Hunter System.

State of Alaska Proxy System	Federal Subsistence Management Program Designated Hunter System
Applies where there is an open State harvest season.	Applies to Federal public lands when there is an open Federal harvest season.
Applies to caribou, deer, and moose.	Applies to caribou, deer, and moose.
Available to a hunter who is blind, physically disabled, or 65 years of age or older.	Available to Federally qualified subsistence users.
Either the recipient or the hunter may apply for the authorization.	Recipient may designate another Federally qualified subsistence user on his/her behalf.
No person may be a proxy for more than one recipient at a time.	A person may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time.
Antler destruction is required for all species.	No antler destruction.

Extent of Federal Public Land

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

Regulatory History

Prior to 2003, the Board adopted designated hunter regulations for 21 unit-specific hunts, and there were differences in how the regulations addressed the designated hunter system (see FSB 2003). In 2003, the Board established the statewide designated hunter system for deer, caribou, and moose, leaving the option for unit-specific regulations to include other species and special provisions (68 FR 38466. June 27, 2003). The Board was supported by the majority of Regional Advisory Councils and the Interagency Staff Committee (FSB 2003).

As mentioned earlier, instances exist in unit-specific regulations that preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. For example, in Unit 6 special provisions exist for moose, deer, black bear, beaver, and goat; in Unit 9 for caribou; in Unit 10 for caribou; in Unit 22 for muskoxen; in Unit 23 for sheep and muskoxen; and in Unit 26 for sheep and muskoxen (**Appendix A)**.

Customary and Traditional Uses

Designated hunter provisions provide recognition of the customary and traditional practices of sharing and redistribution of harvests. A plethora of research supports a need for a designated hunter system in Federal subsistence regulations to harmonize fundamental harvesting characteristics of rural Alaska communities with the Federal Subsistence Management Program. Sahlins (1972) observed that 20% to 30% of households in "family-based production" could be expected to fail to produce enough food to feed themselves. Family-based production is the foundation of the mixed subsistence-cash economy found in most rural Alaskan communities (cf. Wolfe 1981, 1987; Wolfe and Walker 1987; Wolfe et al. 1984). Family-based production is when households linked by kinship distribute the responsibility to harvest, process, and store wild resources based on factors such as skills and abilities, availability of able workers, sufficient income to purchase harvesting and processing technology, and other factors. Sahlins' (1972) observation has been repeated in subsistence studies conducted in rural Alaska communities (cf. Andrews 1988; Magdanz, Utermohle, and Wolfe 2002; Sumida 1989; Sumida and Andersen 1990). While predominantly-Native communities differ somewhat concerning family-based food production patterns, Wolfe et al. (2007) showed that some of the characteristics apply to culturally-mixed rural communities in Southeast Alaska as well. The common variables that affected household food production in rural Alaska in the late 20th century were: commercial fishing involvement, males over 15 years, age of elders, and single person households. Commercial fishing involvement and three or more males over 15 years correlated with households with relatively high wild food production. Older elders and single person households correlated with households with relatively low wild food production. Wolfe et al. (2007) observed that on a statewide basis it was not uncommon for about 30% of the households in a community to produce about 70% or more of the community's wild food harvest. Households in the higher harvesting third of households were called "super-households" based on Wolfe's (1987) research in rural Alaska communities.

The analysis of Proposal WP95-04, concerning a transferable moose harvest limit in Unit 5, described the rationale for the adoption of the proposal. The passage is repeated here because it continues to be relevant, describes the "super-household" phenomenon described above, and provides the primary rationale for the structure of the statewide designated hunter system in regulation today.

> [The designated hunter system] legalizes a traditional practice that is already going on. Within the individual harvest limits, some hunters cannot fulfill both the requirements of their own household and those of the people with whom they share. The proposal would permit hunters to harvest moose expressly for sharing.
>
> In every society, the ratio of producers to dependents is strongly influenced by the ecological setting and dominant mode of production. In societies with hunting and gathering economies (termed "subsistence" in Alaska), the proportion of producers ranges from approximately 50 to 70 percent. However, not all producers are hunters; some are engaged in processing foods. Consequently, it is common for a single hunter, in the northern context, to harvest resources for four or more individuals.

> Domestic units may pass through several developmental stages with widely varying ratios of producers to dependents. For example, a household in its early stages of development, with infants and small children, is different from a domestic unit headed by a middle-aged couple with several unmarried adult children. During later stages a household may be composed exclusively of elderly post-productive people. In any stage of development, households may contain members who are unable to or do not choose to harvest for themselves. Single-parent families are another category of households, which may rely on others to supply them with resources.
>
> Like households, individual producers also pass through developmental stages with distinctive productive capacities. A considerable amount of an apprentice harvester or processor's effort is consumed in learning. Conversely, individuals in their final productive years are primarily engaged with education and supervisory tasks rather than the direct procurement and processing of resources. Hence, the majority of production is accomplished by that segment of a population that, while having mastered requisite skills, is free of the responsibilities and physical impairments acquired with advancing adulthood. Finally, regardless of stage of development, all producers do not possess equal skills, abilities, and aptitudes. Each community has a minority of good hunters, trappers, and fishers.
>
> Inequalities in individual and household productive capacities are equalized via processes of distribution (sharing and feasting) and exchange (trade and barter). The nature, magnitude, and geographic extent of distributive processes are highly variable across households, communities, societies, and time periods (FSB 1995:31–32).

It is due to the variable nature of the distribution process, mentioned in the final paragraph of the passage above, that the Federal Subsistence Board, based on the recommendations of the majority of Regional Advisory Councils and the Interagency Staff Committee (FSB 2003), adopted the statewide designated hunter provisions that are in current Federal regulations (§___.25(e)). The Board considered, but did not adopt, a statewide provision that would restrict designators to only elderly or disabled subsistence users. However, based on a review of past analyses from 1993 to 2003, it is clear that the Board anticipated receiving requests to adopt unit-specific regulations that would preclude or modify the designated hunter system.

Harvest History

The designated hunter permit database is maintained at the Office of Subsistence Management (FWS 2011). Table 2 describes the use of the designated hunter system since 2003 when the statewide system was instituted by the Federal Subsistence Board. The data show the cumulative use for the 2003–2009 regulatory years. Designated hunters hunted for caribou, deer, moose, and sheep only. Based on Table 2, it is clear that a large majority of the harvest by designated hunter was deer, and the majority of permits were used in Southeast Alaska (Units 1–5). The portion of the total harvest taken by designated hunters for any one species was highest in Unit 3 for deer (8.9% of the harvest was taken by designated hunters), Unit 12 for caribou (7.0%), and Unit 5 for deer (5.7%); however, designated hunters generally harvested less than 2% of the total harvest for any one species in any single unit (**Table 2**).

People requesting to designate another hunter are not asked to indicate a disability, and therefore, data concerning the number of people with disabilities that designate a hunter could not be presented in the analysis.

Table 2. Use of designated hunter system based on completed harvest reports, 2003-2009 cumulative (ADF&G 2011, FWS 2011).

Management Unit	Number of Permits Used (Hunted)	Number of Animals Harvested	All Hunters[a] Number of Animals Harvested	Percentage Harvested by Designated Hunters
Caribou				
9	9	4	2,376	0.2%
12	29	14	199	7.0%
13	184	71	11,600	0.6%
17	10	8	4,819	0.2%
18	2	1	2,894	<0.1%
20	24	12	5,007	0.2%
Unknown	21	4		
Total (2003-2009)	279	114	26,895	0.4%
Deer				
1	16	23	4,166	0.6%
2	175	229	13,697	1.7%
3	238	301	3,537	8.5%
4	248	439	30,366	1.4%
5	2	7	122	5.7%
6	2	3	14,653	<0.1%
8	137	227	31,894	0.7%
Unknown	27	6		
Total (2003-2007)[b]	845	1,235	98,435	1.3%
Moose				
1	8	1	1,122	0.1%
3	9	1	315	0.3%
5	7	4	314	1.3%
6	34	14	848	1.7%
9	1	0	996	0.0%
11	11	4	356	1.1%
12	1	0	959	0.0%
13	43	12	4,757	0.3%
15	5	3	3,193	0.1%
19	31	7	1,938	0.4%
24	8	2	1,164	0.2%
25	1	1	1,215	0.1%
26	1	1	96	1.0%
Unknown	20	5		
Total (2003-2009)	180	55	15,318	0.4%
Sheep				
23	3	2	123	1.6%
Unknown	0	0		
Total (2003-2009)	3	2	123	1.6%

[a] All hunters including Federally qualified, non-Federally qualified, and nonresidents of the state.
[b] Harvest by all hunters available to 2007 only.

Some age data is available for the 2009 and 2010 regulatory years. For the 2009 and 2010 regulatory years combined, of the 1,108 people who designated another hunter, age data is available for only 80 people. Of the 80 people, 3 (4%) were 18-years of age or younger, 59 (74%) were age 19 to 59, and 18 (23%) were 60 or older (**Table 3**).

Table 3. The age of designators, based on the age of 80 out of a total of 1,108 people who designated another hunter during the 2009 and 2010 regulatory years (FWS 2011).

	Permits issued		Permits used		Animals taken	
Age of designators	Number	Percentage	Number	Percentage	Number	Percentage
18 years and younger	3	4%	3	4%	1	3%
19-59 years	59	74%	50	75%	28	70%
60 years and older	18	23%	14	21%	11	28%
Total	80	100%	67	100%	40	100%

Note: percentages may not equal 100 due to rounding.

The designated hunter database at the Office of Subsistence Management compiles limited data on the age of designated hunters because age is not a requirement for designating another hunter (except in Unit 6, see Appendix A). Applications for Federal registration permits request each hunter's age. When a person designates his or her harvest limit to another, the age of the designator is available on the Federal registration permit application; however, some hunts do not require a Federal registration permit. For hunts that do not require a Federal permit, the age of a designator is available on the State hunting license and not readily retrievable. Additionally, Federal registration permit applications ask each hunter to check a box if he or she is designating another hunter; however, this box is usually not checked by those using a designated hunter. Currently, age data is available for people who obtained a Federal registration permit and checked the box indicating they were using a designated hunter for the 2009 and 2010 regulatory years (FWS 2011).

Other Relevant Proposals

Action on this proposal may affect decisions on other wildlife proposals currently under consideration, WP12-10, WP12-11, and WP12-13. All three concern designated hunter provisions in Federal regulations, but none propose restrictions on the designator as does the proposal under consideration in this analysis, WP12-02.

Effects of the Proposal

If this proposal is adopted, only Federally qualified subsistence users who are 60 years of age or older, or disabled, would be allowed to designate another person to take their harvest limit of deer, caribou, and moose—except in Unit 6 where unit-specific regulations allow only those who are either blind, 65 years of age or older, at least 70% disabled, or temporarily disabled to designate a hunter (see **Appendix A**). The extent of impacts on the subsistence users cannot be measured exactly because statistics were only partially gathered to describe the age of those designating a hunter and not whether the user was disabled, noted above. From the information in Table 3, about 77% of the users designating a hunter were under 60 years old and would be prohibited from designating a hunter if this proposal is adopted.

The effect on wildlife populations would depend on the region. In regions where designated hunter use is more common, hunting effort may be eased, but no information has been systematically collected concerning this issue. No effects on other users are anticipated.

If this proposal is not adopted, Federally qualified subsistence users would continue to be allowed to designate another hunter to take their harvest limit of deer, caribou, and moose (except in Unit 6 where additional restrictions are in place, see above). No effects on wildlife populations are anticipated, and no effects on other users are anticipated.

OSM CONCLUSION

Oppose Proposal WP12-02.

Justification

Federal subsistence wildlife regulations allow any Federally qualified subsistence user to designate another subsistence user to take his or her harvest limit of deer, caribou, and moose. The designated hunter system supports a valid practice of communal sharing of resources and skills in rural Alaska. While in some regions the designated hunter system is lightly used, nonetheless it provides important regulatory flexibility to accommodate customary and traditional practices.

The proponent raises issues regarding the designated hunter system for the entire state. It is clear that in some regions people are not aware of the permit and their use of the system has not developed but is anticipated to develop as more participate in the formal harvest reporting systems available to them. Additionally, the harvest by designated hunters generally has been a small portion (less than 2%) of the total harvest by all hunters (including Federally qualified users, non-Federally qualified users, and nonresidents of the state, combined). Therefore, a statewide provision restricting the use of the designated hunter system is not supported. In circumstances where evidence is available to clearly warrant, region or unit-specific restrictions could be proposed.

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APPENDIX A
FEDERAL DESIGNATED HUNTER—UNIT SPECIFIC REGULATIONS

§___.26(n) Unit regulations

Unit 6
(ii)(D) A Federally qualified subsistence user (recipient) who is either blind, 65 years of age or older, at least 70 percent disabled, or temporarily disabled may designate another Federally qualified subsistence user to take any moose, deer, black bear, and beaver on his or her behalf in Unit 6, and goat in Unit 6D, unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than one harvest limit in his or her possession at any one time;

(E) A hunter younger than 10 years old at the start of the hunt may not be issued a Federal subsistence permit to harvest black bear, deer, goat, moose, wolf, and wolverine;

(F) A hunter younger than 10 years old may harvest black bear, deer, goat, moose, wolf, and wolverine under the direct, immediate supervision of a licensed adult, at least 18 years old. The animal taken is counted against the adult's harvest limit. The adult is responsible for ensuring that all legal requirements are met.

Unit 9
(iii)(E) For Units 9C and 9E only, a Federally qualified subsistence user (recipient) of Units 9C and 9E may designate another Federally qualified subsistence user of Units 9C and 9E to take bull caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report and turn over all meat to the recipient. There is no restriction on the number of possession limits the designated hunter may have in his/her possession at any one time;

(iii)(F) For Unit 9D, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than four harvest limits in his/her possession at any one time;

Unit 22
(iii)(E) A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take musk oxen on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must get a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients in the course of a season, but have no more than two harvest limits in his/her possession at any one time, except in Unit 22E where a resident of Wales or Shishmaref acting as a designated hunter may hunt for any number of recipients, but have no more than four harvest limits in his/her possession at any one time.

Unit 23

(iv)(D) For the Baird and DeLong Mountain sheep hunts—A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for only one recipient in the course of a season and may have both his and the recipients' harvest limits in his/her possession at the same time;

(iv)(F) A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take musk oxen on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must get a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but have no more than two harvest limits in his/her possession at any one time.

Unit 26

(iv)(C) In Kaktovik, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep or musk ox on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than two harvest limits in his/her possession at any one time;

(iv)(D) For the DeLong Mountain sheep hunts—A Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take sheep on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for only one recipient in the course of a season and may have both his and the recipient's harvest limits in his/her possession at the same time.

APPENDIX B
STATE PROXY HUNTER REGULATIONS

5 AAC 92.011. Taking of game by proxy

(a) A resident hunter (the proxy) holding a valid resident hunting license may take specified game for another resident (the beneficiary) who is blind, physically disabled, or 65 years of age or older, as authorized by AS 16.05.405 and this section.

(d) A person may not be a proxy
(1) for more than one beneficiary at a time;
(2) more than once per season per species in Unit 13;
(3) for Tier II Caribou in Unit 13, unless the proxy is a Tier II permittee.

(j) A proxy participating in a proxy hunt must remove at least one antler from the skull plate or cut the skull plate in half, on an antlered animal, for both the proxy's animal and the beneficiary's animal before leaving the kill site, unless the department has established a requirement that complete antlers and skull plates must be submitted to the department.

(k) Proxy hunting under this section is only allowed for
(1) caribou;
(2) deer; and
(3) moose in Tier II hunts, any-bull hunts, and antlerless moose hunts.

(l) Notwithstanding (k) of this section, proxy hunting is prohibited in the following hunts where the board has determined that the use of the proxy would allow circumvention of harvest restrictions specified by the board:
(1) Unit 20(E) moose and caribou registration hunts;
(2) Units 21(B), 21(C), 21(D), and 24 moose hunts if either the proxy or the beneficiary holds a drawing permit for Units 21(B), 21(C), 21(D), or 24 moose hunts;
(3) Units 9(A) and 9(B), unit 9(C), that portion within the Alagnak River drainage, and units 17(B), 17(C), 18, 19(A), and 19(B) caribou hunts from August 1 through October 31.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council determined that there was no evidence presented to support claims expressed by the proponent. The proposed regulation is much too restrictive and does not benefit subsistence users.

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council finds many statewide proposals problematic in general in light of regional variances and this one in particular for its lack of specific detail. The Council recognizes that the practice of using a designated hunter is both culturally oriented and appropriate and notes that the current system seems to be working well, so this change is not needed.

Kodiak/Aleutians Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council sees no reason to change the existing regulation. There appears to be no conservation or use issues that this proposal would address or solve.

Bristol Bay Subsistence Regional Advisory Council

Oppose Proposal WP12-02. There are many reasons that people may need to designate their harvest limit to another person such as injury, illness, or other hardships. The proposal does not take this into account, and there is no information to suggest the current regulation is causing conservation problems or concerns throughout the State.

Yukon-Kuskokwim Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council likes the way the Federal designated hunt is done now. This proposal does not recognize traditional practices in villages.

Western Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-02. This proposal does not meet customary and traditional practices and would be detrimental to subsistence uses.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council felt that the proposed regulation was too restrictive. They are comfortable with the existing regulation, which reflects customary and traditional use.

Eastern Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-02. The Council recognizes that traditional networks of sharing and support are too complex within and between communities to fit with this proposal and feels that this proposal places undue hardship on specific users such as single mothers. The Council suggests that the proposal may be more appropriate for a specific area experiencing abuse of the system, rather than as a statewide proposal.

North Slope and Northwest Arctic Subsistence Regional Advisory Councils

Oppose Proposal **WP12-02**. If a designated hunter regulation is allowed, the designated hunter must de-value the trophy value of the harvest. The proposed regulations will place unnecessary limitations on elders. Elders are commonly provided for in rural communities.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-02: Change federal subsistence designated hunter regulations.

Introduction: This proposal seeks to change the statewide federal subsistence designated hunter regulation by specifying the qualifications for the recipient of harvest. The proposal requests federal regulations be changed to require that federal subsistence designated hunters only harvest for federally qualified recipients 60 years of age or older or for a person who is disabled.

The proponent indicates the federal subsistence designated hunter program has diverged from the original intent of the Federal Subsistence Board by allowing designated hunting to provide for elders and others that were unable to hunt for themselves. The proponent indicates the designated hunter program is currently an uncontrolled system. The proponent indicates some federal subsistence users are abusing this regulation and are harvesting as many animals as numbers of permits they can obtain which may lead to detrimental impacts to game populations and subsistence hunting in general.

Impact on Subsistence Users: If adopted, federally qualified subsistence designated hunters could harvest animal for federally qualified users 60 years of age or older or are disabled. If adopted, some federally qualified subsistence known as super harvesters may expend additional time locating and obtaining game tags from qualified designated hunter beneficiaries. If adopted, designated hunters who cannot locate federally qualified users 60 or over or are disabled may harvest fewer animals per year.

Opportunity Provided by State: Proxy hunting for big game is authorized in state hunting regulations. State proxy hunting is allowed for moose, caribou, and deer. The state proxy hunting beneficiary requirements stipulate the beneficiary must be a resident of Alaska who is blind, 70% physically disabled, or 65 years of age or older. Proxy hunters may not proxy hunt for more than one beneficiary at a time and may have only one Proxy Authorization with them in the field at a time.

Conservation Issues: Undetermined at this time. If this proposal is adopted without modifications many more animals may be harvested than anticipated.

Enforcement Issues: If adopted, this proposal would move federal and state regulations toward alignment.

Recommendation: Support with modification.
Adopt the proposal with modification to establish designated hunter beneficiary qualifications aligned with those approved by the Federal Subsistence Board for Unit 6. The State recommends this proposal be modified to require beneficiaries of the federal subsistence designated hunter program be blind, 65 years old or older, at least 70% disabled, or temporarily disabled. The State also recommends modifying this proposal to reflect the Unit 6 designated hunter possession limit adopted by the Federal Subsistence Board which to limits designated hunters to possession of only one bag limit at a time.

WRITTEN PUBLIC COMMENTS

Support Proposal WP12-02 **with modification** to include widows. The designated hunter option is important to traditional subsistence practices and ensuring that animals are harvested correctly. *Gates of the Arctic National Park Subsistence Resource Commission*

Support Proposal WP12-02 **with Modification** to more closely mirror current State eligibility requirements for proxy hunting. The commission recommends that qualified hunters be allowed to hunt for individuals who are blind, 70 percent physically disabled (as determined by a government agency for a physical disability or an affidavit signed by a physician), or over 60 years of age. This measure would reduce the possibility of abuse of the designated hunter provision by clearly defining who is eligible to use a designated hunter. *Lake Clark National Park Subsistence Resource Commission*

Oppose. There was not clear evidence that the existing designated hunter provisions are abused or otherwise a problem, and the current regulations are important in providing an opportunity for others in the community to hunt for those who are not able to do so themselves. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-03 Executive Summary	
General Description	Proposal WP12-03 would require trappers to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. The animal would become the property of the regional management agency. The proposed regulation asks trappers to salvage the edible meat and turn it over to the appropriate agency, but this would not be required. *Submitted by the Orutsararmiut Native Council*
Proposed Regulation	**§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.** *(a) Definitions.* *Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.* *(j) Utilization of fish, wildlife, or shellfish.* *(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:* *(i) The hide, skin, viscera, head, or bones of wildlife.* *(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.* **§___.26 Subsistence taking of wildlife.** *(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:* *(10) Using a trap to take ungulates or bear.* ***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, becomes the property of the regional management agency. The trapper should salvage edible meat and surrender it to the appropriate agency. A person who salvages and surrenders the edible meat in accordance with this regulation will not be subject to citation. If such an incidental take occurs, the trapper must move all active traps and snares at least 300 feet from the site for the remainder of the regulatory year (July 1 through June 30), and after the ending of the July 1 – June 30 regulatory year, may reset again in the same place or area during subsequent trapping seasons.***

continued on next page

WP12-03 Executive Summary *(continued)*	
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Kodiak/Aleutians Regional Council Recommendation	**No action taken**
Bristol Bay Regional Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support**
Western Interior Regional Council Recommendation	**Oppose**
Seward Peninsula Regional Council Recommendation	**Oppose**
Northwest Arctic Regional Council Recommendation	**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	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP12-03

ISSUES

Proposal WP12-03, submitted by the Orutsararmiut Native Council, would require trappers to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. The animal would become the property of the regional management agency. The proposed regulation requires trappers to salvage the edible meat and turn it over to the appropriate agency.

DISCUSSION

The proponent intends to protect trappers from enforcement action by more clearly writing a provision into Federal wildlife regulations that is currently only in State wildlife regulations. The proponent indicates that enforcement officers do not always understand the State regulations concerning the actions trappers must undertake when they take a moose, caribou, or deer incidental to trapping furbearers. The proponent states that trappers have been bothered by State enforcement officers with citations that were later dismissed. Specifically, a trapper was cited for locating a trap at the same location where the trap had incidentally harvested a moose the previous regulatory year. As described below, the activity is allowed in State trapping regulations (5 AAC 92.095(a)(12)). The trapper was freed from having to pay the fine, but had to pay the legal costs of defending himself. It appears the State officer interpreted one year to mean one calendar year (January 1–December 31), while the State regulation indicates one regulatory year (July 1–June 30).

At the September 2011 meeting of the Yukon Kuskokwim Delta Regional Advisory Council, the proponent added that the proposal removes a "gray area" in Federal regulations in which it is not clear to trappers or law enforcement that a trap that incidentally harvests a moose, caribou,or deer must be moved at least 300 feet. That is, currently, a Federally qualified subsistence user on Federal public lands could opt to follow Federal regulations that do not require him or her to move a trap at all (YKDRAC 2011: 87). The proposal adds the requirement to Federal regulations, removing any questions regarding what a Federally qualified subsistence user must do to avoid a citation.

By making this proposal, the Subsistence Committee of the Orutsararmiut Native Council is responding to concerns brought by tribal members (Roczicka 2011, pers. comm.). The Orutsararmiut Native Council is the Federally recognized Indian Reorganization Act (IRA) Council representing the community of Bethel.

It should be noted that some of the proponent's requested language is not in the State of Alaska codified regulations but is in the State's booklet distributed to the public ("2010/2011 Alaska Trapping Regulations"):

> 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 should 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 snares at least 300 feet from the site for the remainder of the regulatory year (ADF&G 2011a:14).

The instructions were meant to clarify State wildlife regulations, described below, and inform a trappers of what to do if they incidentally harvest moose, caribou, or deer while trapping for furbearers (Bowen 2011, pers. comm.).

A similar proposal was submitted to the Alaska Board of Game (Proposal 18) (ADF&G 2011b).

Existing Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(a) Definitions.

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

(j) Utilization of fish, wildlife, or shellfish.

(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:

(i) The hide, skin, viscera, head, or bones of wildlife.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.

§___.26 Subsistence taking of wildlife.

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(10) Using a trap to take ungulates or bear.

Proposed Federal Regulation

§____.25 Subsistence taking of fish, wildlife, and shellfish: general regulations.

(a) Definitions.

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

(j) Utilization of fish, wildlife, or shellfish.

(1) You may not use wildlife as food for a dog or furbearer, or as bait . . . except for the following:

(i) The hide, skin, viscera, head, or bones of wildlife.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan.

§___.26 Subsistence taking of wildlife.

(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(10) Using a trap to take ungulates or bear. ***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, becomes the property of the regional management agency. The trapper should salvage edible meat and surrender it to the appropriate agency. A person who salvages and surrenders the edible meat in accordance with this regulation will not be subject to citation. If such an incidental take occurs, the trapper must move all active traps and snares at least 300 feet from the site for the remainder of the regulatory year (July 1 through June 30), and after the ending of the July 1 – June 30 regulatory year, may reset again in the same place or area during subsequent trapping seasons.***

Existing State Regulation

5 AAC 92.085. Unlawful methods of taking big game; exceptions

The following methods and means of taking big game are prohibited . . . :

(6) with the use of a trap or snare . . . .

5 AAC 92.095. Unlawful methods of taking furbearers; exceptions

a) The following methods and means of taking furbearers under a trapping license are prohibited . . . :

(12) by placing or leaving an active trap or snare set on land that is within 300 feet of the site at which a moose, caribou, or deer was taken using a trap or snare; this prohibition applies for the duration of the regulatory year in which the moose, caribou, or deer was taken using the trap or snare.

5 AAC 92.210. Game as animal food or bait

A person may not use game as food for a dog or furbearer, or as bait . . . .

5 AAC 92.220. Salvage of game meat, furs, and hides

(d) A person taking game not listed in (a) of this section shall salvage for human consumption all edible meat, as defined in 5 AAC 92.990.

(h) A game animal taken in violation of AS 16 or a regulation adopted under AS 16 is the property of the state.

5 AAC 92.990. Definitions

(49) "salvage" means to transport the edible meat, skull, or hide, as required by statute or regulation, of a game animal or wild fowl to the location where the edible meat will be consumed by humans or processed for human consumption in order to save or prevent the edible meat from waste, and the skull or hide will be put to human use.

16.30.010. Wanton waste of big game animals and wild fowl

(a) It is a class A misdemeanor for a person who kills a big game animal or a species of wild fowl to fail intentionally, knowingly, recklessly, or with criminal negligence to salvage for human consumption the edible meat of the animal or fowl.

Extent of Federal Public Land

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

Background

The use of traps to harvest caribou, moose, and deer is prohibited in State and Federal wildlife regulations primarily because traps set for moose, caribou, and deer do not discriminate between animals, such as, cows, bulls, and fawns.

A good estimate of how often moose, caribou, or deer are caught in traps set for furbearers statewide, or by region, is not known at this time (Ardizzone 2011, pers. comm.; Seavoy 2011, pers. comm). State and Federal staff generally assume that low levels of incidental harvests occur and are ongoing. Snare height above ground, trap location, bait type, location of trail snares, et cetera, are effective techniques to select for targeted furbearers and against non-targeted animals. Occasionally, non-targeted animals are caught, but trappers use techniques to avoid them, and that is one reason there are low levels of incidental harvests (Seavoy 2011, pers. comm.). The intent of the State regulation (see above 5 AAC 92.095(a)(12)) that requires a trapper to move the trap from the site of the incidental harvest is to deny a trapper the benefit of continuing to set a trap at a kill site, which may attract furbearers (ADF&G 1998; Rearden 2011, pers. comm.).

At the September 2011 meeting of the Yukon Kuskokwim Delta Regional Advisory Council, the Association of Village Council Presidents (AVCP) representative said that incidental trapping of moose and caribou in Unit 18 was rare, and that he was aware of it happening only once or twice in the past 16 years, since he began to work at AVCP. He added that trappers set snares to harvest furbearers, such as, lynx, wolves, and foxes, and have not been intentionally setting snares for moose or caribou. Snaring a moose or caribou would be completely out of the ordinary (YKDRAC 2011: 83).

At the same meeting a Council member described the hardship on Federally qualified subsistence users if they were required to surrender the salvaged meat to the appropriate agency, as stated in the proposal. This was because of the remoteness of much of rural Alaska. Requiring a trapper to somehow transport the salvaged meat to an agancy representative would not be practical (YKDRAC2011: 89).

Current Federal regulations require that ungulates, bear, grouse, and ptarmigan caught incidental to trapping furbearers be salvaged (§__.25(j) (3)), and only the hide, skin, viscera, head, or bones may be used for bait (§__.25 (j)(1)(i)).

Regulatory History

In 1998, the Alaska Board of Game adopted a proposal (Proposal 103) submitted by ADF&G describing the actions trappers must take when they incidentally harvest a moose, caribou, or deer in a trap; for the remainder of the regulatory year (until June 30), a trapper must move the trap at least 300 feet from the site the animal was taken (5 AAC 92.095(a)(12)). Additionally, the animal must be salvaged (5 AAC 92.220(d)) and its parts cannot be used for bait (5 AAC 92.210). Moving the trap from the site of the incidental harvest denies trappers the benefit of continuing to set a trap at a kill site, which may attract furbearers (ADF&G 1998; Rearden 2011, pers. comm.).

Current Events Involving Species

The Alaska Board of Game deferred State Proposal 18, similar to Proposal WP12-03, at its meeting in Barrow on November 11–14, 2011 (Ardizzone 2011, pers. comm.). The deferred State proposal, Proposal 18, also was submitted by the Orutsararmiut Native Council but concerned Unit 18 only (ADF&G 2011b). The Board of Game deferred the proposal in order to consider it for statewide application at its meeting in Anchorage January 13–17, 2011.

Effects of the Proposal

If this proposal is adopted, under Federal regulations Federal subsistence users would be required to move a trap that incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. The animal would become the property of the regional management agency. The proposed regulation requires trappers to salvage the edible meat and surrender it to the appropriate agency. An existing Federal regulation would allow the hide, skin, viscera, head, or bones to be used for bait (§__.25 (j)(1)(i)).

No effects on other users and no effects on the conservation of moose, caribou, or deer are anticipated.

If this proposal is not adopted, under the existing Federal regulations, Federal subsistence users would continue to be required to salvage the edible meat from a moose, caribou, or deer incidentally harvested while trapping for furbearers (§__.25(j) (3)). However, they are not currently required to surrender salvaged edible meat to a Federal or State agency. The hide, skin, viscera, head, or bones could be used for bait (§__.25 (j)(1)(i)). No effects on other users and no effects on the conservation of moose, caribou, or deer are anticipated.

The proposed regulation would require that a Federal subsistence user turn the salvaged edible meat over to the appropriate agency, and the proposed regulation would continue to allow the use of parts of moose, caribou, and deer for bait (§__.25 (j)(1)(i)). These actions would be contrary to State regulations that do not require that the animal be surrendered to the State (Pappas 2011, pers. comm.) and that prohibit using incidentally harvested animals as bait (5 AAC 92.210).

OSM CONCLUSION

Oppose Proposal WP12-03.

Justification

The intent of the proponent is to import a State regulation into Federal regulations and to clarify its intent to law enforcement officers so that other trappers who comply with State regulations will not be cited. However, the proposed regulation would continue to allow the use of parts of moose, caribou, and deer for bait (§__.25 (j)(1)(i)), which is contrary to State regulations that prohibit using incidentally harvested animals as bait (5 AAC 92.210). Additionally, requiring a trapper to surrender the salvaged edible meat to the appropriate agency representative would not be practical and would be contrary to State regulations that do not require that the animal be surrendered to the State.

Furthermore, the use of traps to harvest caribou, moose, and deer is prohibited in Federal and State regulations primarily because traps do not discriminate between animals, such as, cows, bulls, and fawns. While these animals are occasionally caught in traps set for furbearers, the regulations are not directed at trappers. Finally, it is not clear how moving a trap at least 300 feet would conserve moose, caribou, or deer. Therefore, the proposed regulation would place an unnecessary burden on Federal subsistence users.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southeast Subsistence Regional Advisory Council

Oppose Proposal WP12-03. The Council was unclear regarding the intent of this proposal. Neither the proponent nor the staff analysis provided a discussion of how the regulation would benefit subsistence users or provide for conservation of either predators or prey. The proposal is unnecessary to prevent the incidental take of game animals in traps.

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP12-03. The Council believes that the regulatory authority already exists to accomplish the goals of this proposal. The council questions whether a move of 300 feet would be effective.

Kodiak/Aleutians Subsistence Regional Advisory Council

No action taken on Proposal WP12-03. There does not appear to be a benefit to either resource conservation or Federal subsistence users to adopt this regulation.

Bristol Bay Subsistence Regional Advisory Council

Oppose Proposal WP12-03. This proposal would align Federal with State regulations. However, there are no known conservation issues that would be addressed by adoption of the proposal, and the State of Alaska indicates that enforcement of the existing regulation is not a problem. The proposed regulation is not needed.

Yukon-Kuskokwim Subsistence Regional Advisory Council

Support Proposal WP12-03. The Council supports this proposal to help clear up regulatory confusion for subsistence users.

Western Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-03. This proposal is not needed. Subsistence users do not target ungulates while trapping.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP12-03. The proposal is more restrictive of subsistence users. It is not supported by a biological reason, but based on an isolated incident.

Eastern Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-03. The Council understands that State of Alaska regulations addressing this issue already apply to Federal subsistence trapping, making a companion Federal proposal unnecessary. The Council is also aware of improved snare design that allows unintended catch to break away and survive.

North Slope and Northwest Arctic Subsistence Regional Advisory Councils

Oppose Proposal **WP12-03**. It is an unnecessary proposed regulation.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-03: Incidental harvest requires the moving traps for the remainder of the regulatory year. This proposal was submitted by the Orutsararmiut Native Council.

Introduction: The proposer seeks to require that trappers move a trap which incidentally harvests a moose, caribou, or deer at least 300 feet for the remainder of the regulatory year. Trappers would also be required to salvage the edible meat for surrender to the Federal inseason wildlife manager.

Impact on Subsistence Users: Federal subsistence users would be required to move a trap when it has taken a moose, caribou, or deer incidental to trapping furbearers for the remainder of the regulatory year, and surrender their meat specifically to the Federal inseason wildlife manager.

Opportunity Provided by State:
5 AAC 92.085. Unlawful methods of taking big game; exceptions
The following methods and means of taking big game are prohibited in addition to the prohibitions in 5 AAC 92.080:

(6) with the use of a trap or snare . . . .

5 AAC 92.095. Unlawful methods of taking furbearers; exceptions
a) The following methods and means of taking furbearers under a trapping license are prohibited, in addition to the prohibitions in 5 AAC 92.080:

(12) by placing or leaving an active trap or snare set on land that is within 300 feet of the site at which a moose, caribou, or deer was taken using a trap or snare; this prohibition applies for the duration of the regulatory year in which the moose, caribou, or deer was taken using the trap or snare.

Conservation Issues: None identified nor solved by adoption of this proposal.

Enforcement Issues: This proposal is purported to have been submitted in response to previous confusion by enforcement personnel. The State understands local enforcement personnel have received updated training as a result of reported events surrounding this issue. Failure to adopt this proposal is not expected to contribute to continued enforcement issues.

Other Comments: This proposal is likely unnecessary given that if this proposal is not adopted, Federally qualified subsistence users would continue to be required to comply with the state regulations requiring that when a caribou, moose, or deer are harvested incidentally, the trap must be moved at least 300 feet for the remainder of the regulatory year, or risk receiving a state citation. As it is written, this proposal does not stipulate that the trap must be moved off of a main path or trail.
Recommendation: Oppose

WRITTEN PUBLIC COMMENTS

Oppose. There is no evidence that this is a problem in our area. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-82 Executive Summary		
General Description	Proposal WP12-82 requests closing the Federal brown bear season in Unit 26A a month later, changing the season closing from May 31 to June 30 and, in Unit 26B, opening the season six days earlier, changing it from Sept. 1 to Aug. 25. Extending the Federal seasons would align the Federal brown bear harvest seasons with the State seasons in Unit 26A and 26B. *Submitted by the North Slope Subsistence Regional Advisory Council*	
Proposed Regulation	*Unit 26A—1 bear by State registration permit*	*July 1–~~May 31~~* ***June 30***
	Unit 26B—1 bear	*~~Sept. 1~~* ***Aug. 25****–May 31*
	Unit 26 C—1 bear	*Aug. 10–June 30*
OSM Conclusion	**Support**	
North Slope Regional Council Recommendation	**Support** Proposal WP12-82 **with modification** to extend the season in Unit 26B to year-round. The modified regulation should read: *Unit 26A—1 bear by State registration permit* — *July 1–~~May 31~~* ***June 30*** *Unit 26B—1 bear* — *~~Sept. 1~~* ***Jan. 1****–~~May 31~~* ***Dec. 31*** *Unit 26 C—1 bear* — *Aug. 10–June 30*	
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 WP12-82 **with modification**. The department recommends the Federal Subsistence Board use the regulatory language describing the season in Unit 26A as "no closed season" instead of the proposed language of July 1 through June 30 and use the regulatory language describing the season in Unit 26B. *See ADF&G comment at the end of the analysis.*	
Written Public Comments	**None**	

STAFF ANALYSIS
WP12-82

ISSUES

Proposal WP12-82, submitted by the North Slope Subsistence Regional Advisory Council, requests closing the Federal brown bear season in Unit 26A a month later, changing the season closing from May 31 to June 30 and, in Unit 26B, opening the season six days earlier, changing it from Sept. 1 to Aug. 25. Extending the Federal seasons would align the Federal brown bear harvest seasons with the State seasons in Unit 26A and 26B.

DISCUSSION

The proponent is requesting an extension of the brown bear seasons in Unit 26A and 26B to align the Federal brown bear harvest seasons with the State seasons. Alaska Board of Game action in 2010 liberalized the State brown bear hunting seasons (ADF&G 2010), making the State's seasons more liberal than the Federal seasons. Currently, the Federal season in Unit 26A is July 1–May 31. Extending the season to June 30 would provide one additional month to harvest brown bears and would provide a year-round season. The Federal season in Unit 26B currently is Sept. 1–May 31. Opening the season Aug. 25 would provide an additional six days to the harvest season. Aligning the Federal regulations with the State regulations would provide Federally qualified subsistence users the same opportunity to harvest brown bears under Federal regulations as under State regulations.

Existing Federal Regulation

Unit 26 – Brown Bear

Unit 26A—1 bear by State registration permit	*July 1–May 31*
Unit 26B—1 bear	*Sept. 1–May 31*
Unit 26 C—1 bear	*Aug. 10–June 30*

Proposed Federal Regulation

Unit 26 – Brown Bear

Unit 26A—1 bear by State registration permit	*July 1–~~May 31~~* ***June 30***
Unit 26B—1 bear	*~~Sept. 1~~* ***Aug. 25****–May 31*
Unit 26 C—1 bear	*Aug. 10–June 30*

Existing State Regulation

Unit 26 – Brown Bear

26A—1 bear every regulatory year	*No closed season*
26B—1 bear every regulatory year by permit	*Jul. 1 – Dec. 31* *Jan. 1 – Jun. 30*
26B remainder	

Residents– 1 bear every regulatory year	*Sept. 1– May 31*
Non residents – 1 bear every regulatory year by permit	*Sept. 1– May 31*
Unit 26 C—1 bear	*Aug. 10–June 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 70% of Unit 26A, of which the National Petroleum Reserve-Alaska (NPRA), administered by BLM, comprises 91% (63% of total land). The Gates of the Arctic National Park and Preserve consists of approximately 9% (6% of total land) of the Federal public lands along the southeastern boundary of the subunit. Alaska Maritime NWR manages a very small land parcel in the extreme eastern corner of the subunit. In Unit 26B, Federal public lands comprise approximately 30% of lands, of which 76% (23% of total land) are Arctic National Wildlife Refuge, administered by the FWS, 13% (4% of total land) are administered by the BLM, and 10% (3% of total land) are Gates of the Arctic National Park and Preserve, administered by the NPS lands (see **Unit 26 Map).**

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 determination for brown bear in Unit 26.

Regulatory History

The Federal Subsistence Management Program initially adopted the State regulations for harvesting wildlife in 1991. At that time, the brown bear season in Unit 26B was Sept. 1–May 31. The season has remained unchanged in Unit 26B.

In 1992, the Federal Subsistence Board, in a parallel action with the State of Alaska Board of Game, created the Northwestern Brown Bear Management Area, which included Unit 26A. This management area eliminated the need to purchase the $25 resident brown bear tag and replaced it with a no cost subsistence registration permit from ADF&G; eliminated the salvage requirements for hide and skull, thus eliminating the sealing requirement (unless removed from the area); required the salvage of meat; increased the bag limit from one bear every four years to one bear per year; and established a standard season of Sept. 1–May 31.

In its 1992 actions, the Federal Subsistence Board had specifically excluded the summer season to help reduce the potential harvest of female bears. Several years later in 1995, at the request of a North Slope village, the Board adopted a proposal to change the Federal subsistence season to May 1–Oct. 31 (FWS 1995), pointing out that this season change would incorporate virtually all of the reported harvests by North Slope residents.

After the Federal Subsistence Board adopted the summer season, the ADF&G submitted a request for reconsideration of the 1995 action pertaining to expansion of brown bear hunting seasons in Unit 26 (FWS 1996). Harvest information indicated harvest rates were within sustainable levels in Unit 26A, and there was a low level of interest associated with harvesting brown bears in Unit 26 by most subsistence hunters. However, since the reproductive potential of the brown bear population in Unit 26 was considered low at that time, and females are particularly vulnerable to harvest during the summer months, the Federal Subsistence Board recognized that it is inconsistent with current wildlife management practices to allow an open season on brown bears during the summer months. The Federal Subsistence

Board rescinded its regulation for a summer harvest season and reestablished the Federal subsistence brown bear hunting regulations as they existed in the in the 1994/95 regulatory year. From 1996 to 2007 the Federal regulation in Unit 26A was 1 bear by State registration permit during a Sept. 1–May 31 open season.

The State subsistence regulations in Unit 26A in 2006/2007 was for one brown bear every regulatory year from July 1–May 31 (ADF&G 2005). Previously, the State's harvest season had been Aug. 20–May 31. In 2007, the Federal Subsistence Board reassessed the brown bear season and, because the brown bear population appeared to be stable or growing and the concerns about the reproductive potential lessened, the Board expanded the brown bear harvest season in Unit 26A from Sept. 1–May 31 to July 1–May 31. This extension also aligned the Federal season with the State season and provided the Federal subsistence hunter with the same opportunities under Federal regulations as under State regulations (FSB 2007). In October 2010, the Alaska Board of Game adopted new State regulations to expand the brown bear hunting seasons in Unit 26A to July 1–June 31 and Aug. 25–May 31 in Unit 26B (ADF&G 2010).

Biological Background

Densities of brown bears vary widely in Unit 26, with densities highest in the foothills of the Brooks Range and lowest in the northern portion of the unit. Brown bear information is gathered from surveys of other game species, village-based harvest surveys, conversations with knowledgeable local residents, and analysis of harvest data (Carroll 2009). Based on studies in the 1980s, and population density estimates in the early 1990s, the most recent estimate for bears in Unit 26A is 900–1,120 bears. Bear populations were reduced during the 1960s by hunting, but have been stable or increasing since the 1960s. Hunters and pilots indicate that the bear population currently has increased in size (Carroll 2009). The ADF&G management objectives are to maintain a brown bear population of approximately 800 bears or greater in Unit 26A (Carroll 2005).

The most recent population estimate for Unit 26B is 269 brown bears (1.8 bears/100mi^2) and is based on a population estimate conducted during 1999–2003 (Reynolds, ADF&G, unpublished data, cited in Lenart 2007). This is considered a low to moderate density of brown bears for the Arctic. Brown bear densities were at one time suspected to be at artificially high levels near Prudhoe Bay due to the availability of food in dumpsters around developed areas, but the bear population also experienced high postweaning mortality due to human induced mortality and, therefore, brown bear populations near Prudhoe Bay may or may not have been inflated in the area (Lenart 2007).

Most of the brown bear habitat in Unit 26A and 26B is assumed to be undisturbed and has supported a fairly large and growing population of bears. Potential hazards to brown bear habitat include oil, gas, and mineral exploration and development. For part of the year, caribou represent a large food resource available to bears. Also, muskoxen numbers have declined in Unit 26, partly due to bear predation.

Harvest History

Brown bears are predominantly harvested by North Slope Inupiat in late spring when their fur is in prime condition, or late fall when bears are fat. Traditional seasons vary somewhat among North Slope villages, but generally follow this annual pattern of use. Generally, North Slope Inupiat do not actively hunt brown bears. Rather, harvest occurs opportunistically when people encounter brown bears incidentally while hunting for other wildlife or fishing. The brown bear harvest has remained well under the harvestable surplus. Even though the brown bear regulations have been liberalized, the number of bears harvested declined after 1996 because the moose hunt was closed, so there were fewer people traveling to the area to hunt (Carroll 2011, pers.comm.). Unreported harvests of brown bears continue to be a problem in Unit

26A and 26B (Carroll 2005). Subsistence use studies indicate that only one to two bears are harvested by residents in most villages in the region. Nuiqsut and Anaktuvuk Pass residents are the primary users of Unit 26B. Nuiqsut residents had higher brown bear harvests, with an estimated five to ten harvested per year, and Anaktuvuk Pass residents harvest up to five brown bears a year (FWS 1995). Community-based harvest assessment studies determined that a total of approximately 11–12 bears per year were harvested in Unit 26A by residents of Unit 26A villages (Carroll 2005). Even though not all harvested bears are reported, the local unreported harvest does not appear to be at a level that creates a biological problem (Carroll 2005). In Unit 26B, the reported harvest of brown bears in 2004 and 2005 was six and two respectively with a reported harvest ranging from 2–25 bears since 1996. Reported harvests for Unit 262B appear to be within a conservative sustained yield of 5% of the population per year (Lenart 2007).

Effects of Proposal

If adopted, this proposal would close the Federal brown bear season in Unit 26A one month later and open the season in Unit 26B about a week earlier. This action would provide Federal subsistence users who would like to take bears later in the year in Unit 26A and earlier in the year in Unit 26B more opportunity. It would have no effect on other users. Under State regulations subsistence users can already harvest for subsistence use a week earlier in Unit 26B and year-round in most of Unit 26A, except within Gates of the Arctic National Park, and a State registration permit is already required under Federal regulations. Overall, this proposed change would align the Federal and State subsistence brown bear seasons in Unit 26A and 26B.

Although subsistence users already have the opportunity to harvest brown bears during the proposed seasons in most of Unit 26A and in Unit 26B under State regulations, adoption of this proposal would allow for June harvests within Gates of the Arctic National Park for qualified users, which includes residents of Anaktuvuk Pass and Nuiqsut. It is unlikely that adoption of this proposal would greatly increase bear harvest, and brown bear harvest in Unit 26A and 26B is currently within the sustainable harvest level (Carroll 2011, pers. comm.).

OSM CONCLUSION

Support Proposal WP12-82.

Justification

Adoption of Proposal WP12-82 would extend the Federal brown bear seasons in Unit 26A and 26B by closing the season one month later in Unit 26A and providing a year-round season, and opening the season in Unit 26B Aug. 25 instead of Sept. 1. This action would provide Federal subsistence users with more opportunity to harvest brown bears and would align the Federal brown bear seasons with the State brown bear seasons in Unit 26A and 26B. Aligning the Federal regulations with the State regulations would provide Federally qualified subsistence users the same opportunity to harvest brown bears under Federal regulations as under State regulations. Currently, State brown bear seasons are more liberal than the Federal seasons. No conservation concerns are anticipated. Brown bear harvest is currently within the sustainable harvest level.

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NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-82 **with modification** to extend the season in Unit 26B to year-round. The Council sees no conservation concern for Unit 26B brown bear. A proposal is going before the Board of Game in November 2011 for a year-round season in Unit 26B.

The modified regulation should read:

Unit 26A—1 bear by State registration permit	*July 1–~~May 31~~* ***June 30***
Unit 26B—1 bear	*~~Sept. 1~~* ***Jan. 1–~~May 31~~ Dec. 31***
Unit 26 C—1 bear	*Aug. 10–June 30*

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-82: Adjust federal subsistence brown bear hunting season to match state seasons in Units 26A and 26B.

Introduction: This proposal was submitted to align the federal subsistence brown bear hunting seasons with the state brown bear seasons in Units 26A and 26B. The current federal subsistence brown bear hunting seasons is July 1 through May 31 in Units 26A and September 1 through May 31 in 26B. The proposed federal subsistence seasons are July 1 through June 30 for Unit 26A and August 25 through May 31 in 26B.

Impact on Subsistence Users: If adopted as proposed, federally qualified subsistence hunters would be able to hunt during the same season dates as the hunters under state brown bear hunting regulations in Unit 26A, but not in Unit 26B because the state season was recently modified. If the proposal was amended to align with the current state season in Unit 26B, consistency would be achieved and confusion of differing season dates between state and federal subsistence hunting regulations in Unit 26A and 26B would be eliminated.

Opportunity Provided by State: The state brown bear hunting season for Unit 26A is "no closed season" (same as proposed July 1 through June 30 season) with a bag limit of one bear every regulatory year. The state brown bear hunting season for unit 26B is as follows:

> That portion of Unit 26B including the Kadleroshilik River drainage south and east of the Prudhoe Bay Closed Area, and including that portion of the Echooka, Ivishak Lupine, and Ribdon river drainages and the Accomplishment Creek drainage north of a line beginning at 69 degrees 08.97 minutes North latitude, 146 degrees 50.36 minutes West longitude on the divide between the Echooka and Shaviovik river drainages and ending at 68 degrees 35.71 minutes North latitude, 148 degrees 29.64 minutes West longitude, excluding the Accomplishment Creek drainage southwest of a line following the west bank of Accomplishment Creek from 68 degrees 35.71 minutes North latitude, 148 degrees 29.64 minutes West longitude to the confluence of Accomplishment Creek and the Sagavanirktok River at 68 degrees 42.19 minutes North latitude, 148 degrees, 54.47 minutes West longitude, and including that portion of the Sagavanirktok river drainage south of the Prudhoe Bay Closed Area and north of 68 degrees 42.19 minutes North latitude (crossing the Dalton highway near milepost 300), and including that portion of the Kuparuk and Toolik river drainages south of the Prudhoe Bay Closed Area and north of a line at 68 degrees 42.19 minutes, North latitude, excluding tributary drainages flowing into the Kuparuk River north of the confluence of the Kuparuk and Toolik rivers and west of the west bank of the Kuparuk River. RB988 July 1–December 31 or RB989 January 1–June 30, one bear every regulatory year.
>
> Remainder of Unit 26B, September 1–May 31, one bear every regulatory year.

ADF&G Comments on WP12-82
December 5, 2011, Page 1 of 2

Enforcement Issues: Adoption of this proposal should eliminate confusion by federally qualified subsistence users because the state and federal subsistence brown bear hunting seasons will be aligned.

Recommendation: Support with modification. The department recommends the Federal Subsistence Board use the regulatory language describing the season in Unit 26A as "no closed season" instead of the proposed language of July 1 through June 30 and use the regulatory language describing the season in Unit 26B as described above.

WP12-62 Executive Summary	
General Description	Proposal WP12-62 requests a community harvest permit for brown bear hunting in Unit 25D. *Submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*Unit 25D—1 bear* ***every regulatory year or by community harvest permit.***
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-62 **with modification** to eliminate the community harvest provision and increase the harvest limit to two bears every regulatory year. The modified regulation should read: *Unit 25D—~~1~~* ***2*** *bear* ***every regulatory year*** ~~***or by community harvest permit***~~***.***
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposals and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposals. The ISC notes that the Alaska Board of Game will be addressing a similar proposal (# 183) at its March 2012 meeting and the Federal Subsistence Board may want to discuss deferring action on this proposal until after that meeting so that State and Federal regulations might be aligned as a result.
ADF&G Comments	**Defer**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-62

ISSUES

Proposal WP12-62, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests a community harvest permit for brown bear hunting in Unit 25D.

DISCUSSION

The proponent notes that the proposal will have two effects: 1) "It will decrease predator populations that prey on calf moose;" and 2) "It will help the moose population grow to allow for more local harvest and have potential to expand nonlocal participation."

Predator control issues and management fall within the authority of individual land managing agencies. The Board's policy, adopted May 20, 2004 reads as follows:

> As authorized by the Secretaries of Interior and Agriculture [50 CFR Part 100.100 (USDI0) and 36 CFR part 242.10 (USAD)], the Board administers the subsistence taking and uses of fish and wildlife on Federal public lands through regulations that provide for the non-wasteful harvest of fish and wildlife by Federally qualified rural residents, consistent with the maintenance of healthy populations of harvested resources. Such subsistence taking and uses are "…*for direct personal or family consumption*…" (Section 803 of ANILCA). Wildlife management activities on Federal public lands other than the subsistence take and use of fish and wildlife, such as predator control and habitat management, are the responsibility of and remain within the authority of the individual land management agencies.

Existing Federal Regulation

Brown Bear

Unit 25D—1 bear

Proposed Federal Regulation

Brown Bear

Unit 25D—1 bear ***every regulatory year or by community harvest permit***

Extent of Federal Public Lands

Federal public lands affected by this proposal include Yukon Flats National Wildlife Refuge, which comprises approximately 75% of Unit 25D.

Customary and Traditional Use Determination

The customary and traditional use determination for brown bear for Unit 25D is for all rural residents of Unit 25D.

Community Harvest Limits

Current Federal regulations governing community harvests read as follows:

> 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. An animal taken by an individual as part of a community harvest limit counts toward every community member's harvest limit for that species taken under Federal or State regulations, except for wildlife taken under permit for special purposes, including ceremonies and potlatches (36 CFR 242.26(e)(2), 50 CFR 100.26(e)(2)).

Two community harvests are currently allowed under Federal regulations for the community of Lime Village in Unit 19. These regulations allow "no individual harvest limit, but a village harvest quota of 200 caribou," and "no individual harvest limit, but a village harvest quota of 28 bulls [moose]." A community harvest is also allowed under Federal regulations for residents of Anaktuvuk Pass in Units 26A and 26B for "60 sheep, no more than 10 of which may be ewes."

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 2007).

The current population estimate of brown bears in Units 25A, 25B, and 25D is based on the 1993 estimate of approximately 1,200 brown bears (2.4 bears/100 mi^2) (Lenart 2007) and estimated densities and population size slightly varies between the units. In the mountainous portion of Unit 25C, Eagan (1995) (*cited* in Young 2007) determined that there was a medium density (1.3-2.6 bears/100 mi^2).

In northern Alaska, female brown bears do not successfully reproduce until they are older than 5 years (Reynolds 1987). The delay in reproduction, as well as small litter sizes (1.6 cubs/litter), long intervals between successful reproductive events and short potential reproductive periods cause the low rates of successful production in brown bears in northern Alaska (USFWS 1982). In addition, female brown bears exhibit high fidelity to home ranges and little emigration or immigration (Reynolds 1993 *cited* in Lenart 2007). Therefore, brown bears are often managed conservatively.

Brown bears in Unit 25D have been identified as a significant predator on moose calves that contributes to maintaining a low density of moose. In their moose mortality study, Bertram and Vivion (2002) found that predation was responsible for 97% of known calf mortality, with brown bears causing 39% of it, second only to black bear at 45%. As a result, the *Yukon Flats Cooperative Moose Management Plan* (ADF&G 2002) prescribes increasing brown bear harvest.

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 25D, or about 1 bear per 46 mi^2. 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 Alaska Department of Fish and Game management objectives for Unit 25B and Unit 25D brown bear indicate a combined sustainable harvest of 29 bears, with a minimum of 60% males (Lenart 2007).

Harvest History

There are 25 years of data on brown bear harvests from community household surveys for Unit 25D (e.g. Sumida 1988, 1989; Sumida and Andersen 1990; Lenart 2007; Thomas 2008; Young 2007). The ADF&G Community Subsistence Information System contains the following information, summarized in **Table 1**. Stevens Village residents harvested 2 brown bear in 1984; Fort Yukon residents harvested 31 brown bear in 1987; Venetie residents harvested 1 brown bear in 1987; Canyon Village residents harvested 1 brown bear in 1987 and 2 in 1994; and Chalkyitsik residents harvested 1 brown bear in 1994. More recent data combine Units 25B and 25D, summarized in **Table 2**. These data indicate that 37 brown bears were harvest in Units 25B and 25D in 2006-2007; 17 brown bears in 2007–2008; and 22 brown bears in 2008-2009.

Table 1. Brown bear harvests in Unit 25D. Note that these numbers are from household surveys, which are not conducted every year. A lack of data does not imply that no brown bears were taken in any particular year.

Brown Bear Harvest, Unit 25D					
Community	**Year**				
	1984	1985	1987	1993	1994
Stevens Village	2				
Fort Yukon			31		
Venetie			1		
Canyon Village			1		2
Chalkyitsik					1

Current Events

The Alaska Board of Game will address a similar proposal, Proposal 183, at its March 2012 meeting.

Effects of the Proposal

The biological effects of the proposal are difficult to gauge absent specification of community or community harvest limits. Presumably, however, a community harvest permit would decrease brown bear populations in Unit 25D, and possibly assist with increasing moose populations.

OSM CONCLUSION

Oppose Proposal WP12-62.

Table 2. Unit 25B and 25D brown bear mortality (Lenart 2007, Thomas 2006, Young 2007; see staff analysis of WP10-91 Deferred for further details in Unit 25 generally).

Regulatory Year	Unit 25B and 25D		
	Mortality	% Male	Household Survey Data Mortality[a]
1995–1996	2	100	1
1996–1997	4	75	0
1997–1998	0	0	1
1998–1999	2	100	0
1999–2000	6	67	—
2000–2001	1	100	—
2001–2002	1	100	—
2002–2003	11	64	5
2003–2004	2	100	—
2004–2005	3	100	22
2005–2006	1	100	—
2006–2007	—	—	37
2007–2008	—	—	17
2008–2009	—	—	22

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

Justification

Predator control issues and management fall within the authority of individual land managing agencies. The proponent will be provided the procedures for submitting their request to the appropriate agencies involved as required in the Board's Predator Management Policy.

In addition, if the proposal resulted in an increase in the allowable harvest, it would misalign Federal and State regulations and thereby complicate current planning actions that are underway by the Yukon Flats Moose Management Planning Committee.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-62 **with modification** to eliminate the community harvest provision and increase the harvest limit to two bears every regulatory year.

The modified regulation should read:

*Unit 25D— ~~1~~ **2** bear **every regulatory year** ~~**or by community harvest permit**~~.*

The Council finds no conservation concerns and feels that the proposal provides increased subsistence harvest opportunity to the relatively low number of users who utilize this resource.

INTERAGENCY STAFF COMMITTEE COMMENT

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 ISC notes that the Alaska Board of Game will be addressing a similar proposal (# 183) at its March 2012 meeting and the Federal Subsistence Board may want to discuss deferring action on this proposal until after that meeting so that State and Federal regulations might be aligned as a result.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-62: This proposal requests changes to the Unit 25D federal subsistence brown bear hunting bag limits and seeks creation of a federal subsistence community harvest permit hunt.

Introduction: The proponent requests the Federal Subsistence Board develop a community harvest permit for brown bear in Unit 25D. The proponent indicates this proposal was submitted to assist with both the federally qualified subsistence users who utilize brown bear and also assist with decreasing predator populations that prey on moose calves by facilitating brown bear harvest.

Impact on Subsistence Users: Adoption of this proposal would have an unknown impact as few brown bears are harvested by federally qualified subsistence users in Unit 25D.

Opportunity Provided by State: State regulations for Unit 25D brown bear hunting follows:

> Alaskan residents, one bear every regulatory year from July 1 through November 30 or from March 1 through June 30.
>
> Non residents, on bear every regulatory year between September 1 through November 30 or March 1 through June 15. Nonresidents must be accompanied by a guide.

Regulations governing the State of Alaska community harvest permits.

> 5 AAC 92.072. Community subsistence harvest hunt area and permit conditions
>
> (a) The commissioner or the commissioner's designee may, under this section and 5 AAC 92.052, issue a community-based subsistence harvest permit and harvest reports for big game species where the Board of Game (board) has established a community harvest hunt area under (b) of this section and 5 AAC 92.074.
>
> (b) The board will consider proposals to establish community harvest hunt areas during regularly scheduled meetings to consider seasons and bag limits for affected species in a hunt area. Information considered by the board in evaluating the proposed action will include
>
> (1) a geographic description of the hunt area;
>
> (2) the sustainable harvest and current subsistence regulations and findings for the big game population to be harvested;
>
> (3) a custom of community-based harvest and sharing of the wildlife resources harvested in the hunt area; and

(4) other characteristics of harvest practices in the hunt area, including characteristics of the customary and traditional pattern of use found under 5 AAC 99.010(b).

(c) If the board has established a community harvest hunt area for a big game population, residents of the community may elect to participate in a community harvest permit hunt in accordance with the following conditions:

(1) a hunt administrator representing a group of residents may apply to the department for a community harvest permit by identifying the community harvest hunt area and the species to be hunted, and by requesting community harvest reports sufficient to supply the estimated number of individuals who will subscribe to the community harvest permit; the hunt administrator

(A) must record and maintain a record of the names of residents subscribing to the community harvest permit and the residents hunting license number, permanent hunting identification card number, customer service identification number, or birth date for residents under 16 years of age;

(B) must issue harvest reports to hunters who have subscribed to the community harvest permit, but may not issue more individual harvest reports than the sum of the individual bag limits of the number of the residents who have subscribed to the permit;

(C) must request additional harvest reports for a community harvest permit from the department during a hunting season if the number of people subscribing to the hunt exceeds the original estimate;

(D) must collect validated harvest reports from hunters following the take of individual game animals, record harvest information for individual animals taken, and collect biological samples or other information as required by the department for management;

(E) must provide the department with harvest information, including federal subsistence harvest information, within a specified period of time when requested, and a final report of all game taken under the community harvest permit within 15 days of the close of the hunting season or as directed in the permit; and

(F) must make efforts to ensure that the applicable customary and traditional use pattern described by the board, if any, is observed by subscribers including meat sharing; the applicable board finding will be identified on the permit; this provision does not authorize the hunt administrator to deny subscription to any community resident;

(2) a resident of the community who elects to subscribe to a community harvest permit

(A) may not hold a harvest ticket or other state hunt permit for the same species where the bag limit is the same or for fewer animals during the same regulatory year, however a person may hold harvest tickets or permits for same-species hunts in areas with a larger bag limit following the close of the season for the community harvest permit;

(B) may not subscribe to more than one community harvest permit for a species during a regulatory year;

(C) must have in possession when hunting and taking game a community harvest report issued by the hunt administrator for each animal taken;

(D) must validate a community harvest report immediately upon taking an animal; and

(E) must report harvest and surrender validated harvest reports to the hunt administrator within 5 days, or sooner if required by the department, of taking an animal and transporting it to the place of final processing for preparation for human use and provide the hunt administrator with information and biological samples required under terms of the permit;

(F) must, if the community harvest hunt area is under a Tier II permit requirement for the species to be hunted, have received a Tier II permit for that area, species, and regulatory year.

(d) 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 bag limits established for other subsistence harvests for that species in the hunt area. 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.

(e) Establishment of a community harvest hunt area will not constrain nonsubscribing residents of the community 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 eligible to hunt under existing subsistence regulations to subscribe to a community harvest permit.

(f) The department may disapprove an application for a community subsistence harvest permit from a hunt administrator who has previously failed to comply with requirements in (c)(1) of this subsection.

(g) A person may not give or receive a fee for the taking of game or receipt of meat under a community subsistence harvest permit.

(h) In this section, "fee"

(1) means a payment, wage, gift, or other remuneration for services provided while engaged in hunting under a community harvest permit;

(2) does not include reimbursement for actual expenses incurred during the hunting activity within the scope of the community harvest permit, or a non-cash exchange of subsistence-harvested resources.

Pertinent community subsistence harvest State of Alaska regulations:

5AAC 92.074 Community subsistence harvest areas.

(a) The commissioner may issue community subsistence harvest permits for designated big game species in the areas specified in this section.

(b) Chalkyitsik Community Harvest Area for moose: That portion of Unit 25(B), including the drainage of the Salmon Fork River and drainage of the Black River, downstream from Bear Mountain Creek, that portion of Unit 25(D), including the Black River drainage, upstream from Englishshoe Bar, the portion of the Porcupine River drainage from the lower mouth of Curtis Slough upstream to the upper mouth of Rock Slough, and the drainage of the Grass River north of the south bank of the Grass River east of 144ø 15' W. longitude.

(c) Yukon Flats Community Harvest Area for black bears: Includes all of Unit 25(D).

Conservation Issues: Recent department publications combine brown bear population estimates for Unit 25B and D. The Unit 25B and D area is 26,660 square miles and has an estimated brown bear population density of 2.2 bears per 100 square miles with an estimated population of 587 brown bears. The allowable harvest of 29 brown bears between Unit 25B and D represents a conservative sustainable 5% harvest rate.

Other Comments: The state currently holds a negative C&T finding for this species in this subunit. A petition would need to be submitted to the Alaska Board of Game for consideration of a positive finding. The department offers community subsistence harvest permits for black bear in Unit 25D for Yukon Flats Communities but does not currently offer similar permits for brown bear. The Eastern Interior Regional Advisory Council submitted a parallel proposal to the Alaska Board of Game for the March 2012 meeting. In order for the Alaska Board of Game to adopt a subsistence community harvest permit for brown bear in the area, a Customary and Traditional Use finding for Unit 25D communities for brown bear will be required prior to addressing the proposal at hand. Another option could be to increase the harvest limit.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Recommendation: Defer. The department recommends this proposal be deferred until after the Alaska Board of Game evaluates parallel proposal # 183 at the March 2012 meeting.

WP10-104 and WP12-65/66 Executive Summary	
General Description	Deferred Proposal WP10-104 requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd (CCH) be established in Unit 12 beginning in the fall of 2011. The harvest quota would be in accordance with the recommendations of the Draft Chisana Caribou Herd Management Plan (Draft Management Plan), the harvest limit would be one bull, and the hunting season would be September 1 through September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the remainder of the permits would be issued to Alaska residents and nonresidents for a State hunt. *Submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee* Proposal WP12-65 requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan the harvest limit would be one bull and the hunting season would be August 10 through September 30. *Submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee* Proposal WP12-66 requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan. The hunt would be restricted to Federal public lands in Unit 12 that lie east of the Nabesna River and the Nabesna Glacier. The harvest limit would be one bull and the hunting season would be Sept. 1 through Sept. 30. Additionally, the proponent asks that an Alaska National Interest Lands Conservation Act (ANILCA) Section 804 analysis be completed. *Submitted by the Cheesh 'na Tribal Council*
Proposed Regulation	Proposal WP10-104 **Unit 12—Caribou** *Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ~~*The taking of caribou is prohibited on Federal public lands*~~*.* ***1 bull by joint State-Federal drawing permit only***. — ~~*No Federal open season*~~ ***Sept. 1–Sept. 30***

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WP10-104 and WP12-65/66 Executive Summary *(continued)*		
Proposed Regulation (Continued)	Proposal WP12-65 **Unit 12–Caribou**	
	*Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is pro(hibited on Federal public lands~~. **1 bull by Federal registration permit only**.*	*~~No Federal open season~~* ***Aug. 10–Sept. 30***
	Proposal WP12-66 **Unit 12–Caribou**	
	*Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park **that lies west of the Nabesna River and the Nabesna Glacier**~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
	*Unit 12, that portion **east** of the Nabesna River and **the Nabesna Glacier,** ~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— **1 bull by Federal registration permit only**.*	***Sept. 1 –Sept. 30***
OSM Conclusion	**Take no action** Proposals WP 10-104 and WP12-65. **Support** Proposal WP12-66 **with modification** to list the communities allowed to harvest caribou in Unit 12, that portion east of the Nabesna River and the Nabesna Glacier, and lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border: Northway, Mentasta, Tetlin, Tok, and Chisana, and, if Proposal WP12-68 is adopted by the Federal Subsistence Board, Chistochina.	

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WP10-104 and WP12-65/66 Executive Summary *(continued)*	
OSM Conclusion (Continued)	The modified regulation would read: **Unit 12—Caribou** *Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park* ***that lies west of the Nabesna River and the Nabesna Glacier****~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~* — *No Federal open season* *Unit 12, that portion* ***east*** *of the Nabesna River and* ***the Nabesna Glacier,*** *~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and ~~all Federal Public lands~~ south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ***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.*** *Note: Chistochina is included provided the Federal Subsistence Board adopts WP12-68.
Southcentral Regional Council Recommendation	**Oppose** Proposal WP10-104. **Oppose** Proposal WP12-65. **Support** Proposal WP12-66 **with modifications** suggested by the OSM and contingent on the formation of a subcommittee to consist of representatives from the Southcentral Alaska Subsistence Regional Advisory Council, the Eastern Interior Alaska Subsistence Regional Advisory Council, the communities of Chistochina, Mentasta, Northway, and Tetlin, plus three or four additional interested members of the public from the other villages considered or areas between to determine allocation. See OSM Conclusion for regulatory language.
Eastern Interior Regional Council Recommendation	**Take no action** on WP10-104 in favor of WP12-66. **Take no Action** on WP12-65 in favor of WP12-66. **Support** Proposal WP12-66 **with modifications** suggested in the OSM Conclusion. *See OSM Conclusion for the regulation language and the full recommendation following the analysis.*

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WP10-104 and WP12-65/66 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a complete 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. Most of the ISC agrees with the recommendation of the Southcentral Regional Advisory Council to form a working group (which should include residents of the affected rural communities/areas), to address issues pertaining to the distribution of permits for this hunt. However, in regard to the support of the RAC being contingent upon the establishment of a subcommittee/working group, the ISC is mindful of the short time frame for such a group to complete its work before the summer subsistence season (as well as the workload and budget constraints affecting agencies). The Board might, therefore, want to consider an alternative process, in which 1) the NPS develops a permit distribution strategy, in consultation with the affected communities; 2) reviews that strategy with the Southcentral and Eastern Interior Regional Advisory Councils (during their 2012 winter meetings), and then 3) implements a final permit-distribution decision for 2012.
ADF&G Comments	**Support** portions of all four proposals **with modification**. The state recommends following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada as laid out in the management plan and further recommends using a joint state/federal permit to monitor harvest in Alaska. A joint federal/state drawing permit would ensure continued cooperation between state and federal managers who worked together to develop the herd management plan. If the harvest is limited to federal subsistence users only, a registration hunt should be used and the season closed if the quota is met. Based on harvest records since the 1970s, the remote nature (aircraft access only), the likelihood of harvesting the quota is unlikely. A short reporting period should be adequate to ensure overharvest does not occur.
Written Public Comments	**Take no action** on Proposal WP10-104. It is an old proposal, which is now obsolete with the submission of new proposals during this proposal cycle. **Oppose** Proposal WP12-65. **Support** Proposal WP12-66 **as modified** by the OSM staff recommendation with additional modification to also include Tanacross and Nabesna on the list of communities eligible to participate in the hunt.

STAFF ANALYSIS
WP10-104 and WP12-65/66

ISSUES

Deferred Proposal WP10-104, submitted by Leif L. Wilson on behalf of the Upper Tanana/40 Mile Advisory Committee, requests that a joint Federal-State draw permit hunt for the Chisana Caribou Herd (CCH) be established in Unit 12 beginning in the fall of 2011. The harvest quota would be in accordance with the recommendations of the Draft Chisana Caribou Herd Management Plan (Draft Management Plan), the harvest limit would be one bull, and the hunting season would be September 1 through September 30. A portion of the permits would be issued to Federally qualified subsistence hunters for a Federal hunt and the remainder of the permits would be issued to Alaska residents and nonresidents for a State hunt.

Proposal WP12-65, submitted by Terry Brigner on behalf of the Upper Tanana/40 Mile Advisory Committee, requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan the harvest limit would be one bull and the hunting season would be August 10 through September 30.

Proposal WP12-66, submitted by the Cheesh ‘na Tribal Council, requests that a Federal registration hunt for the CCH be established beginning in the fall of 2012. The harvest quota would be in accordance with the recommendations of the Draft Management Plan. The hunt would be restricted to Federal public lands in Unit 12 that lie east of the Nabesna River and the Nabesna Glacier. The harvest limit would be one bull and the hunting season would be Sept. 1 through Sept. 30. Additionally, the proponent asks that an Alaska National Interest Lands Conservation Act (ANILCA) Section 804 analysis be completed.

DISCUSSION

All three proposals request the establishment of a hunt in an area and on a population that is currently closed to all users (hunting opportunity of the CCH was closed in 1994). The Alaska range of the CCH is primarily within the Wrangell-St. Elias National Park and Preserve, in a remote, mountainous location that is difficult to access. The Draft Management Plan recommends a harvestable surplus of 2% of the herd split between Alaska and Yukon Canada. Based on the fall 2010 census, the Alaska portion of the quota (1%) is approximately seven animals, considerably less than the number of Federally qualified users, which includes the residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake. Because of the small harvestable surplus, and the large number of Federally qualified users, it may be that if a harvest opportunity is provided, Federal public lands would remain closed to all but Federally qualified users.

Proposal WP10-104: This proposal was deferred until the 2012 regulatory cycle by the Federal Subsistence Board (Board) during its spring 2010 meeting. The Board decided that it was premature to adopt hunting regulations for the CCH until the Draft Management Plan was finalized and supported by the management agencies involved with the CCH. An approved management plan would establish the biological thresholds (e.g., herd size, sex ratio, cow:calf ratio) needed for evaluating herd stability before a harvest quota could be identified. In addition, a CCH census was scheduled to be completed in October 2010. The Board noted that the census information would allow management biologists to determine if the CCH could sustain a harvest.

Proposal WP12-65: The proponent recommends allowing Federal subsistence users to hunt the CCH for two years. After a two-year test period, they suggest establishing an upper limit on Federal subsistence harvest which they refer to as "Federal subsistence need." This harvest limit would be equivalent to the greater annual harvest of Chisana caribou in the two seasons, the fall of 2012 and the fall of 2013. If the "Federal subsistence need" falls below the recommended harvest allocation as defined in the Draft Management Plan, the remaining animals would be made available for harvest in a State hunt administered by the ADF&G. While the proposal noted a "Federal subsistence need," the Federal Subsistence Board provides for a subsistence priority on Federal public lands (36 CFR 242.10 (d)(6) and 50 CFR 100.10(d)(6)); they do not establish any quantitative measurement of the subsistence resources needed for subsistence harvest. The level of participation in a Federal subsistence hunt is unknown, but the proponent believes that the number of caribou available is likely greater than what is harvested by Federal subsistence users.

Proposal WP12-66: The proponent suggests that the number of permits issued should be equal to 1.5 times the number of animals available for harvest and successful harvests be reported within 3 days of the harvest. The proponent requests that a Section 804 analysis be developed to identify those most dependent on the resource and suggests that a working group could be formed to address allocation of harvest permits. Furthermore, the proponent requests that the land west of the Nabesna River remain closed to harvest in order to avoid incidental harvest of the Mentasta Caribou Herd (MCH). The area proposed in Proposal WP12-66 to be opened—Unit 12, that portion east of the Nabesna River and the Nabesna Glacier—covers the core range. The MCH has experienced a dramatic decline from 2,304 caribou in 1990 to 600 in 1997 (Jenkins 2005). The 2010 census of the MCH herd resulted in a population estimate of 336 animals (Putera 2011). Currently, all harvest of the MCH is closed under both Federal and State regulations.

Existing Federal Regulation

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—The taking of caribou is prohibited on Federal public lands.	*No Federal open season*

Proposed Federal Regulation

Proposal WP10-104

Unit 12—Caribou

Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~*The taking of caribou is prohibited on Federal public lands*~~*.* ***1 bull by joint State-Federal drawing permit only***.	~~*No Federal open season*~~ ***Sept. 1–Sept. 30***

Proposal WP12-65

Unit 12–Caribou	
*Unit 12, that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— ~~The taking of caribou is pro(hibited on Federal public lands~~. **1 bull by Federal registration permit only**.*	*~~No Federal open season~~* ***Aug. 10–Sept. 30***

Proposal WP12-66

Unit 12–Caribou	
*Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park **that lies west of the Nabesna River and the Nabesna Glacier**~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
*Unit 12, that portion **east** of the Nabesna River and **the Nabesna Glacier,** ~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border— **1 bull by Federal registration permit only**.*	***Sept. 1 –Sept. 30***

Existing State Regulation

Unit 12 remainder—Caribou	
Residents Only: One caribou may be taken by registration permit only during a winter season to be announced by emergency order	*Winter season to be announced*
Nonresidents	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12 and consist of Tetlin National Wildlife Refuge lands (approximately 11% of the lands in the Unit) and Wrangell-St. Elias National Park and Preserve lands (approximately 48% of the lands in the Unit) (**Unit 12 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 12, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for caribou in Unit 12. If Proposal WP12-68 is adopted by the Board, then Chistochina residents would be added to the customary and traditional use determination for caribou in Unit 12.

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 has been no legal harvest of Chisana caribou in Alaska since 1994.

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 at this time.

Current Events Involving Species

A draft five-year management plan for the CCH has been developed through a cooperative effort between 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 is expected to be finalized in the fall of 2011. Currently, the Draft Management Plan is providing the framework for monitoring the CCH population and criteria for implementing a hunt. As required by the Draft Management Plan, a census was completed in October of 2010 by the National Park Service and Alaska Department of Fish and Game. In addition to a stable or increasing population trend, the Draft Management Plan requires the observed bull:cow ratio be no be less than 35 bulls per 100 cows any one year and1 the three-year calf:cow ratio be above 15 calves per 100 cows (**Figure 1**). If for any reason an observed Chisana caribou population falls below these guidelines, no harvest will be allowed. The Draft Management Plan calls for a maximum allocation of 2% of the herd if the herd population size indicates a harvest is sustainable. The allocation is to be evenly distributed among Yukon and Alaska. The Draft Management plan further recommends a bull-only harvest to have a minimal impact on the potential herd growth.

In Tok on July 7, 2011, and in Chisana on July 8, 2011, residents of Tok and Chisana noted to OSM staff that an unanticipated effect of excluding residents of communities with customary and traditional use of caribou in Unit 12 from the opportunity to harvest Chisana caribou may be an unnecessary divisiveness between communities. These residents cautioned against excluding any qualified residents from the opportunity to harvest Chisana caribou.

At the meeting in Tok, several points were raised about the applicability of a Section 804 analysis. At the meeting in Chisana, comments were made about recent environmental changes and CCH migratory patterns:

- Given the difficulties accessing the CCH, it is unlikely that there will be any overhunting, even with a limit of seven animals. If a hunter walked to the herd from the community of Chisana, it would take a minimum of a week to hunt a caribou and then pack out harvested meat.

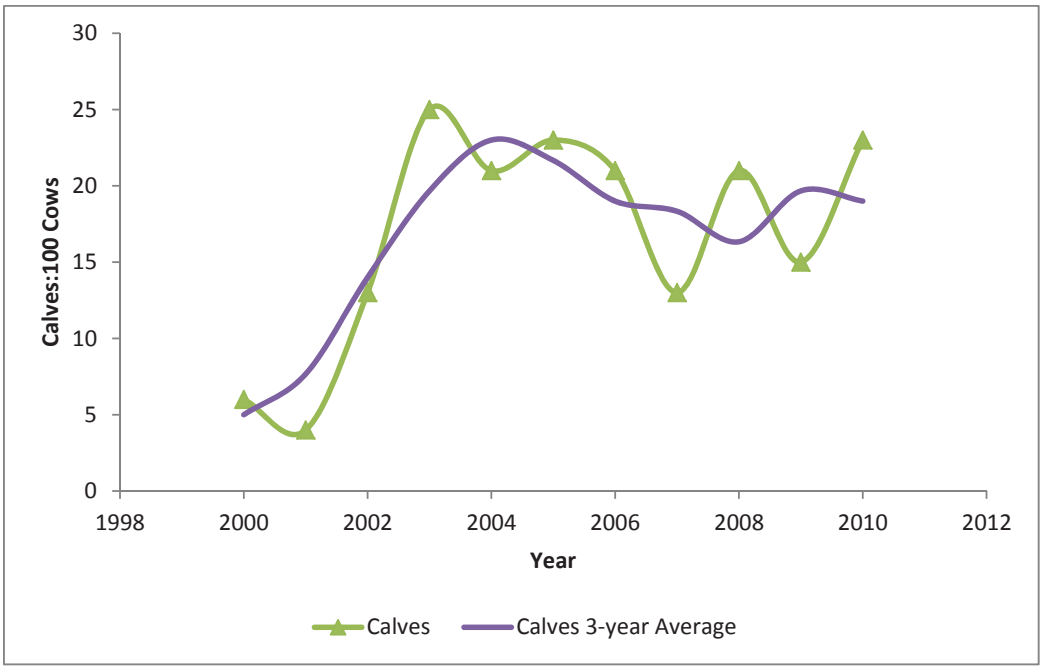

Figure 1. Chisana Caribou calves per 100 cows compared to the 3-year rollling average of calves per 100 cows, 1998 through 2010.

- The least expensive flight to Chisana is on the mail plane from Tok, which costs about $350. Given the costs associate with accessing Chisana caribou, it is unlikely that Federally qualified subsistence users identified under a Section 804 analysis will make the effort to subsistence hunt the CCH; other more readily accessible caribou are available.

- A Section 804 analysis may be premature, without first knowing the level of interest in a CCH hunt.

- Open a general registration hunt first and then, if the quota is reached, an emergency closure would be appropriate. At that point, conduct a Section 804 analysis.

- Most of the CCH hunt has been by nonresidents. On what basis can a Federal subsistence harvest, and an associated Section 804 analysis, be justified?

- The last three winters have been particularly harsh, and the summers have not been productive of good caribou forage. If this pattern continues, a shift in the CCH summer range to areas of better forage may occur.

- The CCH is fairly predictable in its movements. According to one Chisana resident, it would be relatively easy to harvest seven Chisana caribou in one day, once a hunter or group of hunters accessed the herd.

Biological Background

The CCH is a small herd inhabiting east central Alaska and southwest Yukon, Canada. Genetic analysis conducted by Zittlau et al. (2000) indicated that the herd is genetically similar to the woodland caribou

Table 1. Fall sex and age composition of the Chisana Caribou Herd, 1994 - 2010.(Modified from Adams 2007, Bentzen 2008, 2009, Gross 2007 and Putera 2011).

Date	Total Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size[a]
2000	20	6	5	80	15	412	425
2001	23	4	3	79	18	356	375
2002	25	13	10	72	18	258	315
2003[b]	37	25	15	62	23	603	720
2004[b]	38	21				538	
2005[b]	46	23	14	59	27	599	706
2006[b]	48	21				628	
2007[b]	50	13	8	61	31	719	766
2008	44	21	13	60	27	532	
2009	49	15	9	61	30	505	
2010	42	23	14	61	25	622	696

[a] Bases on population mode designed by P. Valkenburg and D. Reed (ADF&G).
[b] Captive rearing efforts. Calf:cow ratios observed during survey are adjusted by extrapolating the calf:cow ratio for the wild population to a total estimate of wild cows and then adding the cows and calves from the captive rearing program.

herds.[1] The CCH was first surveyed in 1977 and has been continually tracked by USGS since 1988. Since continual 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 captivie 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 to be stable, with the herd size ranging from 696 to 766 caribou (**Table 1**). The 3-year average bull:cow ratio of 45:100 is above the minimum 35:100 ratio stated in the Draft Management Plan. The number of calves in the herd has increased since 2009. The 3-year average calf:cow ratio of 20:100 is above the minimum 15:100 ratio set in the Draft Management Plan.

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 (see Proposal WP12-68 for an extended discussion of customary and traditional patterns of caribou use, which includes the CCH,

[1]The CCH is a genetically distinct population. The CCH acts and looks like Yukon woodland caribou, but the herd's classification is ambiguous. In Canada the CCH falls under the classification of woodland caribou while in Alaska the CCH is classified as barren-ground caribou (Richard 2002).

in Unit 12). Although subsistence hunting has declined in recent years, the CCH continues to be an important aspect of Upper Tanana and Ahtna Athabascan culture. Simeone (2006) documented the cultural significance of the CCH by interviewing several key informants. In one such interview, Wilson Justin describes the Chisana caribou as highly prized,

> "*…But it's really, those caribou was really prized by the Indians of Canada all the way over here, it's kind of like a royalty, the royalty of caribou, not any Indian can hunt them, you have to be someone special…The 'alts'e'tnaey have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody… .*"

Although hunting of CCH was closed in Alaska in 1994, First Nation members continued to harvest from the CCH in Yukon through the 1990's. After 2001, Yukon First Nation members voluntarily stopped harvesting Chisana caribou.

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). It is unknown if the harvests by local subsistence users were guided or non-guided hunts.

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 Chisana Caribou Herd in Unit 12. Recommended harvest allocations are to be determined based on several biological parameters addressed in the Draft Management Plan. Based on the fall 2010 census, the current harvest allocation would be 14 caribou; 7 for Alaska and 7 for the Yukon. The customary and traditional use determination for caribou in Unit 12 includes the communities of Chisana, Nabesna, Northway, Tanacross, Tetlin, and Tok in Unit 12, Dot Lake and Healy Lake in Unit 20, and Mentasta Lake in Unit 13. If Proposal WP12-68 is adopted by the Board, then Chistochina residents would be added to the customary and traditional use determination for caribou in Unit 12. In that case, this 804 analysis would determine which residents of ten 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, 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 positive customary and traditional use determination for caribou in Unit 12. Chistochina residents are included in the discussion for the reason described above. If the Board does not adopt WP12-68, then Chistochina residents would be excluded from eligibility.

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

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: the hunt for Chisana caribou has been closed since 1994; presumably, all rural residents with customary and traditional use determinations for caribou in Unit 12 have 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 WP12-68, 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.

There is little evidence to suggest that residents of Nabesna, Tanacross, Dot Lake and Healy Lake have a customary and direct dependence on Chisana caribou. Research has 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 (Bentzen 2011, pers. comm.).

Based on the available evidence, it appears that residents of six of ten communities exhibit a customary and direct dependence on Chisana caribou, including Tok, Northway, Chistochina, Chisana, Mentasta, and Tetlin. 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 "customary and direct dependence" criterion. Additional information from the Eastern Interior Regional Advisory Council and the public is sought regarding whether or not residents of Nabesna, Tanacross, Dot Lake and Healy Lake have a customary and direct dependence on the Chisana Caribou Herd.

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; Chistochina is the exception, pending Board determination.[2]

From the point of view of geographic proximity, Chisana is closest to the CCH area. If geographic proximity is the only measure of local residency, then only Chisana residents clearly qualify as local

[2]A customary and traditional use determination is based on a holistic assessment of eight factors; see Proposal WP12-68 for an application. 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.

residents. Residents of Dot Lake and Healy Lake, by contrast, are at the greatest distance from the CCH area and could be excluded from local residency.

Based on the available evidence, it appears that residents of eight communities exhibit "local residency" if the criteria is geographic proximity. These communities include Chisana, Nabesna, Northway, Tanacross, Tetlin, Tok, Mentasta Lake and Chistochina (pending Board adoption of WP12-68). 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 "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 under consideration 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 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, Tanacros), 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. These communities also have other subsistence resources available to them, such as moose, sheep, and bear.

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 (see WP12-68 for references). As noted in WP12-68, 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 CCH 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 CHH currently reside in Chisana, Chistochina, Mentasta and Tok. For these guides, the CCH 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 subject to this 804 analysis 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, the Board may consider 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, 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.

Summary of 804 Analysis

The Section 804(1) analysis determines that residents of Chisana, Chistochina, Northway, Mentasta, Tetlin, and Tok exhibit the greatest customary and direct dependency on the CCH. The Section 804(2) analysis makes the determination that Chisana, Chistochina, Nabesna, Northway, Tanacross, Tetlin, Tok, and Mentasta Lake and 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, Northway, Mentasta, Tetlin, and Tok, and that these communities should be granted a subsistence priority over Dot Lake, Healy Lake, Nabesna, and Tanacross.

On balance, the Section 804 Analysis determines that Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok and should be provided a subsistence priority over Dot Lake, Healy Lake, Nabesna and Tanacross.

The decision of how to apportion the opportunity for a subsistence harvest of seven caribou over residents of six communities will be further discussed by the appropriate Councils. Such discussion may also provide information for including residents who are not affiliated with any community but have customary and traditional use of caribou in Unit 12.

Effects of the Proposal

If adopted, these proposals would establish a hunt in an area and on a population that is currently closed to all harvest (hunting opportunity of the Chisana Caribou Herd was closed in 1994). The Draft Management Plan establishes the harvestable quota; this quota allows for a conservative harvest as long as the population remains stable and the bull:cow and calf:cow ratios are above the minimum requirements. The 2010 Census confirmed that the CCH is above the Draft Management Plan thresholds. If a hunt opportunity is adopted, the Federal Subsistence Board will need to consider whether or not the closure should be lifted to all users, or lifted only for Federally qualified users. If the closure is lifted for all users, both Federally qualified subsistence users and non-Federally qualified users could harvest Chisana caribou. The hunt managers would be tasked with developing an allocation system to limit the number of hunt permits.

If the closure is lifted for Federally qualified users only, the harvestable surplus of the CCH in Unit 12 is small and the number of Federally qualified users, as identified by the customary and traditional use determination, far exceeds that small number. Whenever a proposal to change Federal regulations seeks a prioritization for use of a subsistence resource among rural residents having customary and traditional use of that resource, an analysis must be done in accordance with Section 804 of ANILCA.

If a Federal subsistence hunt of the CCH is established, the Wrangell-St. Elias National Park and Preserve superintendent would be the CCH hunt manager. The authority to manage the hunt could be granted with a letter of delegation from the Federal Subsistence Board. Under 36 CFR 242.10 (d)(6) and 50 CFR

100.10 (d)(6), the Federal Subsistence Board has the authority to delegate authority to modify or restrict harvest limits, season dates, and methods and means.

The Section 804 analysis offers a rationale to provide residents of six of ten communities the opportunity to subsistence harvest Chisana caribou. These communities include Northway, Mentasta, Tetlin, Chistochina, Tok, and Chisana. If this proposal is adopted, precisely how these six communities would allocate seven caribou would have to be determined.

Excluding residents of communities with customary and traditional use for caribou in Unit 12 from hunting Chisana caribou may result in divisiveness between communities. In discussions with OSM staff about a Section 804 analysis, residents of Tok and Chisana expressed concern about this possible effect.

While Proposals WP12-65 and WP12-66 would provide for a Federal subsistence hunt and have equal merit, Proposal WP12-66 limits the hunt area to east of the Nabesna River and Nabesna Glacier in Unit 12. Historically this area has been the core range of the CCH. Restricting the hunt area should protect the Mentasta Caribou herd while having minimal impact to subsistence hunters wanting to harvest a caribou from the CCH.

OSM CONCLUSION

Take no action Proposals WP 10-104 and WP12-65.

Support Proposal WP12-66 **with modification** to list the communities allowed to harvest caribou in Unit 12, that portion east of the Nabesna River and the Nabesna Glacier, and lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border: Northway, Mentasta, Tetlin, Tok, and Chisana, and, if Proposal WP12-68 is adopted by the Federal Subsistence Board, Chistochina. If a Federal subsistence hunt of the CCH is established, it is recommended that the authority to manage the hunt be granted to the inseason manager by a letter of delegation from the Federal Subsistence Board. Under 36 CFR 242.10 (d)(6) and 50 CFR 100.10 (d)(6), the Federal Subsistence Board may delegate authority to establish the harvest quota, the number of permits issued, as well as the season opening and closing dates.

The modified regulation would read:

Unit 12—Caribou	
Unit 12, that portion ~~of the Nabesna River drainage~~ within the Wrangell-St. Elias National Park ***that lies west of the Nabesna River and the Nabesna Glacier****~~, and Preserve and all Federal Public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border~~*	*No Federal open season*
Unit 12, that portion ***east*** *of the Nabesna River and* ***the Nabesna Glacier,*** *~~drainage within the Wrangell-St. Elias National Park and Preserve~~ and ~~all Federal Public lands~~ south of the Winter Trail running southeast from Pickerel Lake to the Canadian border—* ***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.	

*Note: Chistochina is included provided the Federal Subsistence Board adopts WP12-68.

Justification

The Alaska range of the Chisana Caribou Herd is primarily within the Wrangell-St. Elias National Park and Preserve. Federal subsistence regulations (36 CFR 100.10 (4)(v) and 50 CFR 100.10 (4)(v)) mandate the taking of fish and wildlife on Federal public lands for subsistence uses shall be given priority over the taking of fish and wildlife for other purposes. The most recent census indicates that CCH could sustain a small harvest. While Proposals WP12-65 and WP12-66 would provide for a Federal subsistence hunt and have merit, Proposal WP12-66 supports a more conservative approach. Historically, very few Chisana caribou have migrated west of the Nabesna River and Nabesna Glacier in Unit 12. Restricting the hunt to east of the Nabesna River and Nabesna Glacier will protect the Mentasta Caribou herd with minimal impact to subsistence hunters wanting to harvest a caribou from the CCH. In addition, Proposal WP12-66 suggests a shorter hunting season. Since no harvest from the CCH has occurred since 1994, a cautious approach is warranted. If this time period proves to be too conservative, a proposal lengthening the hunting season could be submitted to the Office of Subsistence Management in the future. The Section 804 analysis offers a rationale to provide residents of Chisana, Chistochina, Mentasta, Northway, Tetlin, and Tok a subsistence priority over residents of Dot Lake, Healy Lake, Nabesna and Tanacross (Chistochina would be included only if Proposal WP12-68 is adopted by the Board). The Eastern Interior Regional Advisory Council, the Southcentral Regional Advisory Council, and public review may bring more information forward for consideration.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Oppose Proposal WP10-104. The Council continues to have the concerns with this deferred proposal that it identified when originally considered. The Council feels that the proposal is detrimental to subsistence users and that there is not an adequate harvestable surplus for a joint hunt.

Oppose Proposal WP12-65. The Council finds that this proposal did not address its recommendations for opening this hunt.

Support Proposal WP12-66 **with modifications** suggested by the OSM and contingent on the formation of a subcommittee to consist of representatives from the Southcentral Alaska Subsistence Regional Advisory Council, the Eastern Interior Alaska Subsistence Regional Advisory Council, the communities of Chistochina, Mentasta, Northway, and Tetlin, plus three or four additional interested members of the public from the other villages considered or areas between to determine allocation.

Eastern Interior Subsistence Regional Advisory Council

Take no action on WP10-104 in favor of WP12-66.

Take no Action on WP12-65 in favor of WP12-66.

Support Proposal WP12-66 **with modification** to establish a Federal registration hunt for the Chisana Caribou Herd beginning fall 2012 with a harvest quota in accordance with the Chisana Caribou Draft Management Plan with a harvest limit of one bull between 9/1 and 9/30 subject to additional ANILCA Section 804 analysis for the inclusion of the communities of Nabesna and Tanacross, as modified by the OSM (see the OSM Conclusion for the modified regulation) with the expectation that the Wrangell-St. Elias superintendent would be delegated the authority to:

- Announce the harvest quota, number of permits to be issued, and the reporting period;
- Open the season;
- Close the season, in consultation with the Alaska Department of Fish and Game, Tetlin National Wildlife Refuge, and the chairs of the Eastern Interior and Southcentral Alaska Subsistence Regional Advisory Councils, by local announcement when the quota has been taken;
- And provide the two Councils with a hunt report at their Winter 2013 meetings.

The Council finds the initial Section 804 analysis well done and recognizes that the proposal reflects the extensive efforts of many contributors. The Council feels that, while the harvestable surplus is small, it should not pose a conservation concern with good in-season management. The Council notes that the remoteness of the hunt area will limit access, but that the proposal will provide increased subsistence opportunity for some.

WRITTEN PUBLIC COMMENTS

Wrangell-St. Elias National Park Subsistence Resource Commission

T**ake no action** on Proposal WP10-104. It is an old proposal, which is now obsolete with the submission of new proposals during this proposal cycle.

Oppose Proposal WP12-65, preferring the provisions of WP12-66.

Support Proposal WP12-66 **as modified** by the OSM staff recommendation with additional modification to also include Tanacross and Nabesna on the list of communities eligible to participate in the hunt. There is not a conservation concern with establishing a hunt that is consistent with the provisions of the Chisana Caribou Herd Management Plan. Nabesna is one of the closest communities to the range of the herd, and Tanacross residents have ties to the other communities identified in the 804 Analysis. Both Nabesna and Tanacross should also be included.

INTERAGENCY STAFF COMMITTEE COMMENT

The Interagency Staff Committee found the staff analysis to be a complete 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.

Most of the ISC agrees with the recommendation of the Southcentral Regional Advisory Council to form a working group (which should include residents of the affected rural communities/areas), to address issues pertaining to the distribution of permits for this hunt. However, in regard to the support of the RAC being contingent upon the establishment of a subcommittee/working group, the ISC is mindful of the short time frame for such a group to complete its work before the summer subsistence season (as well as the workload and budget constraints affecting agencies). The Board might, therefore, want to consider an alternative process, in which 1) the NPS develops a permit distribution strategy, in consultation with the affected communities; 2) reviews that strategy with the Southcentral and Eastern Interior Regional Advisory Councils (during their 2012 winter meetings), and then 3) implements a final permit-distribution decision for 2012.

ADF&G Comments on WP12- 65, 66, and WP10-104
11 Nov, 2011; Page 1 of 2

Alaska Department of Fish and Game
Comments to Regional Advisory Council

Wildlife Proposals WP12- 65, 66, and Deferred WP10-104: Chisana Caribou

This group of proposals request different variations of allowing limited harvest of caribou from the Chisana herd.

WP12-65: Requests that in Unit 12 – that portion of the Nabesna River drainage within the Wrangell-St. Elias National Park and Preserve and all Federal public lands south of the Winter Trail running southeast from Pickerel Lake to the Canadian border – the bag limit be 1 bull by Federal registration permit only. The proposal recommends the hunt be managed in accordance with the recommendations in the Chisana Herd Management Plan (Plan). The proposal requests closure of the hunt to non-federally qualified hunters.
Open Season – Aug. 10 – Sept 30

The Management Plan for the Chisana Caribou sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

WP12-66: Requests approval of a federal subsistence caribou hunt targeting the Chisana caribou herd in 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 Canadian border, with the bag limit of one bull by federal Registration permit. This proposal also request no federal open season in that portion of Unit 12 within the Wrangell-St. Elias National Park that lies west of the Nabesna River and Nabesna Glacier. The proposal requests total closure to non-federally qualified hunters until federal subsistence user needs are identified and a quantifiable harvest amount is produced to determine if the federal subsistence priory is being met (at least a three year process).

Deferred Wildlife Proposal WP10-104: Establishes a joint federal/state drawing permit hunt for the Chisana caribou herd starting fall 2011, following recommendations in the draft Management Plan for the Chisana Caribou, 2010-2015, released April 22, 2010, for public review. The management plans sets guidelines for opening a limited hunt on the herd while protecting the herd from overharvest.

Introduction: In the 1980s and early 1990s, an average of 29 Chisana caribou were harvested annually, with about 60% of the harvest taken by Alaska residents. Following a decline in the herd in the early 1990s, hunting in Alaska and Canada was stopped. Between 2003 and 2006, a captive rearing program was conducted by the Yukon Department of Environment which successfully increased the number of calves recruited into the population during the recovery effort. From 2004 through 2008, the population has been stable and is estimated at 700-800 caribou.

The Chisana Caribou herd management plan, drafted by Yukon Department of Environment, White River First Nation, Canadian Wildlife Service, National Park Service (Wrangell-St. Elias), US Fish and Wildlife Service, and the Alaska Department of Fish and Game was recently finalized.

Impact on Subsistence Users: Access to the Chisana caribou herd is difficult and is mostly limited to aircraft. Harvests by federally-qualified subsistence users in Unit 12 averaged fewer than 2 caribou between 1981-1983 and 1990-1993. Adoption of WP12-65 or 66 may provide a few federal subsistence hunters the opportunity to harvest a bull caribou from the Chisana herd. In the event the number of communities eligible to harvest Chisana caribou exceeds the harvest limit, qualifying communities would experience a diminished opportunity.

Opportunity Provided by State: State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Hwy (Tok Cutoff) and have not provided any opportunity for harvest of Chisana caribou since 1993.

Conservation Issues: The Chisana caribou management plan recommends a 2% bulls only harvest if the herd remains increasing or stable, the bull/cow ratio does not fall below 35/100, and calf recruitment remains above 15 calves/100 cows over a three year average. It is unlikely a limited harvest would have any negative impact on the herd.

Enforcement Issues: A drawing hunt for both federally qualified and non-federally qualified users would have few enforcement issues. If the Federal Subsistence Board chooses to limit this hunt to federally qualified users, all enforcement efforts would be the responsibility of the respective land managers.

Other Comments: The guidelines set forth for a harvest in the management plan are based on the 2010 census in which the herd met the required population level, bull/cow, and calf cow ratios.

Recommendation: Support portions of all four proposals **with modification**. The state recommends following the guidelines for a limited harvest of Chisana caribou shared between Alaska and Canada as laid out in the management plan and further recommends using a joint state/federal permit to monitor harvest in Alaska. A joint federal/state drawing permit would ensure continued cooperation between state and federal managers who worked together to develop the herd management plan.

If the harvest is limited to federal subsistence users only, a registration hunt should be used and the season closed if the quota is met. Based on harvest records since the 1970s, the remote nature (aircraft access only), the likelihood of harvesting the quota is unlikely. A short reporting period should be adequate to ensure overharvest does not occur.

WP12-68 Executive Summary	
General Description	Proposal WP12-68 requests the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination. *Submitted by the Cheesh'na Tribal Council*
Proposed Regulation	**Customary and Traditional Use Determination—Unit 12—Caribou** *Rural residents of Unit 12,* ***Chistochina****, Dot Lake, Healy Lake, and Mentasta Lake.*
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP12-68

ISSUES

Proposal WP12-68, submitted by the Cheesh'na Tribal Council, requests the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination.

DISCUSSION

Chistochina is located in Unit 13C just outside the border of Unit 12. Chistochina residents already have a positive customary and traditional use determination for moose, brown bear, and sheep in Unit 12. Mentasta Lake in Unit 13C also has a positive customary and traditional use determination in Unit 12 for caribou. The Cheesh'na Tribal Council requests that Chistochina should be added to the list of communities with positive customary and traditional use determination for caribou in Unit 12, to be consistent with Mentasta Lake. Chistochina already has a positive customary and traditional use determination for caribou in Unit 13.

The proponent states that customary and traditional use determinations made by the Alaska State Board of Game were originally based on herds rather than Game Management Units. Initial customary and traditional use determinations for caribou under Federal Subsistence Management regulations for Unit 12 were adopted from the State for Nelchina and Fortymile herds, but not for the Chisana Caribou Herd. Current unit specific Federal customary and traditional use determinations for caribou are based on species not herd due to the migratory nature of caribou.

Existing Federal Regulation

Customary and Traditional Use Determination—Unit 12—Caribou

Rural residents of Units 12, Dot Lake, Healy Lake, and Mentasta Lake.

Proposed Federal Regulation

Customary and Traditional Use Determination—Unit 12—Caribou

*Rural residents of Unit 12, **Chistochina**, Dot Lake, Healy Lake, and Mentasta Lake.*

Extent of Federal Public Lands

Federal public lands comprise approximately 58% of Unit 12 and consist of 47% National Park Service lands managed by Wrangell-St. Elias National Park and Preserve and 11% U.S. Fish and Wildlife Service lands managed by Tetlin National Wildlife Refuge (**Unit 12 Map**).

Regulatory History

In 1996, the Federal Subsistence Board deferred Proposals 56 and 57 that requested expanding the customary and traditional use determinations for caribou in Unit 12; however, these proposed customary and traditional use determinations were based on herds rather than units and councils requested that the Federal Subsistence Management Program make customary and traditional use determinations by unit.

Chistochina's uses of caribou were reviewed in these analyses (FSB 1996:20–28). In 1997, the Federal Subsistence Board addressed eight proposals in a combined analysis, Proposal 24 (FSB 1997:80–98). The Board made customary and traditional use determinations for caribou in Unit 12 to include a few communities outside of Unit 12, including Dot Lake in Unit 20 and Mentasta Lake in Unit 13 (62 FR 29021 May 29,1997) and Healy Lake in Unit 20 (63 FR 35338 June 29, 1998). Since 1998, there have been no additional customary and traditional determinations for caribou in Unit 12.

Community Characteristics

The village of Chistochina began as an Ahtna fish camp. In 1897, the access road to the village became part of the Valdez-Eagle Trail, built by miners during the gold rush to the Eagle area. The road was then used in the early twentieth century for the construction of U.S. Army Signal Corps telegraph lines from Valdez to Eagle. Gold was mined along the upper Chistochina River and its runoff creeks. The area was later settled by homesteaders, but has remained a traditional Native village. The Federally recognized Cheesh-na Tribe is located in the community (DCRA 2011). The 2000 U.S. census indicates that 93 people live in Chistochina (U.S. Census 2000).

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)).

Historically, members of the Upper-Chisana-Upper Nabesna band occupied the north area of the Wrangell-St. Elias Mountains, hunted caribou in the Nutzotin and Mentasta Mountains, and hunted and trapped in the basins of several rivers, including the White, Nabesna, and Chisana Rivers. With a

shift to village life in the late-nineteenth and early twentieth centuries, Upper Chisana-Upper Nabesna band members moved to Northway, Mentasta, and Chistochina (Haynes and Simeone 2007:10) and to Tetlin (Guédon 1974), where their descendants continue to live. This shift was accompanied by other changes, occasioned by the influx of gold miners in the area. Athabascan residents supplied fish and game to mining camps and hauled freight for cash, mixing subsistence activities with the emerging market economy. Later changes were brought about by World War II and the development of a road system in the area. Despite all of the changes, a mixed economy continues to characterize the region; an important component of this economy is a reliance on subsistence-caught food (Guédon 1974; Reckord 1983b).

Documentary evidence demonstrates that members of the Upper Chisana-Upper Nabesna band hunted caribou in what is now Unit 12 (**Map 1**). Archaeological evidence from nineteenth century sites shows high use of caribou. At Paxson Lake, for example, at a site inhabited between 1850 and 1860, 99 percent of recovered bones were from caribou (Ketz 1983). Eighteenth and nineteenth century traveler's accounts also indicate local dependence on caribou (e.g. Grinev 1993; Wrangell [1839] 1980). Wrangell noted that the main activity of local peoples was hunting caribou. In the spring, hunters used fences to guide caribou into areas where they could be killed. These harvest techniques are thought to indicate periods of caribou abundance (Rohn 1900; Skoog 1968). In the fall, hunters drove caribou into lakes and ponds and speared them from canoes. "The existence of the tribe depends on the size of the hunt," Wrangell noted, "for it depends on the animal for food and clothing."

Early and mid-twentieth century descriptions indicate a continued dependence on caribou (Case 1986; Guédon 1974; McKennan 1959; Mishler and Simeone 2006). Robert McKennan, who visited the area on the eastern side of what became Wrangell-St.Elias National Park in 1929–1930, described abundant caribou around Chisana. He described groups of caribou in the area containing as many as 2,000 animals. McKennan noted the following:

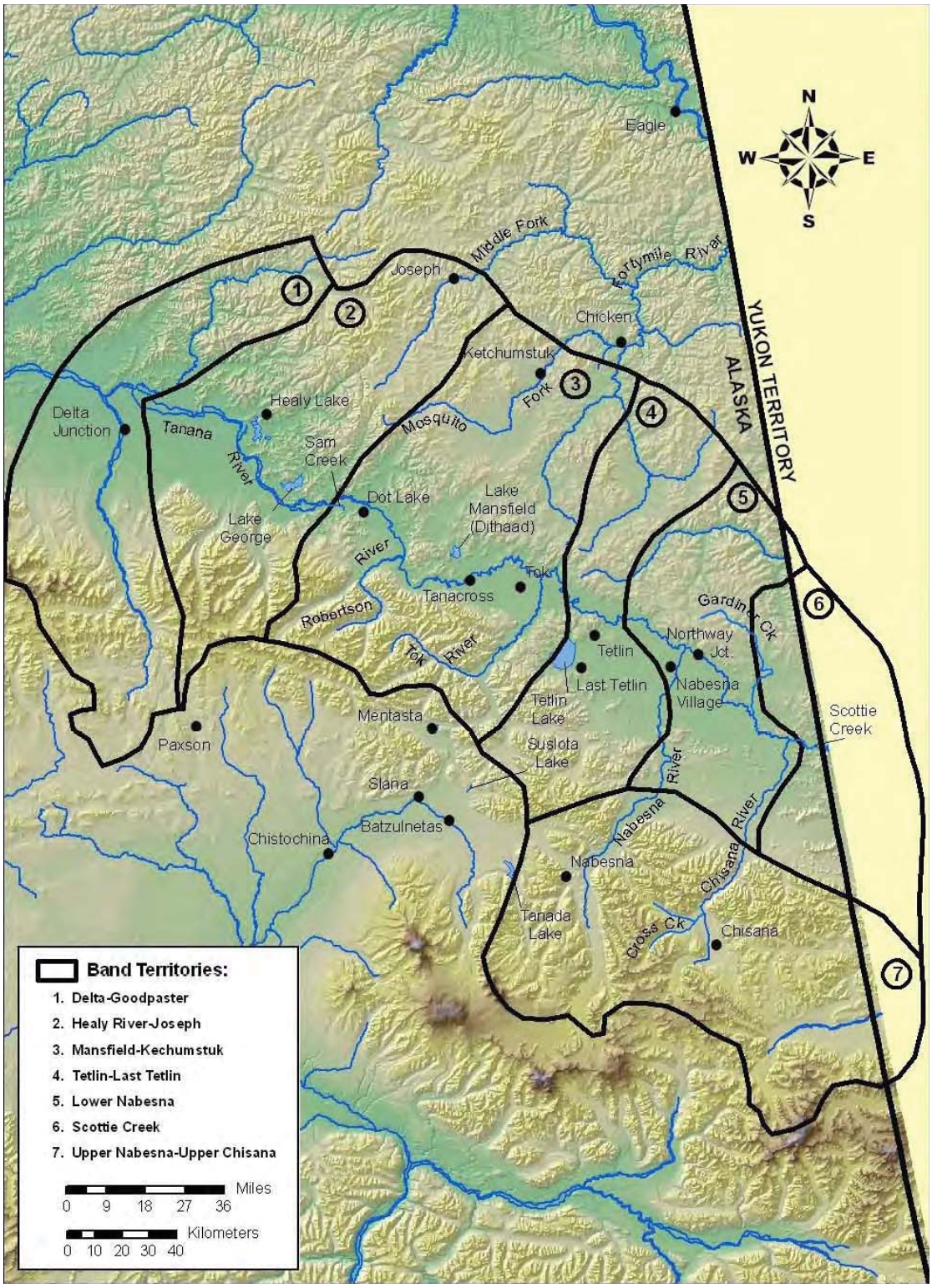
> The economic life of the Upper Tanana centers around the caribou. Not only does the animal constitute the source of food for the natives and their dogs, but it also supplies the material for their clothing, shelters and boots as well as netting for their snowshoes and babiche and sinew for their snares, cords and lashings (McKennan 1959:47).

In reconstructing the historic lifeways of the Lower and Upper Ahtna, who had close ties with Upper Tanana people, de Laguna and McKennan (1981:648) state that:

> While there were caribou in the Klutina area, and probably elsewhere in Lower Ahtna country where they are no longer, the Middle and Upper Ahtna were able to expoit part of the great Yukon-Tanana herd, which occasionally came as far south as Copper Center. Mentasta Ahtna often joined Upper Tanana relatives to work the profitable caribou fence at Ketchumstuk on the upper Tanana drainage.

Similarly, Guédon, who conducted anthropological fieldwork among the Upper Tanana in the early 1970s, described Upper Tanana seasonal rounds for several groups (Last Tetlin, Tetlin, Nabesna, Upper Nabesna-Chisana, Mansfield, Ketchumstuk). Her descriptions (Guédon 1974:38–52) include opportunistic hunting of caribou throughout the year, with concentrated effort at times of migration in the fall (October–November) and spring (April, May, June).

Linguist James Kari (1986) translated and compiled stories from Upper Tanana and Ahtna elders, including stories about the importance of caribou. Fred John, an Upper Ahtna elder, described his childhood after his father had died and his mother provided for the family: "Then, there during the winter,



MAP 1. Upper Tanana region: band territories and villages (Haynes and Simeone 2007:9).

mother set snares for caribou. Caribou would come into the area and she would snare caribou…" (Kari 1986:128).

Adam Sanford, an Upper Ahtna elder, described the annual round of resource use in the Chistochina area, and a specific journey from the mouth of the Sanford River up to the Sanford Glacier and north, on the eastern slopes of Mount Sanford, and then back to the Copper River, "…then we would go up into the country for sheep and moose and caribou." Sanford, who may have been describing Chisana caribou, later noted that

> …not much moose (around) that time…There were only caribou. The next place upriver, 'Creek that has no water', we came back that far. There then, then caribou, we came back among the caribou. There were lots of caribou, summer caribou (Kari 1986:164–165).

In interviews with Ahtna and Upper Tanana elders concerning land use in the area done in preparation for the over-the-horizon backscatter radar system installation by the U.S. Air Force, a number of references are made to historic caribou and caribou hunting. In one interview, Katie John, an Upper Ahtna elder, described the historic seasonal round:

> …Then they move out around September. Then they go out get moose, caribou, sheep, bear, marmot, porcupine, and they all dry, everything they dry, smoke it with the fire, no sun dry. The don't sue sun too much for drying things. The meat they put it all away…they get those birch bark and they gut in inside and they sew it together and they make package. And then they bring it back home when they move back and they just bring it back like that and they put it in the cache (Katie John, in Ahtna 1988:2).

Recent oral histories also demonstrate the significance of caribou in the area of Unit 12 in the first half of the twentieth century. William Simeone (2006:7–12) interviewed a number of residents in the area in 2004, and cites interviews of area residents conducted by other researchers. Robert Marshall, for example, who lived in the 1930s around Lower Tonsina, "described a caribou migration route that took the caribou across the Copper River in the vicinity of Lower Tonsina and Kenny Lake, passed Tonsina Mountain, 'up top the Klutina Glacier,' to Tolsona Lake and on to the calving grounds at the head of the Nelchina River." Simeone notes that Virginia Pete, "whose family hunted and trapped in the vicinity of Crosswind Lake," recalled abundant caribou: her family "used to see it on the lake [Crosswind Lake] thousands of them we see when we travel with dog team" (Simeone 2006:7–8).

In addition to archaeological, historical and contemporary evidence, linguists have documented the complex set of terms used to refer to caribou (Kari 1990), which indicates the importance of caribou in local culture. Ahtna terms distinguish between lead caribou, baby caribou, bull caribou, calf caribou; caribou during different seasons; caribou that do not migrate; medium sized caribou; rutting caribou; young male caribou; and caribou without neck hair, among others.

The literature shows that caribou were part of a larger Athabascan reliance on a diversity of fish and game species. These included salmon, moose, black bear, arctic hare, Dall sheep, mountain goat, beaver, ground squirrel, and various species of birds, as well as a variety of furbearers such as marten, ermine, mink, river otter, and wolverine (Reckord 1983b:25).

In her study of wild resource use in Northway, which included data on hunting between 1920–1960, Martha Case (1986:28–29) notes the following:

> From September until later in the fall (November) when the Fortymile caribou herd passed through the lower Chisana drainage heading southeast into Canada, concerted caribou hunting took place, and again members of the Chisana band came down to Scottie Creek to hunt. Members of the Old Nabesna band moved north into the Ladue River hills to camp and hunt caribou. Caribou was a dietary mainstay, contributing, according to one respondent, the same amount to the diet as moose. McKennan (1959:32, 47) observed that caribou constituted a greater proportion of the diet than moose in 1929–30.

In 2004, William Simeone (2006) interviewed Wilson Justin (currently tribal administrator for the Cheesh'na Tribal Council) about the Chisana Caribou Herd (**Map 2**). Justin had grown up and worked as a second generation hunting guide in the area. He described the Chisana Herd and his clan's—the 'Alts'e'tnaey clan's—close relationship with the caribou.

> Those caribou belong to the 'alts'e'tnaey clan. We are interested in their well-being and we need to be told where the caribou are and that's all we or the managers need to know. The 'alts'e'tnaey have a relationship with those caribou. No one should kill those caribou without our permission and in addition to that you have to be somebody to go out and kill those animals. Cannot just be anybody (Simeone 2006:11).

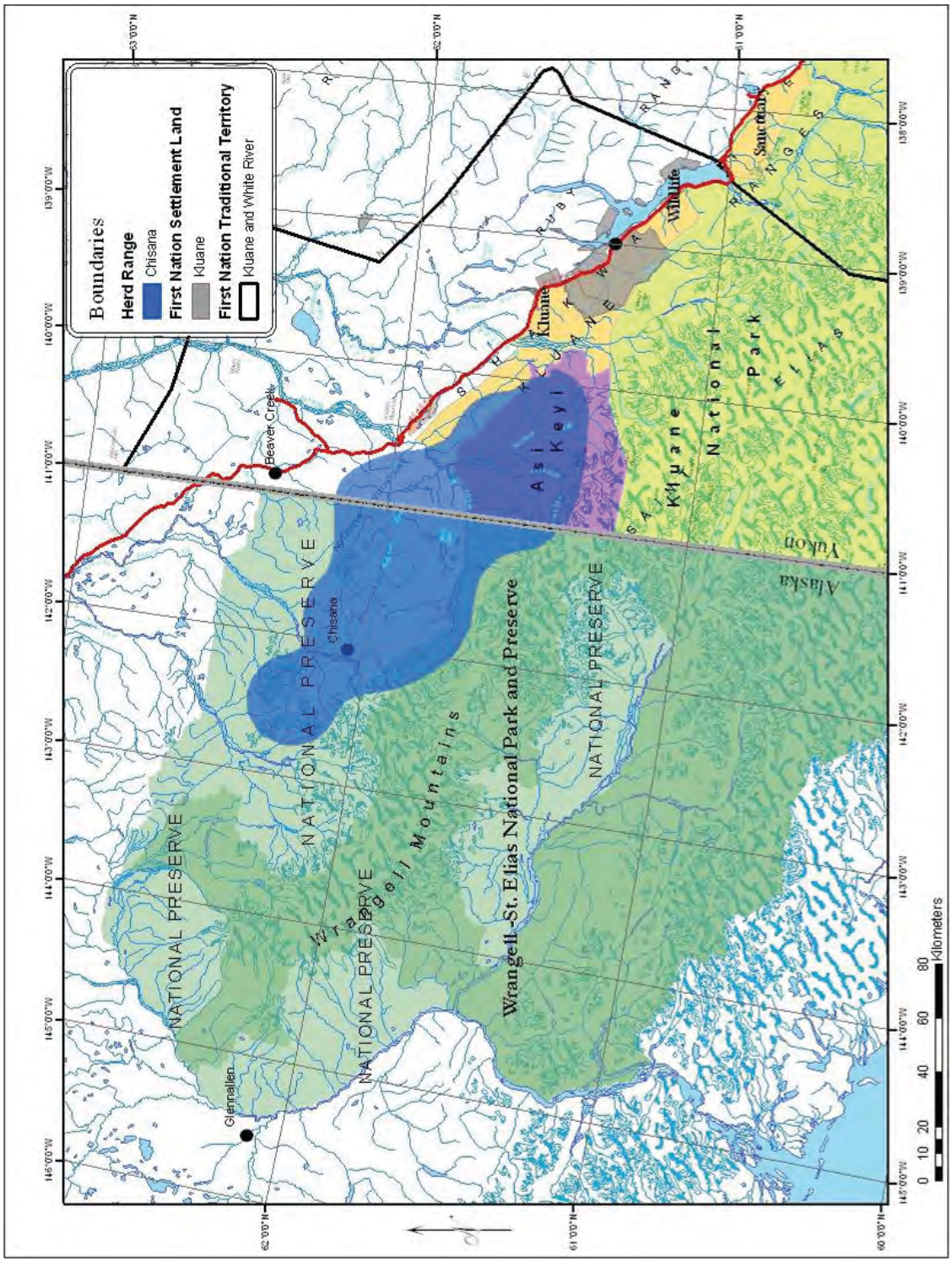
Justin later clarified his clan's relationship to the caribou. At the March 10, 2010 Southcentral Alaska Subsistence Regional Advisory Council meeting, Justin noted the following:

> In the area that I'm from, there were three tribes had what you would call sway over the area in term of the alts'e'tnaey trail that comes through there and they were the Naltsiine…out of Northway and the Alts'e'tnaey.[1] We shared pretty much ownership of the trail.
>
> That caribou herd that we're talking about was under the province of the Naltsiine. The Naltsiine were the medicine men clan and these medicine people pretty much kept that—control and reins over the use and take of these caribou to the exclusion of the other clans including the Alts'e'tnaey.
>
> …the Alts'e'etnaey in my estimation was the successor-in-interest to the Naltsiine over these carbou because the Naltsiine had pretty much faded out of the picture and into the background (SCRSAC 2010:340–341).

In his testimony before the Southcentral Council, Justin provided further historical background:

> Now, the issue of the treaty part really is intriguing because from the family history, there were people like Titus Joe and Titus John who lived near Burwash Landing and were allowed to pursue these caribou, there were Naltsiine all the way into Canada.
>
> Likewise Canadian Indians came up the White River all the way to the headwaters of Chitina and over as far as the very near to the—this side of Chisana in hunting these caribou. So the Naltsiine and the First nations shared an affinity for these caribou and the Royal Canadian Mounted Police who left record of attending meeting in Tetlin and come to Nabesna up to 1932 recognized the fact that the Indians from this side of the border had their right to pursue those caribou into the Canadian side and vice versa (SCRSAC 2010:341).

1 The transcript reads "…they were the Naltsiine, the Taltsiine out of Northway." Wilson Justin (pers. comm. 2011) notes that this is either a transcription error or he misspoke. The reference to the Taltsiine should be deleted.



MAP 2. Chisana caribou range. (Source: Simon and Brown 2010).

A year later, again at the Southcentral Council meeting, Justin added the following information:

> …I spoke at Tok last fall on the medicine people's caribou, commonly referred to as Chisana Herd and I spoke about how that the Chisana Herd originated. It was actually a gift to the Naltsiine people from eastern or east Canadian Indians to end the medicine man wars back in the 1800s. And I just reviewed the minutes not so long ago, there was nothing in the minutes about that. And I reiterate, I am the legal representative of the Cheesh'Na. My words were not brought into the minutes of that meeting and that's really an issue or concern and a problem, both in a—what you would call a Federal sense, ANILCA sense and a participation sense. I meant my words and that story to be remembered as a legal basis for access to those caribou by Cheesh'Na, but it didn't even make it into the minutes (SCRSAC 2011:39–40).

Other people in Chistochina have ties to the community of Chisana. Gilliam Joe, grandson of Chisana Joe, was born in Chisana and left the village when he was two or three years old. Reflecting on the technological changes in his lifetime, he noted that "I left [Chisana] by dog team and returned by airplane." Joe currently resides in Chistochina. As a young man, Gilliam Joe worked as a hunting guide based out of Chisana. He guided in the area between 1964 and 1984, and since that time has frequently returned to Chisana. Over two decades, Joe guided hunting parties into the mountains around Chisana. These parties hunted caribou, among other animals (Joe 2011, pers. comm.). Joe worked for a variety of outfitters, including those run by Bud Konkle and Terry Overly (Overly continues to reside in Chisana). Joe also taught other guides the craft. For example, he taught Deb Overly, who lived in Chisana and was a Chisana caribou guide for many years, and currently resides in Tok (Joe 2011, pers. comm.).

Effect of the Proposal

If this proposal is adopted, the Federal Subsistence Board would recognize the customary and traditional uses of residents of Chistochina to harvest caribou in Unit 12. Additionally, if Proposal WP12-66, which would establish a hunt for Chisana Caribou Herd, is adopted by the Federal Subsistence Board, then Chistochina residents could harvest Chisana caribou, as well as other caribou herds in Unit 12 under Federal subsistence regulations. There are no anticipated biological effects of the proposal. Any conservation issues would be addressed by regulations managing seasons and harvest limits.

OSM CONCLUSION

Support Proposal WP12-68.

Justification

The documentary record indicates that Chistochina residents exhibit customary and traditional practices associated with hunting caribou Unit 12. Historically, members of the Upper-Chisana-Upper Nabesna band occupied the north area of the Wrangell-St. Elias Mountains, hunted caribou in the Nutzotin and Mentasta Mountains, and hunted and trapped in the basins of several rivers, including the White, Nabesna, and Chisana Rivers. With a shift to village life in the late-nineteenth and early twentieth centuries, Upper Chisana-Upper Nabesna band members moved to Northway, Mentasta, Chistochina and Tetlin (Guédon 1974), where their descendants continue to live. Of these communities, only Chistochina lacks a customary and traditional use determination for caribou in Unit 12.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Southcentral Subsistence Regional Advisory Council Recommendation

Support Proposal WP12-68. The Council understands that modern management unit boundaries did not and do not influence traditional use and that there is sufficient documentation of traditional ecological knowledge and modern studies to warrant a positive customary and traditional use determination.

Eastern Interior Subsistence Regional Advisory Council Recommendation

Support Proposal WP12-68. The Council finds no conservation concern or potential detriment to other subsistence users. The Council feels that certain subsistence users will benefit, and that there is good documentation of traditional use patterns to support a positive determination.

INTERAGENCY STAFF COMMITTEE COMMENT

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 WP12-68
11 Nov 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-68 (GMU 12 C&T Caribou): This proposal seeks to establish a positive Federal Customary and Traditional Use determination (C&T) for caribou in Unit 12 for the residents of Chistochina.

Introduction: This proposal requests the federally qualified residents of Chistochina have a positive C&T for caribou in Unit 12. The proponent indicates the federal subsistence program's methodology of making C&T determinations has changed from making herd-based determinations to unit-based determinations. The proponent indicates recent interests in the Chisana herd spurred this proposal and it is appropriate to re-evaluate the current C&T determinations for caribou in Unit12.

Impact on Subsistence Users: If adopted, federal subsistence users who are residents of Chistochina will be granted opportunity to harvest in the federal subsistence caribou hunt in Unit 12 over some other residents who reside closer to caribou in the area Since the current US harvestable allowance for this herd is 7, the addition of this community would place the number of communities with preference over and above the number of harvestable caribou, creating user disputes.

Opportunity Provided by State: State regulations limit caribou hunting in Unit 12 to one bull caribou west of the Glenn Hwy (Tok Cutoff) and have not provided any opportunity for harvesting Chisana caribou since 1993.

Other Comments: The department bases its support for this proposal on information that residents of the Chistochina area hunted or used caribou within the boundaries of Unit 12 and were likely inadvertently omitted from previous positive C&T determinations. The department reminds the Board of its long standing request for rulemaking regarding C&T determinations.

Recommendation: Defer.
The department requests that a thorough assessment be conducted of other local residents with documented harvest history be evaluated at the same time at determination is made for Chistochina to avoid unnecessary exclusion of other users.

WRITTEN PUBLIC COMMENTS

Support. There is ample evidence that residents of Chistochina have customarily and traditionally harvested caribou as well as other resources in Unit 12. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-69 Executive Summary	
General Description	Proposal WP12-69 requests a change in the customary and traditional use determination in Unit 25 remainder from "all rural residents," to "residents of Unit 25." *Submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council*
Proposed Regulation	**Customary and Traditional Use Determination—Caribou** **Unit 25D** *Rural residents of Units 20F, 25D, and Manley.* **Unit 25, remainder.** ~~*All rural residents*~~. ***Rural residents of Unit 25***
OSM Conclusion	**Support** Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A. **Customary and Traditional Use Determination—Caribou** **Unit 25A** ***Rural residents of Unit 24A and 25*** **Unit 25~~, remainder~~. B and C** ~~*All rural residents*~~. ***Rural residents of Unit 25.*** **Unit 25D** *Rural residents of Units 20F, 25D, and Manley.*
Southcentral Regional Council Recommendation	**Defer** to home region
Western Interior Regional Council Recommendation	**Support** Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A. *See OSM Conclusion for modified regulation language.*
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A. *See OSM Conclusion for modified regulation language.*

continued on next page

WP12-69 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** for Unit 25C, No recommendation for other areas in Unit 25.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-69

ISSUES

Proposal WP12-69, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests a change in the customary and traditional use determination in Unit 25 remainder from "all rural residents," to "residents of Unit 25."

DISCUSSION

The proponent expresses concern that as the Fortymile Caribou herd expands, it may draw Federally qualified subsistence users from outside Unit 25. The proponent makes the following observations in support of the proposed regulatory change:

> Currently the 40 Mile Caribou herd population is increasing; as the population grows the herd is expanding its range into Unit 25C (the White Mountains National Recreation Area)… Recently, there have been concerns expressed that as the herds range expands there is a potential for increased Federal harvest in Unit 25C. The current C&T in Unit 25C allows all Federally qualified subsistence users in Alaska to harvest 1 caribou by a joint Federal/State registration permit. Because this area is road accessible and is a relatively easy hunt, the herd's expansion may draw additional Federally qualified subsistence users from outside of the unit.

Note that the proponent's concern is focused on the Fortymile Caribou Herd in Unit 25C, but the proposal speaks to Unit 25 remainder, i.e. Unit 25A, B and C. The proponent states that "the C&T should be narrowed to the Federally Qualified Subsistence users in Unit 25 or as determined by staff analysis."

Existing Federal Regulation

Customary and Traditional Use Determination—Caribou

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Unit 25, remainder.

All rural residents.

Proposed Federal Regulation

Customary and Traditional Use Determination—Caribou

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Unit 25, remainder.

~~*All rural residents*~~***.Residents of Unit 25***

Extent of Federal Public Lands

The Arctic National Wildlife Refuge comprises approximately 74% of Unit 25A; a small portion (2%) is managed by the Bureau of Land Management.

Approximately 64% of Unit 25B is comprised of Federal public lands, including the U.S. Fish and Wildlife Service (36%), comprised of the Yukon Flats National Wildlife Refuge, the Arctic National Wildlife Refuge, the National Park Service (8%), comprised of the Yukon-Charley Rivers National Preserve, and BLM lands (20%).

Approximately 74% of Unit 25C is comprised of Federal public lands, including BLM managed lands (64%) comprised of the White Mountains National Recreation Area, the Steese National Conservation Area, NPS managed lands (9%), comprised of Yukon-Charley Rivers National Preserve, and less than 1% of land managed by the FWS (**Unit 25 Map**).

Regulatory History

In 1998, the Federal Subsistence Board adopted a customary and traditional use determination for caribou in Unit 25D for rural residents of Units 20F, 25D, and Manley. For the remainder of Unit 25, the Board made no specific customary and traditional use determination, which meant that all Federally qualified users were eligible to harvest caribou in Unit 25, remainder (63 FR June 29, 1998).

Community Characteristics and Subsistence History

The communities in Unit 25D include Stevens Village, Beaver, Birch Creek, Fort Yukon, Chalkyitsik, Venetie, and Circle; Arctic Village is in Unit 25A; and Central (including Circle Hot Springs) is in Unit 25C. There are no communities in Unit 25B. The estimated populations 1970-2010 for these communities, and Coldfoot and Wiseman, are shown in **Table 1**.

The following community information is derived from the Alaska Community Database Community Information Summaries (ADCCED 2011), and from the *Proposed Land Exchange Yukon Flats National Wildlife Refuge Final Environmental Impact Statement* (USFWS 2010).

Arctic Village

Arctic Village is on the east fork of the Chandalar River, 100 miles north of Fort Yukon and 290 miles north of Fairbanks. Until the 1950s, the Neets'aii Gwichin ("residents of the north side") lived a nomadic lifestyle. They traditionally used seasonal camps and semi-permanent settlements, such as Arctic Village, Christian, Venetie, and Sheenjak, in pursuit of fish and game. With the introduction of firearms in the early 1900s, family groups began to gather more permanently at several locations, and no longer dispersed into small groups to hunt caribou. A federally-recognized tribe is located in the community -- the Native Village of Venetie Tribal Government. The Neets'aii Gwich'in of Arctic Village lead a subsistence-based lifestyle (ADCCED 2011).

Between 1993 and 1997, the total subsistence harvest for residents of Arctic Village was 10,000 to 21,000 pounds; caribou and moose represented more than 90% of the harvest by weight for most years. Arctic Village harvest areas, based on Caulfield (1983), are shown in **Figure 1**. This figure represents lifetime subsistence harvest areas based on 11 interviews in 1980 (USFWS 2010:3-113ff.).

Table 1. Community Population Estimates (ADCCED 2011 and US Census 2000).

COMMUNITY	POPULATION				
	2010	2000	1990	1980	1970
Arctic Village	152	152	96	111	85
Beaver	84	84	103	66	101
Birch Creek	33	28	42	32	n/a
Coldfoot	10	13	0	0	0
Central	96	134	52	36	26
Chalkyitsik	69	83	90	100	130
Circle	104	100	73	81	54
Fort Yukon	583	595	580	619	448
Stevens Village	78	87	102	96	74
Venetie	166	202	182	132	112
Wiseman	14	21	33	8	0

Beaver

Beaver is located on the north bank of the Yukon River, approximately 60 air miles southwest of Fort Yukon and 110 miles north of Fairbanks. It lies in the Yukon Flats National Wildlife Refuge. Gold discoveries in the Chandalar region in 1907 led to the founding of Beaver. It was established as the Yukon River terminus for miners heading north to the gold fields. A federally-recognized tribe is located in the community -- the Beaver Village. The population of Beaver is predominantly mixed Gwitchin/Koyukuk Athabascan and Inupiat Eskimo. Subsistence is an important source of food items (ADCCED 2011).

Beaver harvest areas, based on Sumida (1989), are shown in **Figure 2**. This figure represents lifetime subsistence harvest areas based on 15 interviews in 1985-86, and covers the years between 1930 and 1986 (USFWS 2010: 3-114 ff.).

Birch Creek

The first written reference to a settlement in the Birch Creek area was in 1862 by a Fort Yukon clergyman who visited a camp established to provide fish for Hudson's Bay Company in Ft. Yukon. Some anthropologists believe that this settlement was annihilated by scarlet fever in the 1880s, but there are ethnographic accounts of the use of this area from 1867 onwards. Birch Creek Jimmy was the founder of Birch Creek and was great chief among the chiefs in his days. He built a cabin in 1898 at the site of the Hudson Bay fish camp. Several years later, he was joined by other extended family members. Around

Figure 1

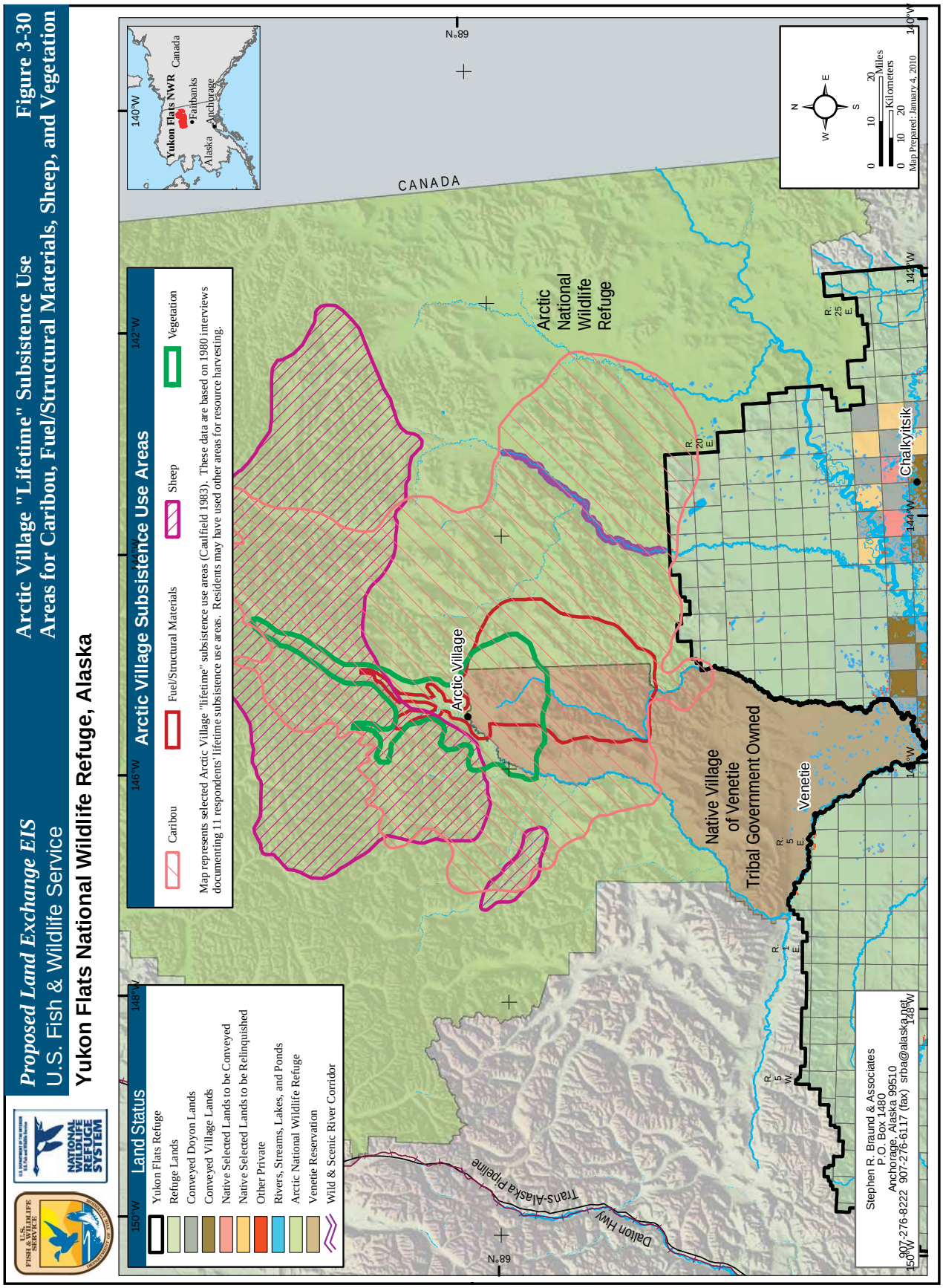
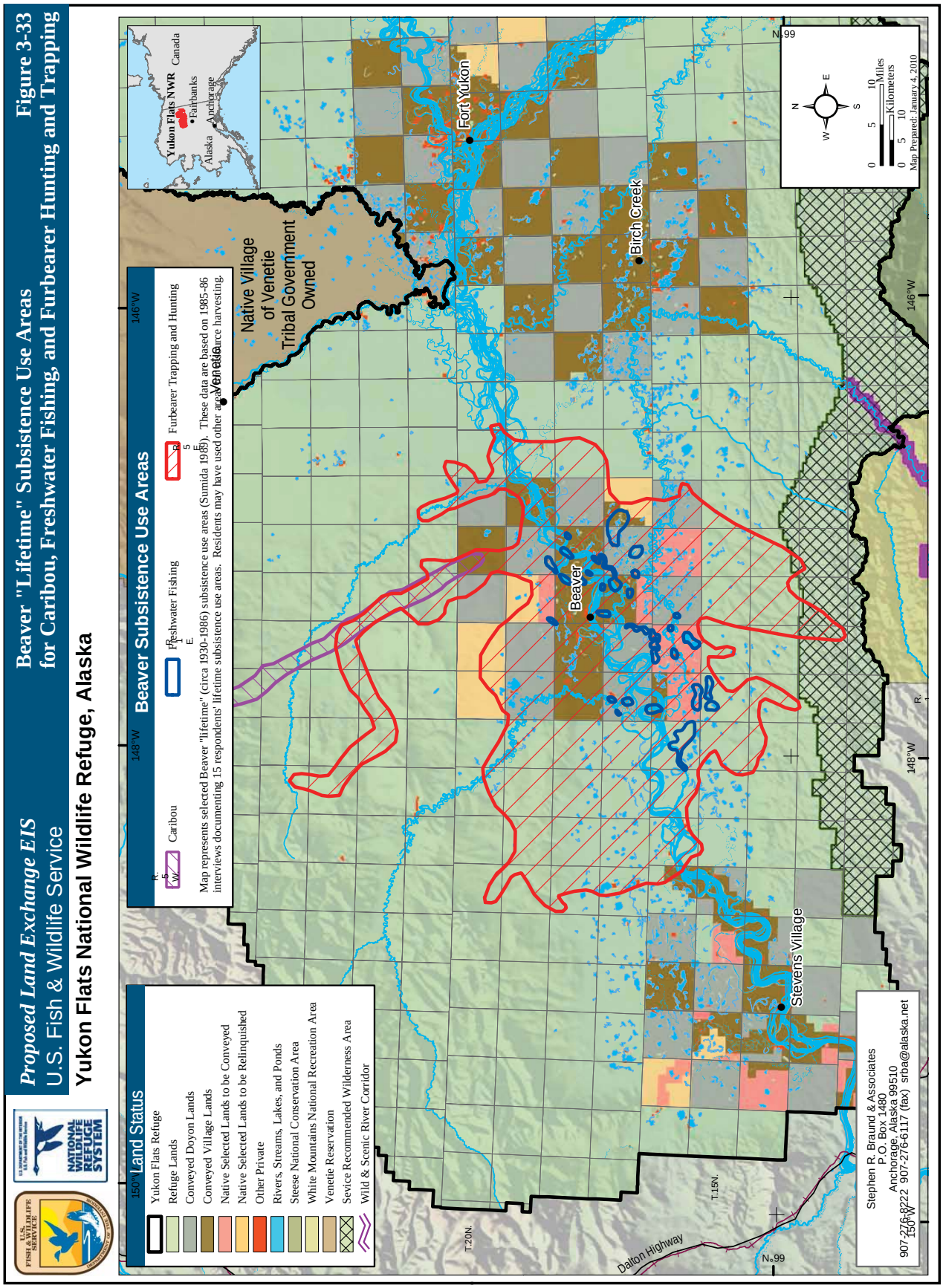

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Arctic Village "Lifetime" Subsistence Use
Areas for Caribou, Fuel/Structural Materials, Sheep, and Vegetation
Figure 3-30
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Wild & Scenic River Corridor
Arctic Village Subsistence Use Areas
Caribou
Fuel/Structural Materials
Sheep
Vegetation
Map represents selected Arctic Village "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1980 interviews documenting 11 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
CANADA
Arctic Village
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Venetie
Chalkyitsik
Dalton Hwy
Trans-Alaska Pipeline
Yukon Flats NWR
Canada
Fairbanks
Alaska
Anchorage
Kilometers
Miles
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaskanet.com

Figure 2


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Beaver "Lifetime" Subsistence Use Areas
for Caribou, Freshwater Fishing, and Furbearer Hunting and Trapping
Figure 3-33
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Beaver Subsistence Use Areas
Caribou
Freshwater Fishing
Furbearer Trapping and Hunting
Map represents selected Beaver "lifetime" (circa 1930-1986) subsistence use areas (Sumida 1985). These data are based on 1985-86 interviews documenting 15 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Native Village of Venetie Tribal Government Owned
Fort Yukon
Birch Creek
Beaver
Stevens Village
Venetie
Dalton Highway
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

1916, the group moved three miles upstream to the site of the present village. It was used as a seasonal base for harvest activities until the early 1950s, when the establishment of a school encouraged village residents to adopt a less nomadic way of life. The first airstrip was constructed in 1973. The school was closed in 1999 due to insufficient students. A federally-recognized tribe is located in the community -- the Birch Creek Tribe; Dendu Gwich'in Tribal Council. Local residents are Dendu Gwich'in Athabascans and are active in subsistence practices (ACDR 2011).

Subsistence harvest data on Birch Creek do not include caribou. **Figure 3** represents a general pattern of subsistence use, based on Stephen R. Braund & Associates (2007). The figure covers the years between 1997 and 2006, based on 17 interviews in 2007 (USFWS 2010: 3-122 ff.).

Central

Central is located on the Steese Highway about 125 miles northeast of Fairbanks and 28 miles southwest of Circle. Circle Hot Springs is located nearby. After the discovery of gold in the Circle Mining District in the 1890s, a centrally-located roadhouse was required between Circle, a supply point on the Yukon, and the mining operations at Mammoth, Mastodon, Preacher, and Birch Creeks. Central House, originally built around 1894, was located at the supply trail's crossing of Crooked Creek. A post office was established in 1925. In 1927, the road link to Fairbanks was completed. Mining continued until the beginning of World War II. After the war, a few miners returned to Central, but mining declined through the 1950s and 60s. Activity increased again in the mid-1970s with the rise in gold prices (ADCCED 2011).

Limited recent use area data are available for Central. **Figure 4** represents subsistence areas for Central, Circle, and Eagle (USFWS 2010:3-123 ff.).

Chalkyitsik

Chalkyitsik is located on the Black River about 50 miles east of Fort Yukon. Chalkyitsik means "fish hooking place" and has traditionally been an important seasonal fishing site for the Gwich'in. Archaeological excavations in the area reveal use and occupancy of the region as early as 10,000 BC. Village elders remember a highly nomadic way of life, living at the headwaters of the Black River from autumn to spring and then floating downriver to fish in summer. By 1969, there were 26 houses, a store, two churches, and a community hall in Chalkyitsik. A Federally-recognized tribe is located in the community -- the Chalkyitsik Village. Chalkyitsik is a traditional Gwich'in Athabascan village, with a subsistence lifestyle (ADCCED 2011).

There are limited caribou subsistence harvest use area data available for Chalkyitsik. **Figure 5** represents lifetime subsistence harvest areas based on 8 interviews in 1981 (Caulfield 1983; USFWS 2010:3-128 ff.).

Circle

Circle is located on the south bank of the Yukon River at the edge of the Yukon Flats, 160 miles northeast of Fairbanks. It is at the eastern end of the Steese Highway. Circle (also known as Circle City) was established in 1893 as a supply point for goods shipped up the Yukon River and then overland to the gold mining camps. Early miners believed the town was located on the Arctic Circle, and named it Circle. The town was virtually emptied after gold discoveries in the Klondike (1897) and Nome (1899). A federally-recognized tribe is located in the community -- the Circle Native Community. The population of Circle is predominantly Athabascan, and there are several non-Native families.

Figure 3

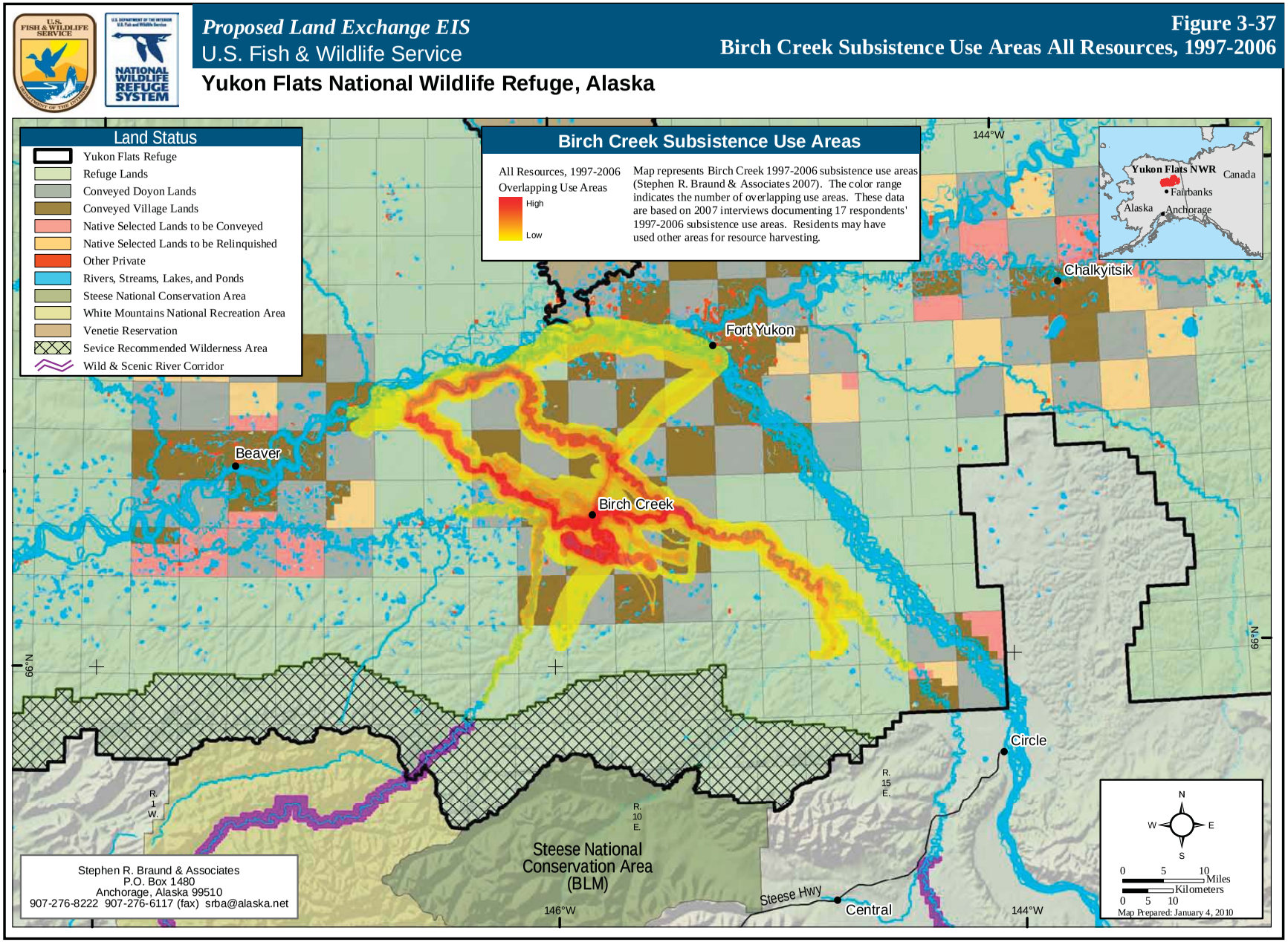
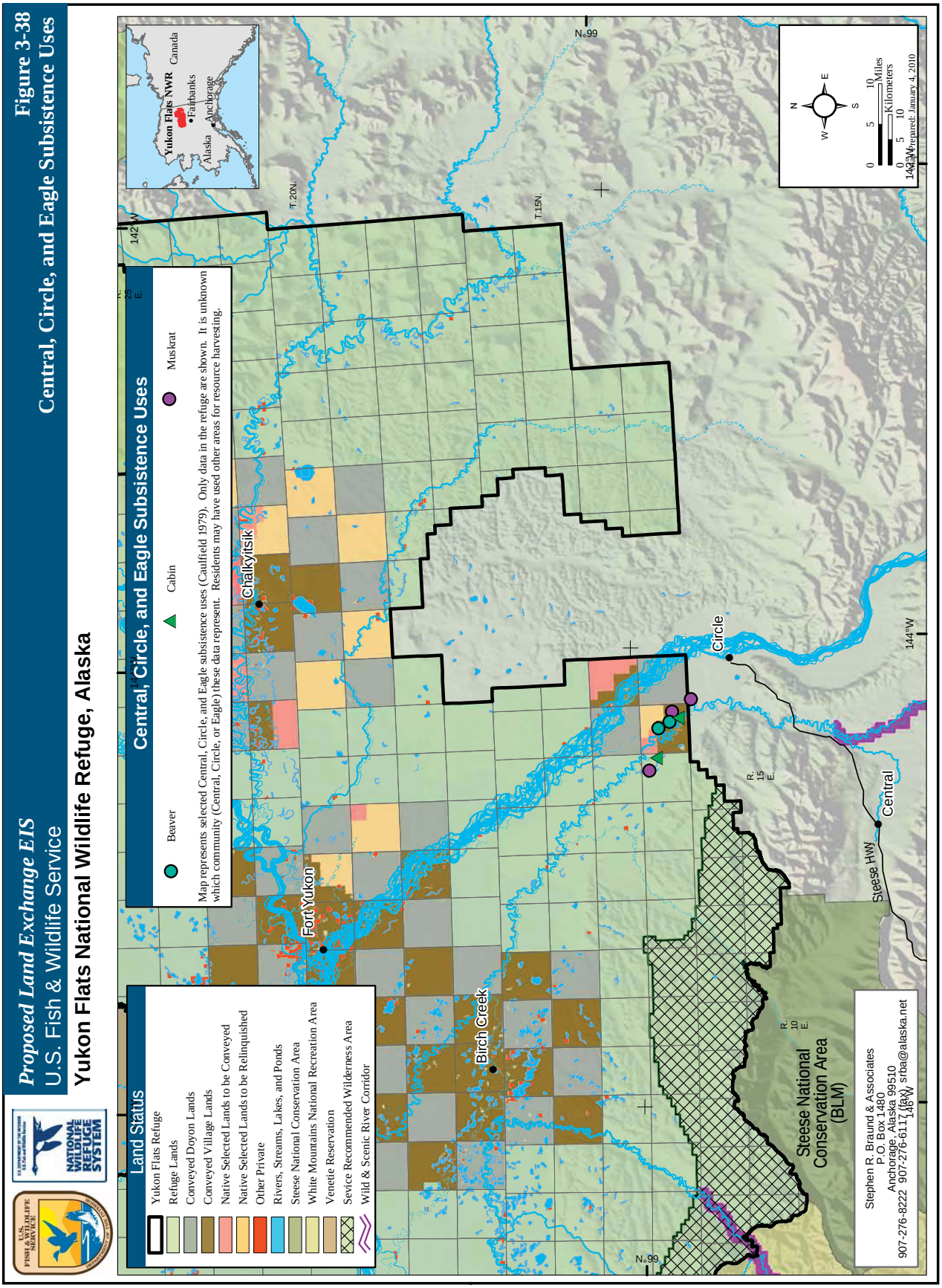

Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Figure 3-37
Birch Creek Subsistence Use Areas All Resources, 1997-2006
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Birch Creek Subsistence Use Areas
All Resources, 1997-2006
Overlapping Use Areas
High
Low
Map represents Birch Creek 1997-2006 subsistence use areas (Stephen R. Braund & Associates 2007). The color range indicates the number of overlapping use areas. These data are based on 2007 interviews documenting 17 respondents' 1997-2006 subsistence use areas. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Canada
Fairbanks
Alaska
Anchorage
Chalkyitsik
Fort Yukon
Beaver
Birch Creek
Circle
Central
Steese Hwy
Steese National Conservation Area (BLM)
144°W
146°W
66°N
R. 1 W.
R. 10 E.
R. 15 E.
N
W
E
S
0 5 10 Miles
0 5 10 Kilometers
Map Prepared: January 4, 2010
Stephen R. Braund & Associates
P.O. Box 1480
Anchorage, Alaska 99510
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 4


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Figure 3-38
Central, Circle, and Eagle Subsistence Uses
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Central, Circle, and Eagle Subsistence Uses
Beaver
Cabin
Muskrat
Map represents selected Central, Circle, and Eagle subsistence uses (Caulfield 1979). Only data in the refuge are shown. It is unknown which community (Central, Circle, or Eagle) these data represent. Residents may have used other areas for resource harvesting.
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
Chalkyitsik
Fort Yukon
Birch Creek
Circle
Central
Steese Hwy
Steese National Conservation Area (BLM)
T.20N.
T.15N.
N.99
R. 15 E.
R. 10 E.
144°W
Miles
Kilometers
Map Prepared: January 4, 2010
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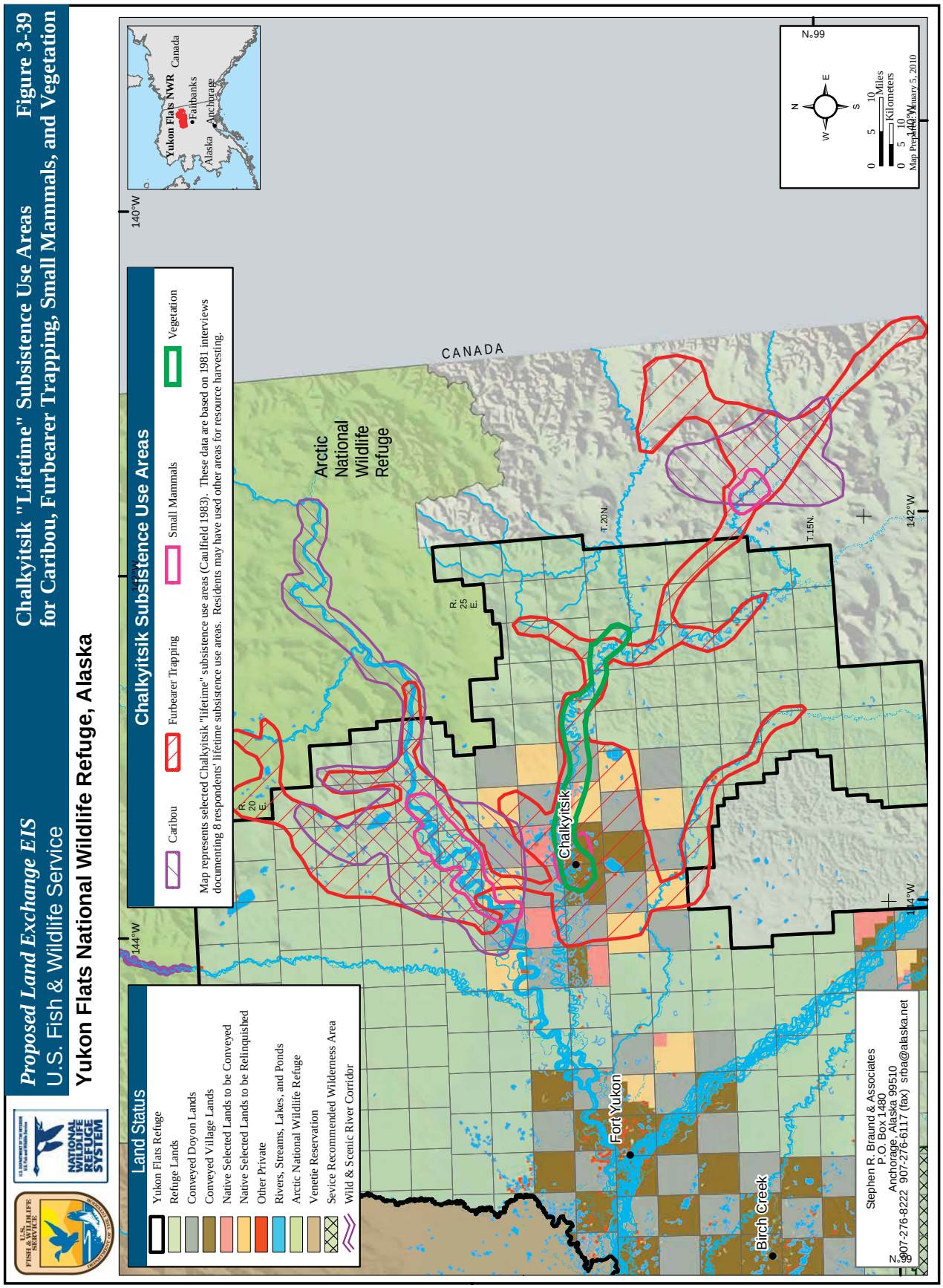
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 5


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Chalkyitsik "Lifetime" Subsistence Use Areas
for Caribou, Furbearer Trapping, Small Mammals, and Vegetation
Figure 3-39
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Chalkyitsik Subsistence Use Areas
Caribou
Furbearer Trapping
Small Mammals
Vegetation
Map represents selected Chalkyitsik "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1981 interviews documenting 8 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
144°W
140°W
142°W
144°W
CANADA
Arctic National Wildlife Refuge
R. 20 E.
R. 25 E.
T. 20N.
T.15N.
Chalkyitsik
Fort Yukon
Birch Creek
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
N
W
E
S
0 5 10 Miles
0 5 10 Kilometers
Map Prepared January 5, 2010
Stephen R. Braund & Associates
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907-276-8222 907-276-6117 (fax) srba@alaska.net

Limited caribou subsistence use area data are available for Circle. **Figure 4** represents subsistence areas for Central, Circle, and Eagle (USFWS 2010:3-123 ff.).

Fort Yukon

Fort Yukon is located at the confluence of the Yukon and Porcupine Rivers, about 145 air miles northeast of Fairbanks. Fort Yukon was founded in 1847 by Alexander Murray as a Canadian outpost in Russian territory. It became an important trade center for the Gwich'in Indians, who inhabited the vast lowlands of the Yukon Flats and River valleys. During the 1950s, a White Alice Communications System and an Air Force station were established. Fort Yukon incorporated as a city in 1959. A federally-recognized tribe is located in the community -- the Native Village of Fort Yukon; Canyon Village Traditional Council (not recognized). Most Fort Yukon residents are descendants of the Yukon Flats, Chandalar River, Birch Creek, Black River, and Porcupine River Gwich'in Athabascan tribes. Subsistence is an important component of the local culture (ADCCED 2011).

Fort Yukon subsistence harvest areas, based on Caulfield (1983) and Sumida and Anderson (1990), are shown in **Figure 6**. This figure represents lifetime subsistence harvest areas based on 10 interviews in 1981 and 26 interviews in 1988 (USFWS 2010: 3-114 ff.).

Stevens Village

Stevens Village is located on the north bank of the Yukon River, 17 miles upstream of the Dalton Highway bridge crossing and 90 air miles northwest of Fairbanks. The original settlement, called Dinyea (meaning "mouth of the canyon"), was founded by three Athabascan brothers from the Koyukon region: Old Jacob, Gochonayeeya, and Old Steven. The village was named for Old Steven when he was elected chief in 1902. A post office began operations in 1936, and scheduled air service was initiated in 1939. A federally-recognized tribe is located in the community -- the Native Village of Stevens. The Native population is predominantly Kutchin Natives, who depend upon subsistence (ADCCED 2011).

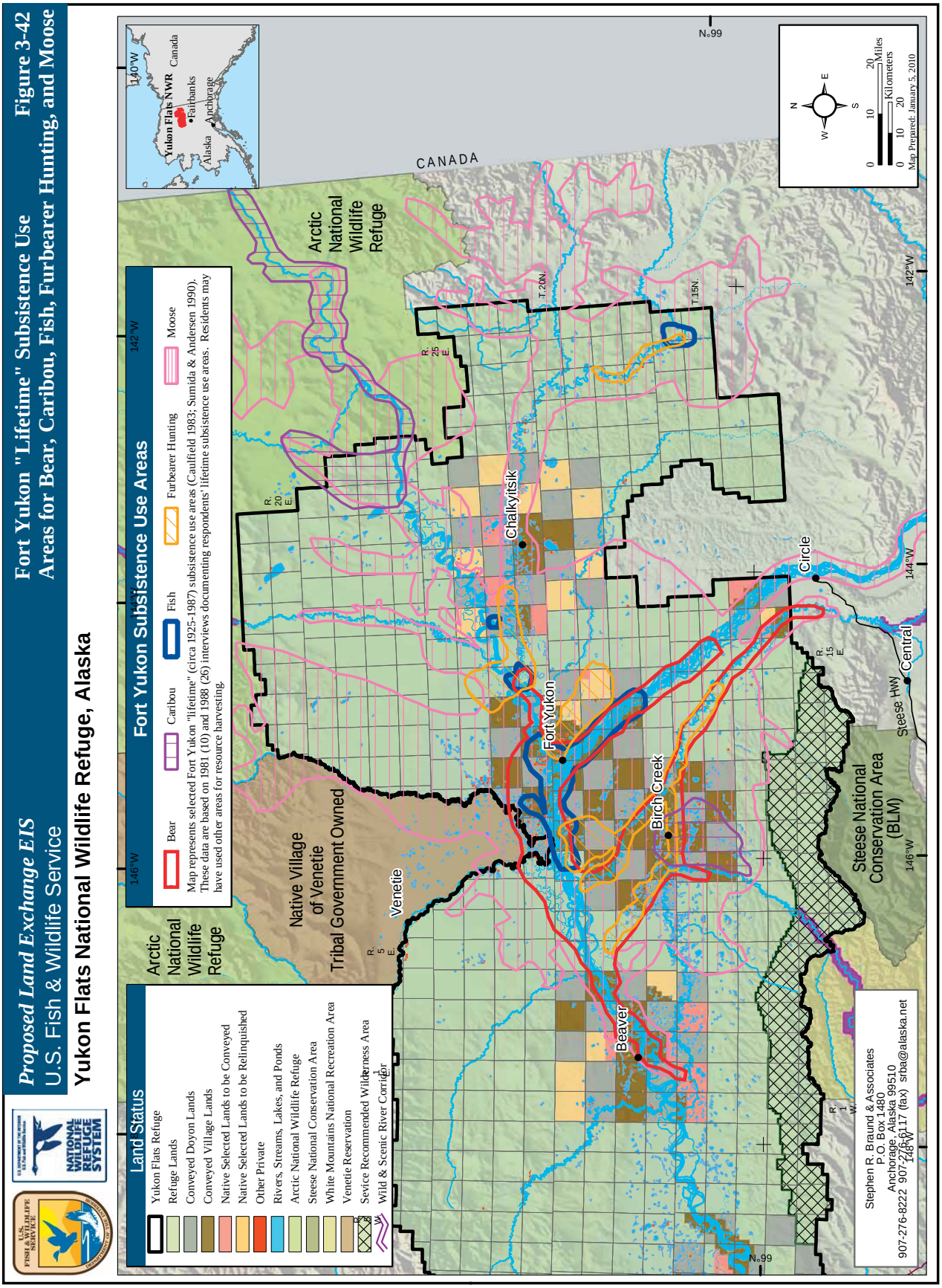
Stevens Village harvest areas, based on Sumida (1988), are shown in **Figure 7**. This figure represents subsistence harvest areas based on 24 interviews in 1984-1985, and covers the years between 1974 and 1984 (USFWS 2010: 3-135 ff.). Note that the map does not depict caribou harvest areas.

Venetie

Venetie is located on the north side of the Chandalar River, 45 miles northwest of Fort Yukon. Known to early explorers as Old Robert's Village or Chandalar Village, Venetie was founded in 1895 by a man named Old Robert, who chose Venetie because of its plentiful fish and game. During the 1950s and 60s, the use of seasonal camps declined, but the advent of the snowmachine enabled Venetie residents to renew use of areas which had traditionally been occupied seasonally. A federally-recognized tribe is located in the community -- the Village of Venetie; Native Village of Venetie Tribal Government (Arctic Village and Village of Venetie). Venetie is comprised largely of descendants of the Neets'ai Gwich'in and, to a lesser extent, the Gwichyaa and Dihaii Gwich'in (ADCCED 2011).

Between 1970 and 1982, caribou were important elements of harvest during some years—as much as 71% of the total harvest. In other years, residents of Venetie harvested no caribou. Venetie lifetime harvest areas, based on Caulfield (1983), are shown in **Figure 8**. This figure represents lifetime subsistence harvest areas based on 9 interviews in 1981 (USFWS 2010: 3-142 ff.).

Figure 6


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Fort Yukon "Lifetime" Subsistence Use Areas for Bear, Caribou, Fish, Furbearer Hunting, and Moose
Figure 3-42
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Steese National Conservation Area
White Mountains National Recreation Area
Venetie Reservation
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Fort Yukon Subsistence Use Areas
Bear
Caribou
Fish
Furbearer Hunting
Moose
Map represents selected Fort Yukon "lifetime" (circa 1925-1987) subsistence use areas (Caulfield 1983; Sumida & Andersen 1990). These data are based on 1981 (10) and 1988 (26) interviews documenting respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Venetie
Beaver
Birch Creek
Fort Yukon
Chalkyitsik
Circle
Central
Steese National Conservation Area (BLM)
Steese Hwy
CANADA
Arctic National Wildlife Refuge
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
Map Prepared: January 5, 2010
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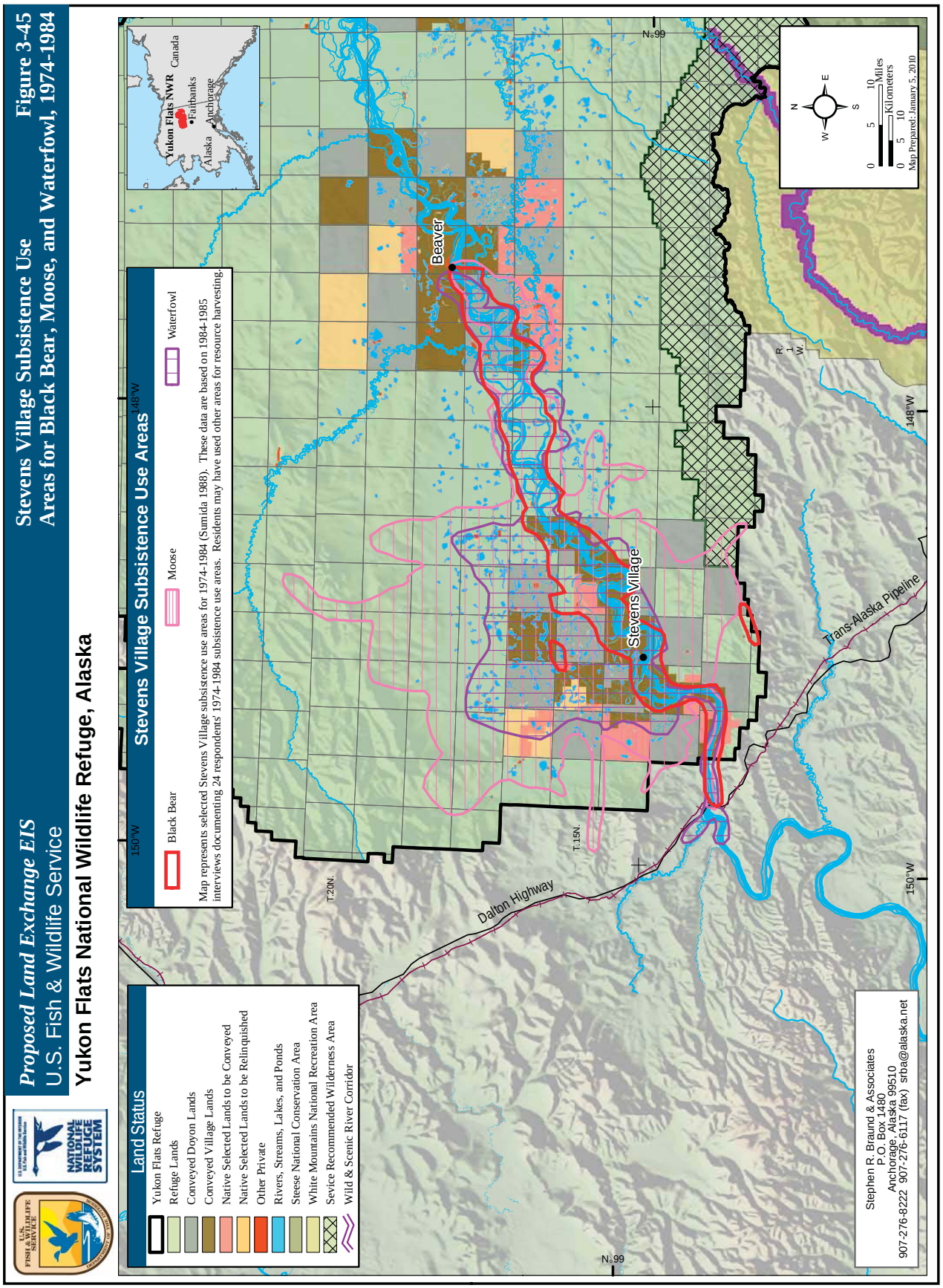
907-276-8222 907-276-0117 (fax) srba@alaska.net

Figure 7


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Stevens Village Subsistence Use
Areas for Black Bear, Moose, and Waterfowl, 1974-1984
Figure 3-45
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Steese National Conservation Area
White Mountains National Recreation Area
Sevice Recommended Wilderness Area
Wild & Scenic River Corridor
Stevens Village Subsistence Use Areas
Black Bear
Moose
Waterfowl
Map represents selected Stevens Village subsistence use areas for 1974-1984 (Sumida 1988). These data are based on 1984-1985 interviews documenting 24 respondents' 1974-1984 subsistence use areas. Residents may have used other areas for resource harvesting.
150°W
148°W
T.20N.
T.15N.
R. 1 W.
N.99
Beaver
Stevens Village
Dalton Highway
Trans-Alaska Pipeline
Yukon Flats NWR
Fairbanks
Anchorage
Alaska
Canada
N
W
E
S
0 5 10 Miles
0 5 10 Kilometers
Map Prepared: January 5, 2010
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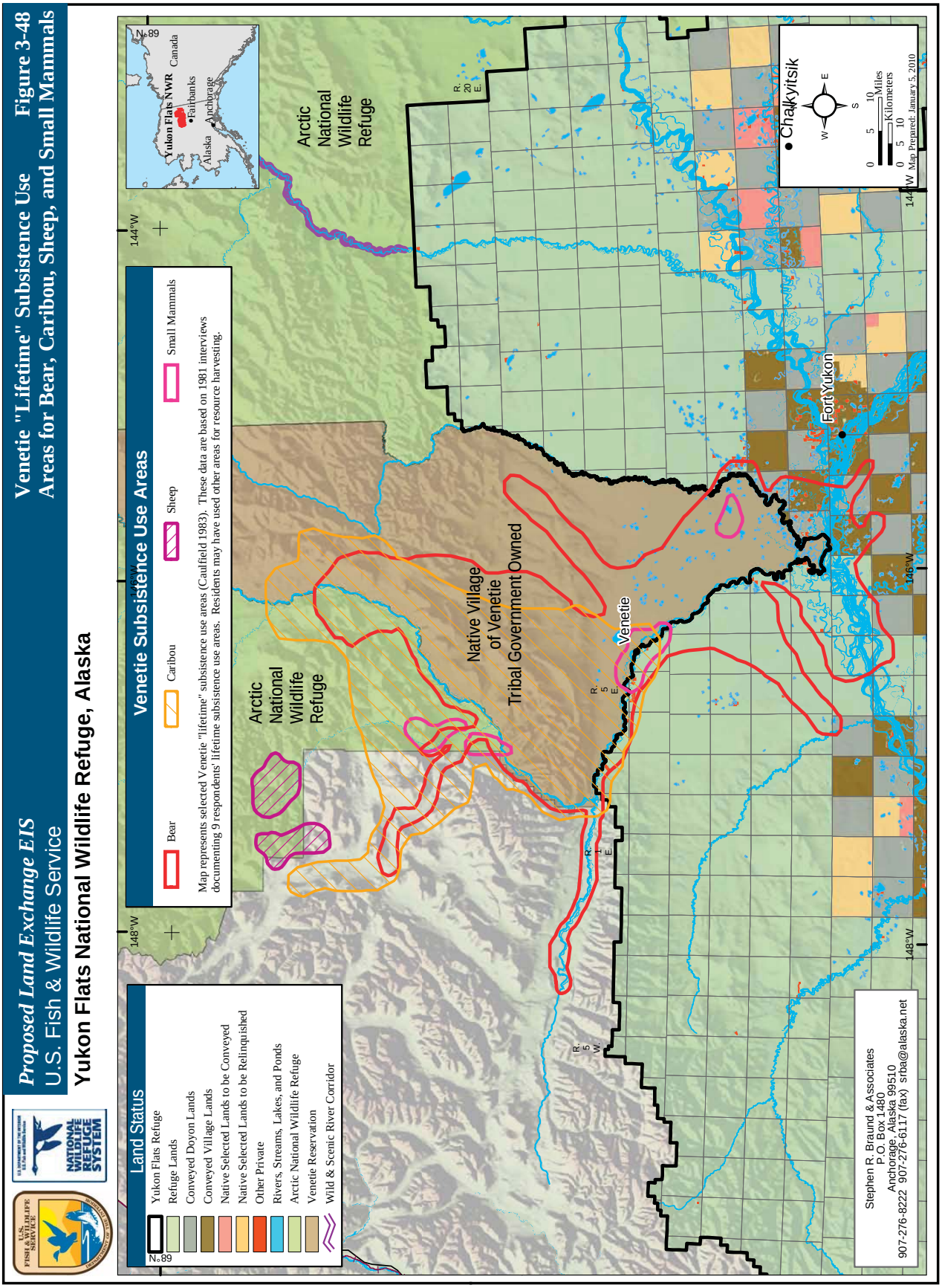
907-276-8222 907-276-6117 (fax) srba@alaska.net

Figure 8


Proposed Land Exchange EIS
U.S. Fish & Wildlife Service
Yukon Flats National Wildlife Refuge, Alaska
Venetie "Lifetime" Subsistence Use
Areas for Bear, Caribou, Sheep, and Small Mammals
Figure 3-48
Land Status
Yukon Flats Refuge
Refuge Lands
Conveyed Doyon Lands
Conveyed Village Lands
Native Selected Lands to be Conveyed
Native Selected Lands to be Relinquished
Other Private
Rivers, Streams, Lakes, and Ponds
Arctic National Wildlife Refuge
Venetie Reservation
Wild & Scenic River Corridor
Venetie Subsistence Use Areas
Bear
Caribou
Sheep
Small Mammals
Map represents selected Venetie "lifetime" subsistence use areas (Caulfield 1983). These data are based on 1981 interviews documenting 9 respondents' lifetime subsistence use areas. Residents may have used other areas for resource harvesting.
Arctic National Wildlife Refuge
Native Village of Venetie Tribal Government Owned
Venetie
Fort Yukon
Chalkyitsik
Yukon Flats NWR
Fairbanks
Anchorage
Canada
Alaska
Miles
Kilometers
Map Prepared: January 5, 2010
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Coldfoot

Coldfoot is located at the mouth of Slate Creek on the east bank of the Middle Fork of the Koyukuk River at mile 175 of the Dalton Highway. The community received its name when gold prospectors ventured up the Koyukuk River in 1900, got "cold feet," and turned back (ADCCED 2011).

As shown in Table 1, between 2000 and 2009, Coldfoot residents hunted caribou in Unit 25. Over this time, three permits were issued to Coldfoot residents, resulting in two harvested caribou.

Wiseman

Wiseman is located on the Middle Fork of the Koyukuk River at its junction with Wiseman Creek about 13 miles north of Coldfoot. In the early 1900s, residents began to abandon Coldfoot in response to increasing mining activity around Wiseman; the town was established in 1907, fist as Wrights, then as Nolan, and finally as Wiseman in 1923. A territorial school operated from 1934 to 1941. The pipeline haul road, now called the Dalton Highway, passes near Wiseman (ADCCED 2011).

Scott (1993:60) notes that Wiseman residents harvest game in Units 24, 25 and 26, including caribou. In 1991, for example, Wiseman residents harvested 10 caribou; however, Scott does not indicate in which unit the caribou were harvested.

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)).

An analysis of customary and traditional caribou use for communities in 25D, communities in 20F and Manley, is found in the staff analysis for Proposal 102 (OSM 1998:118 ff.). That analysis concluded that historical and contemporary Gwich'in Athabascan territories encompassed Unit 25D, portions of which were also used by Koyukon Athabascan. Members of these Athabascan communities recognized and continue to recognize caribou as an important subsistence resource. Evidence of patterns of use includes caribou fences (Hosley 1981), traditions associated with hunting (Nelson 1973; Slobodin 1981), seasonal hunts (Case and Halpin 1990), traditional means of storage (Caulfield 1983), meat distribution through networks of kin (Caulfield 1983), and the incorporation of caribou into a larger pattern of resource use, which included sheep, moose, bear, waterfowl, small game, fish and other resources (Osgood 1936; Slobodin 1981). These patterns broadly persist to the present day, conditioned by current state and federal wildlife management regimes and other historical alterations.

Hosley (1981:534) indicated that the Gwich'in Athabascan of Unit 25D and the Koyukon of Unit 20F historically took caribou in the fall (October and November). Harvest data collected by the Council of Athabascan Tribal Governments (CATG) indicated that by the early 1990s the Gwich'in who had access to caribou harvested them as available. A definite season of intensive harvest was associated with game fences; a generalized pattern of harvest resulted from the adoption of firearms, dog teams, and snow machines for caribou hunting (Case and Halpin 1990). In the past, Gwich'in would travel considerable distances to harvest caribou. Throughout the 1980s, residents of 25D communities traveled up the Porcupine River to take caribou (Caulfield 1983:64).

The Gwich'in traditionally stored caribou by freezing or drying. The meat was prepared by boiling. Caribou heads were considered a delicacy and were baked, roasted, or boiled. Caribou stomachs were used as storage containers (Caulfield 1983:66).

Meat is frequently shared among members of hunting parties, among related households within communities, and between members of different communities. In the early 1980s, Caulfield noted the following:

> Sharing and exchange of locally-derived products continues in the region today. Certain communities, especially Arctic Village and Fort Yukon, serve as regional providers of localized resources. When caribou are available near Arctic Village, meat is shared not only with relatives in Venetie where kinship ties appear especially strong, but also with all other communities in the region. Small amounts of caribou meat may also be sent to the elderly confined in the hospital in Fairbanks or to university students living away from home (Caulfield 1983:203).

Residents in Unit 25 remainder exhibit similar historical and contemporary patterns of caribou use, which are not geographically limited to Unit 25D. Gwich'in Athabascan territory, for example, extended beyond Arctic Village to the north and into western Canada (Slobodin 1981). For Unit 25, remainder, the evidence of patterns of caribou use is the same as the evidence for Unit 25D. In general, when caribou migrations entered into areas proximate to human settlements, caribou were harvested. For example, Arctic Village residents harvested 92 caribou in 1993, 168 in 1994, 110 in 1995, 56 in 1996, and 11 in 1997. This pattern is in shown in **Table 2** for Arctic Village, Beaver, Central, Chalkyitsik, Circle, Fort Yukon, Stevens Village, and Venetie**.** Similar data for Birch Creek are unavailable.

Residents from a number of Federally qualified rural communities statewide have hunted caribou with a joint State/Federal permit in Unit 25. For example, residents from Kodiak, Barrow, and Sitka, among many other communities, have hunted caribou in Unit 25 between 2000 and 2009. Over this time, Kodiak residents received 24 permits and harvested 7 caribou; Barrow residents received 1 permit and harvested no caribou; Sitka residents received 12 permits and harvested 5 caribou. Rural resident caribou harvest

Table 2. Unit 25 caribou harvest data, 2000-2009 for all Federally qualified rural residents (USFWS 2011).

Res Community	Unit	Issued	State Res	Hunted	Kill	Days hunted	Success	CPUE
Skagway	1	1	1	1	0	6	0	0
Haines	1	13	13	9	2	76	22.2	2.6
Gustavus	1	5	5	2	1	4	50	25
Craig	2	6	6	6	0	49	0	0
Thorne Bay	2	2	2	1	0	7	0	0
Klawock	2	3	3	3	1	21	33.3	4.8
Wrangell	3	12	12	10	5	55	50	9.1
Petersburg	3	6	6	3	2	4	66.7	50
Elfin Cove	4	1	1	1	0	6	0	0
Tenakee Springs	4	8	8	7	2	28	28.6	7.1
Sitka	4	12	12	11	5	91	45.5	5.5
Yakutat	5	2	2	0	0	0		
Falls Bay	6	1	1	1	0	3	0	0
Cordova	6	14	14	12	5	51	41.7	9.8
Whittier	6	3	3	3	2	14	66.7	14.3
Chenega Bay	6	1	1	0	0	0		
Cooper Landing	7	6	6	3	2	23	66.7	8.7
Hope	7	2	2	0	0	0		
Kenny Lake	13	2	2	1	0	1	0	0
Copper Center	13	10	10	9	3	54	33.3	5.6
Glennallen	13	2	2	2	1	8	50	12.5
Cantwell	13	9	9	5	3	6	60	50
Lake Louise	13	1	1	1	1	1	100	100
Kashwitna	14	1	1	1	0	2	0	0
Peters Creek	14	4	4	4	0	23	0	0
Talkeetna	14	17	17	14	1	59	7.1	1.7
Willow	14	28	28	21	3	126	14.3	2.4
Chickaloon	14	1	1	0	0	0		
Seldovia	15	1	1	1	0	10	0	0
Nanwalek	15	1	1	1	0	0	0	
Ninilchik	15	21	21	20	8	100	40	8
Trapper Creek	16	7	7	6	2	16	33.3	12.5
Kodiak	8	24	24	17	7	96	41.2	7.3
Unalaska	10	2	2	1	0	8	0	0
Dutch Harbor	10	2	2	1	0	3	0	0
King Salmon	9	6	6	5	1	29	20	3.4
Newhalen	9	1	1	0	0	0		
South Naknek	9	1	1	0	0	0		
Dillingham	17	3	3	3	2	8	66.7	25

Table 2. Continued.

Res Community	Unit	Issued	State Res	Hunted	Kill	Days hunted	Success	CPUE
Aleknagik	17	1	1	1	1	8	100	12.5
St Marys	18	1	1	1	0	1	0	0
Akiachak	18	1	1	1	0	3	0	0
Hooper Bay	18	1	1	1	0	3	0	0
Toksook Bay	18	1	1	1	1	1	100	100
Tok	12	23	23	21	7	121	33.3	5.8
Fort Greely	20D	10	10	8	0	25	0	0
Rampart	20F	1	1	1	0	4	0	0
Healy	20C	18	18	17	1	63	5.9	1.6
Anderson	20A	14	14	10	1	42	10	2.4
Nenana	20A	83	83	71	11	234	15.5	4.7
Clear	20A	19	19	11	2	17	18.2	11.8
Delta Jct	20D	35	35	17	4	76	23.5	5.3
Denali Park	20C	5	5	4	1	20	25	5
Manley Hot Springs	20B	1	1	0	0	0		
Livengood	20B	3	3	0	0	0		
Chicken	20E	2	2	0	0	0		
Circle	25C	18	18	16	1	66	6.3	1.5
Fort Yukon	25D	43	43	42	15	200	35.7	7.5
Central	25C	440	440	351	135	2,918	38.5	4.6
Chuathbaluk	19A	1	1	1	0	10	0	0
Nulato	21D	4	4	3	2	3	66.7	66.7
Galena	21D	1	1	1	1	1	100	100
Coldfoot	24	3	3	3	2	8	66.7	25
Nome	22	1	1	1	0	1	0	0
Kotzebue	23	4	4	1	0	2	0	0
Colville Village	26	1	1	1	0	1	0	0
Barrow	26	1	1	1	0	1	0	0
Wainwright	26	1	1	1	0	7	0	0
Nuiqsut	26	1	1	1	1	1	100	100
Harvest by non-rural residents								
Fort Wainwright	20	774	774	561	108	1,480	19.3	7.3
Meadow Lakes	14	5	5	3	3	4	100	75

data for Unit 25, from 2000 to 2009, are shown in **Table 3**. When taking factor 4, "near, or reasonably accessible from the community or area," into consideration, rural residents from outside of Unit 25 who hunt caribou in Unit 25 may be reasonably excluded from a customary and traditional use determination, with a few exceptions. There is no available information indicating that the harvests by residents of communities outside of Unit 25 should be included in the customary and traditional use determination for Unit 25. For these residents, Unit 25 is not "reasonably accessible." The exception may be residents in Unit 24A. Residents of Coldfoot harvest caribou in Unit 25, as shown in **Table 2**. Between 2000 and 2009, Coldfoot residents were issued 3 permits for Unit 25 and harvested 2 caribou. Residents of Wiseman and other Unit 24A residents also hunt caribou in Unit 25 (Scott 1993; Jack Reakoff, pers. comm.). For these residents, Unit 25 is reasonably accessible and should be considered for a positive customary and traditional use determination.

Table 3. Caribou harvest by community in Unit 25, 1993-1997 (ADF&G 2011 and USFWS 2011)

Community	Caribou Harvest by Year				
	1997	1996	1995	1994	1993
ARCTIC VILLAGE	11	56	110	168	92
BEAVER	n/a	n/a	n/a	5	n/a
CENTRAL	n/a	n/a	n/a	n/a	n/a
CHALKYITSIK	n/a	n/a	n/a	n/a	n/a
CIRCLE	5	2	2	n/a	n/a
FORT YUKON	20	10	50	75	2
STEVENS VILLAGE	n/a	n/a	n/a	n/a	n/a
VENETIE	n/a	n/a	n/a	179	34

Current Events

Based on discussions at the Western and Eastern Interior Regional Advisory Council meetings, the proposal should be modified to include Federally qualified rural residents of Unit 24A in the customary and traditional use determination for Unit 25A, but not Unit 25B and C.

Effects of the Proposal

The effect of the proposal would be to exclude Federally qualified users from outside of Unit 25, with the possible exceptions of those residents in Unit 24A, from harvesting caribou under Federal regulations in the remainder of Unit 25 (Units 25A, 25B, and 25C). Such users could still harvest caribou under State regulations. If the proposal is adopted as written, then recognition of customary and traditional use of caribou for residents of Unit 25 would not be provided to those who have a pattern of use (residents of Unit 24A) within the remainder of Unit 25. If Federally qualified users who customarily and traditionally harvest caribou in this unit have been inadvertently excluded, they may choose to submit a proposal to be considered for a for a positive customary and traditional use determination. The Eastern Interior and Western Interior Alaska Regional Advisory Councils should provide further guidance on including appropriate rural residents.

OSM CONCLUSION

Support Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A.

The modified regulation should read:

Customary and Traditional Use Determination—Caribou

Unit 25A

Rural residents of Unit 24A and 25

Unit 25~~, remainder~~. B and C

~~*All rural residents*~~. ***Rural residents of Unit 25.***

Unit 25D

Rural residents of Units 20F, 25D, and Manley.

Justification

Residents of Unit 25 generally exhibit the eight factors determining customary and traditional use of caribou throughout Unit 25 remainder (Unit 25A, B, and C). Adopting the proposal would recognize the customary and traditional uses of caribou by Federally qualified rural residents of Unit 25. Based on discussions at the Western and Eastern Interior Regional Advisory Council meetings, the proposal should be modified to include Federally qualified rural residents of Unit 24A in the customary and traditional use determination for Unit 25A, but not Unit 25B and C.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Defer to home region.

Western Interior Subsistence Regional Advisory Council

Support Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A. *See OSM Conclusion for modified regulation language.*

There are people Unit 24A who use Unit 25A for caribou that reside in 24A.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-69 **with modification** to include residents of Unit 24A in the customary and traditional use determination for caribou in Unit 25A. *See OSM Conclusion for modified regulation language*.

The Council feels that the proposal addresses the potential for subsistence users from outside the area that have not utilized this hunt in recent years to impact harvest of the Fortymile Caribou Herd, and clarifies the intent of the herd planning group. The Council finds the documentation provided in the analysis sufficient to warrant its recommendation.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-69 (GMU 25D Remainder C&T Caribou): This proposal would establish a Federal Customary and Traditional Use determination (C&T) for caribou in Unit 25 Remainder for all residents of Unit 25.

Introduction: This proposal requests the federally qualified residents of Unit 25 have a C&T for caribou in Unit 25 Reminder to narrow federal subsistence user access to the 40 Mile caribou herd. For clarity, Unit 25 Remainder is comprised of all of Unit 25 minus Unit 25D. The proponent indicates recent concerns about the potential range expansion of the 40 Mile herd and additional interest for federal subsistence harvest in Unit 25C by rural residents from outside of the area. The proponent indicates that all rural residents are currently eligible to participate in the federal subsistence hunt and increased interest is likely in this area as caribou are easily accessed. This proposal was submitted to limit participation in the Unit 25 Remainder caribou hunt to residents of Unit 25 only.

Impact on Subsistence Users: If adopted, federal subsistence users who are residents of Unit 25 will be granted proprietal opportunity to harvest caribou in Unit 25 Remainder under federal regulations. If adopted, federally qualified subsistence users residing outside Unit 25 will be prohibited from participation in this federal subsistence caribou hunt.

Opportunity Provided by State: Hunting is by joint state/federal registration permit with a fall and winter season. The state resident fall season is August 10-September 30 in the roadless portion of the herd's range and August 29 through September 30 in the road accessible areas. The state non-resident fall season in the roadless area is August 10 through September 20. The bag limit is 1 bull for all fall seasons. The state winter season in restricted to residents only and is December 1through February 28 with a bag limit of 1 caribou. All hunts are subject to openings and closings on short notice to prevent overharvest.

Other Comments: This proposal resulted from Eastern Interior Regional Advisory Council participation in the Fortymile Caribou Herd Harvest Coalition which includes the Council, 6 state fish and game advisory committees, Yukon First Nations, and Yukon Government. The intent of the proposal may have been to change the C&T use determination for only Unit 25C. This needs to be clarified.

Recommendation: Support for Unit 25C, No recommendation for other areas in Unit 25.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

WP12-71/72 Executive Summary	
General Description	Proposal WP12-71, submitted by the Tetlin National Wildlife Refuge, requests that the fall moose harvest in a portion of Unit 12 be changed from a split season of August 24–28 and September 8–17 to a consecutive days season of August 24–September 20 and that the season be administered through a joint State-Federal registration permit. Proposal WP12-72, submitted by the Tetlin National Wildlife Refuge, requests that the winter moose harvest season in a portion of Unit 12 be changed from November 20–December 10 to November 1–March 31 and that the season be administered through a joint State-Federal registration permit. Both proposals request a single joint State-Federal registration permit which would be valid for both the fall and winter seasons.
Proposed Regulation	**Unit 12 — Moose** *Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull* ***by joint State-Federal registration permit (valid for both the fall and winter seasons)*** *~~The Nov.–Dec. season is open by Federal registration permit only.~~* *Aug. 24~~–Aug. 28~~* *~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Mar. 31*** *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 antlered bull.* *Aug. 24–Sept. 30* *Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.* *Aug. 15–Aug. 28* *Sept. 1–Sept. 17*
OSM Conclusion	**Support** Proposal WP12-71 and **Support** Proposal WP12-72 **with modification** to extend the winter season only to February 28, not March 31, and to create a joint State-Federal registration for the fall season only. The modified regulations would read:

continued on next page

WP12-71/72 Executive Summary *(continued)*	
OSM Conclusion (Continued)	**Unit 12 — Moose** *Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull.* ***The fall season is by joint State-Federal registration permit.*** *The Nov.–~~Dec.~~* ***Feb****. season is open by Federal registration permit only.* — *Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** / *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28*** Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only. *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 antlered bull.* — *Aug. 24–Sept. 30* *Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.* — *Aug. 15–Aug. 28 Sept. 1–Sept. 17*
Southcentral Regional Council Recommendation	**Support** Proposal WP12-71/72 **with the modifications** suggested by the OSM.
Eastern Interior Regional Council Recommendation	**Support** WP12-71/72 **with modification** suggested by OSM. In addition, modify to require a Federal registration permit rather than a joint State-Federal registration permit.” The modified regulation should read: **Unit 12 — Moose** *Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull.* ***The fall season is by Federal registration permit.*** *The Nov.–~~Dec.~~* ***Feb****. season is open by Federal registration permit only.* — *Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** / *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28***

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WP12-71/72 Executive Summary *(continued)*		
Eastern Interior Regional Council Recommendation (Continued)	*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 antlered bull.*	*Aug. 24–Sept. 30*
	Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*
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. The ISC notes that the Eastern Interior Regional Council recommendation further modifies the proposal to proceed using a Federal registration permit only, rather than await future Alaska Board of Game action to potentially endorse a joint State-Federal permit. The ISC agrees that if the Eastern Interior RAC recommendation is supported, subsistence users could use one federal registration permit for both the fall and winter hunts, rather than needing a joint State/Federal permit for the fall hunt and a separate federal registration permit for the winter hunt.	
ADF&G Comments	**Oppose** Proposal WP12-71. The State supports alignment of state and federal seasons whenever possible to reduce hunter confusion and enforcement issues. If the proposal is adopted, the state recommends the hunt be administered through a federal registration permit on the Tetlin NWR only in an effort to reduce enforcement issues and confusion among state hunters. Proposal WP12-72. The State recommends retaining the current fall season dates to align regulations and reduce user confusion. State and federal managers are in agreement to leave the federal permit in place rather than adopt a joint permit.	
Written Public Comments	**1 Support** Proposals WP12-71/72 **as modified** in the OSM staff recommendation (winter season ending February 28)	

STAFF ANALYSIS
WP12-71/72

ISSUE

Proposal WP12-71, submitted by the Tetlin National Wildlife Refuge, requests that the fall moose harvest in a portion of Unit 12 be changed from a split season of August 24–28 and September 8–17 to a consecutive days season of August 24–September 20 and that the season be administered through a joint State-Federal registration permit.

Proposal WP12-72, submitted by the Tetlin National Wildlife Refuge, requests that the winter moose harvest season in a portion of Unit 12 be changed from November 20–December 10 to November 1–March 31 and that the season be administered through a joint State-Federal registration permit.

Both proposals request a single joint State-Federal registration permit which would be valid for both the fall and winter seasons.

DISCUSSION

WP12-71: The proponent states that the current Federal fall season is the same as the State season, from which it was adopted. The State adopted a split fall season as a means to inhibit a large influx of urban Alaska residents from coming to the area. It was believed that if the initial part of the season were only five days, fewer people would travel the long distance to participate. The proponent states that the split season has impacted local rural residents by making it difficult for them to harvest moose. Additionally, the Federal season does not provide a priority to Federally qualified subsistence users. The proposed season of August 24 to September 20 would provide Federally qualified subsistence users almost two additional weeks of harvest opportunity. A continuous season has the added benefit of eliminating the illegal harvest that may be occurring during the current closed period between August 29 and September 7.

WP12-72: The proponent states that there has been no reported harvest in the Federal-only winter hunt (2000–2009). The proponent's intent is to provide a substantial increase in time to allow Federally qualified users more harvest opportunity. In discussions with the proponent after submission of the proposal, the proponent requested that the proposed end date of the winter season be changed to February 28 instead of March 31.

Note: Proposals WP12-70 and -73 are related to proposals WP12-71 and -72 as they both request changes to the fall season dates in the adjacent Federal "remainder" portion of Unit 12; those Federal lands to the west of the Nabesna River and the Nabesna Glacier.

Existing Federal Regulations

Unit 12 — Moose

Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull. The Nov.–Dec. season is open by Federal registration permit only.	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17* *Nov. 20–Dec. 10*
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 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Proposed Federal Regulations

Unit 12 — Moose

Unit 12–that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull ***by joint State-Federal registration permit (valid for both the fall and winter seasons)*** *~~The Nov.–Dec. season is open by Federal registration permit only.~~*	*Aug. 24~~–Aug. 28~~* *~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Mar. 31***
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 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder–1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Existing State Regulations

Unit 12 — Moose

Unit 12—that portion including all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Unit 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28* *OR* *Sept. 8–Sept. 17*
	Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*CM300*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*

Unit 12— remainder of that portion in the Tok River drainage upstream from the Tok Cutoff Bridge, including the Little Tok River drainage.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12—that portion east of the Nabesna River, and south of the winter trail running southeast from Pickerel Lake to the Canadian border.	*Both residents and nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.*	*Harvest permit*	*Sept. 1–Sept. 30*
	Resident: One bull	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
Unit 12— remainder	*Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12; 11% U.S. Fish and Wildlife Service managed lands and 48% National Park Service managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determination

Unit 12, that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake – Residents of Units 12, 13C, Dot Lake and Healy Lake have a positive Customary and Traditional Use determination.

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 — Residents of Units 12, 13C and Healy Lake.

Unit 12, remainder — Residents of Units 11 north of the 62nd parallel, 12, 13A, 13B, 13C, 13D, and the residents of Chickaloon, Dot Lake and Healy Lake.

Regulatory History

Federal and State moose hunting regulations in Unit 12 have changed numerous times since 1989. The Federal seasons and harvest limits have most often been changed in response to the State's establishment, modification, and/or subsequent discontinuance of spike-fork seasons. The State and Federal regulations for the remote hunt area south of the Pickerel Lakes Winter Trail remained constant from 1989 and 1991, respectively, until the State Board of Game (BOG) added the unit wide August 20 to August 28 spike-fork season in 1995, and the Federal Subsistence Board followed suit in 1996. In 1998, the BOG opened the Unit 12 spike-fork season on August 15 — five days earlier. In 1999, the Federal Subsistence Board aligned the Federal regulations with the more liberal state-hunting season. In March of 2000, the BOG considered and adopted a proposal, submitted by the Alaska Department of Fish and Game (ADF&G),

which changed the State's Unit 12 moose hunting seasons and harvest limits. These changes included elimination of all spike-fork seasons in Unit 12.

Due to conservation concerns expressed by the ADF&G and staff of the Tetlin National Wildlife Refuge, the Eastern Interior Regional Advisory Council submitted Proposal WP01-41 requesting changes to the dates of the fall season and the removal of the August spike-fork season from a portion of Unit 12. The Board adopted the proposed regulations for the 2001–2002 regulatory year for the Tetlin National Wildlife Refuge portion of Unit 12 (FWS 2001). In May 2003, the Board adopted Proposal WP03-45 (FWS 2003), which established the current dates for the fall moose season and aligned with BOG actions eliminating the spike-fork season, in 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 Canadian border. In 2007, the Board adopted WP07-57 with modification, which requested a change in the winter season dates. The Board adopted the Eastern Interior Regional Advisory Council's recommendation of November 20 – December 10.

State Management Goals and Objectives Unit 12 moose (Gross 2008):

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem.
- Continue sustained opportunities for subsistence use of moose
- Maximize sustained opportunities to participate in hunting moose.
- Maximize opportunities for the non-consumptive use of moose.

Management Objective

- Maintain a minimum post hunting ratio of at least 40 bulls:100 cows east of the Nabesna River, and a minimum of 20 bulls:100 cows in the remainder of the unit.

Intensive Management Objectives

- Population: 4000–6000 moose.
- Harvest: 250–450 moose annually.

Biological Background

The Unit 12 moose population is considered to be of low density and relatively stable (Gross, 2011). The latest moose survey in the Tetlin NWR and adjacent areas in Wrangell-St. Elias Preserve affected by the proposal was conducted in 2008. From that survey, the moose population was estimated to be 1,843 animals, at a density of 0.62 moose per square mile (**Table 1**). Between 2004 and 2008, the ratio of calves per 100 cows declined from 47.8 to 24.5 and the ratio of yearling bulls per 100 cows declined from 16.2 to 14.

In the Tetlin NWR portion of the unit, the bull/cow ratio has been relatively high, with a range of 60–90 bulls/100 cows, in surveys conducted since 1990, so management objectives have consistently been met in the Tetlin NWR portion of Unit 12.

Harvest History

All hunters utilize a State harvest ticket for the Federal and State fall moose seasons on the Tetlin NWR. The reported harvest on the Tetlin NWR averaged 12 moose per year from 1991 to 2010, with a range of

Table 1. Observed and estimated moose population from aerial surveys on Tetlin National Wildlife Refuge and adjacent areas in Unit 12; 1990, 2000-2001, 2003-2004 and 2008 (Keller et. al. 2009)

	Year					
	1990	**2000**	**2001**	**2003**	**2004**	**2008**
Moose Observed						
Yearling Bulls	49	14	33	30	24	56
Bulls 30-50 inches	94	44	65	71	45	90
Bulls 50+ inches	74	43	81	117	76	73
Cows with no calves	260	93	159	174	119	257
Cows with one calf	48	31	58	76	65	71
Cows with two calves	4	4	4	6	12	5
Total bulls	217	101	179	218	155	219
Total cows	312	128	221	256	196	333
Total calves	56	39	66	89	89	81
Total moose	585	268	466	563	437	633
Population Estimates *						
Total Moose	1,339	844	1,411	1,317	1,272	1,843
Density (moose/mi²)	0.36	0.28	0.48	0.45	0.43	0.62
Percent Cows	43.8	45.7	49.1	46	45.8	52.7
Percent Calves	11.1	15.6	16.3	15.1	21.9	12.7
Percent Yearling Bulls	8.1	4.3	8	7	7.4	7.3
Percent Bulls	28.9	38.6	36.7	41.1	31.9	32.3
Bulls/100 Cows	71.2	84.4	74.8	89.4	69.8	61.7
Yearling Bulls/100 Cows	15.4	9.5	16.4	15.3	16.2	14
Calves/100 Cows	21.9	34	33.2	32.8	47.8	24.5

* 1990 estimates computed from MOOSEPOP (Reed 1989). All other estimates from spatial analysis (Ver Hoef 2000, 2001)

4 to 23 (**Table 2**). It should be noted that reporting has been poor for several years and it is suspected that out-of-season harvest takes place (Gross, 2011).

The winter moose season is for Federally qualified users only and is prosecuted under a Federal registration permit. Since 2000, an average of 24 permits have been issued per year, with an average of 7 people actually hunting per year (**Table 3**). To date, there has been no reported harvest of moose in the winter season.

Effects of the Proposal

If the proposal were adopted, the falls season dates would change from August 24–28 and September 8–17 to August 24–September 20 and the winter season dates would change from November 20–

Table 2. Reported moose harvest on Tetlin NWR and WRST Preserve in the affected area (UCU 404, 801, 802, 901, 903 and 12ZY001002) with State green harvest ticket, fall season, regulatory years 1990–1991 through 2009–2010 (Berg, pers. comm., based on ADF&G data, 2011; FWS 2011).

	Successful hunters			
Regulatory year	Local[a] residents	Non Local residents	Non residents	Harvest Total
1990–1991	1	2	2	5
1991–1992	3	3	2	8
1992–1993	4	2	1	7
1993–1994	1	2	1	4
1994–1995	4	3	5	12
1995–1996	5	2	1	8
1996–1997	4	3	3	10
1997–1998	4	3	4	11
1998–1999	10	1	0	11
1999–2000	7	3	2	12
2000–2001	6	2	4	12
2001–2002	10	5	2	17
2002–2003	3	7	8	18
2003–2004	11	8	5	24
2004–2005	4	6	2	12
2005–2006	4	10	5	19
2006–2007	5	7	4	16
2007–2008	6	9	5	20
2008–2009	9	6	5	20
2009–2010	4	5	4	13

[a] Residents of Unit 12, 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

December 10 to November 1–March 31, which would provide an additional 14 days of harvest opportunity in the fall season and an additional 130 days in the winter season.

All users hunting in the Tetlin NWR and the northeast corner of Wrangell-St. Elias Preserve portion of Unit 12 would be required to utilize a joint State-Federal registration permit on Federal lands for the fall season instead of a State green harvest ticket. Note: If the proposed joint permit were adopted by the Federal Subsistence Board at its scheduled January 2012 meeting, it would likely need to be contingent upon positive action (adoption) by the Board of Game, which is scheduled to meet in March 2012 for Unit 12 (Region III).

There would likely be an increase in the number of moose harvested, due to longer fall and winter seasons.

Table 3 Unit 12 Moose Harvest data, Federal only winter season, 2000–2009 (FWS 2011)

Regulatory Year	Permits Issued	Permits Hunted	Number Harvested	Male	Female	Unkn Sex	Percent Success	Days Hunted	CPUE*
2000	6	4	0	0	0	0	0	9	0
2001	25	11	0	0	0	0	0	19	0
2003	32	5	0	0	0	0	0	14	0
2004	33	6	0	0	0	0	0	19	0
2005	28	8	0	0	0	0	0	19	0
2006	11	4	0	0	0	0	0	10	0
2007	41	9	0	0	0	0	0	29	0
2008	46	12	0	0	0	0	0	37	0
2009	20	9	0	0	0	0	0	27	0
Total	242	68	0	0	0	0	0	183	0

*No. of moose harvested per 100 days of effort

OSM CONCLUSION

Support Proposal WP12-71 and **Support** Proposal WP12-72 **with modification** to extend the winter season only to February 28, not March 31, and to create a joint State-Federal registration for the fall season only.

The modified regulations would read:

Unit 12 — Moose

Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull. ***The fall season is by joint State-Federal registration permit.*** *The Nov.~~–Dec.~~* ***Feb****. season is open by Federal registration permit only.*	*Aug. 24~~–Aug. 28~~* *~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28***

Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.

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 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Justification

Federally qualified subsistence users would be provided an additional 113 days of harvest opportunity in the affected portion of Unit 12, with more days to hunt without competition from other users. The ratio of bulls per 100 cows in the affected area is well above the management objective and the population appears healthy enough to allow for a few more bulls to be harvested. The joint permit for the fall season would allow managers to monitor the harvest and address conservation concerns if they arise. There has been no reported harvest in the winter season (2000–2009) and the extended season is not anticipated to increase the harvest significantly. A joint State-Federal registration permit for the winter season is unnecessary, as the State has no winter moose season in the affected portion of Unit 12. The winter season end date modification of February 28 is a result of the updated request from the proponent (see page 1).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP12-71/72 **with modification** suggested by the OSM. The Council finds no conservation concerns and notes that the proposals will provide additional subsistence harvest opportunity.

Eastern Interior Subsistence Regional Advisory Council

Support WP12-71/72 **with modification** suggested by OSM. In addition, modify to require a single Federal registration permit, rather than a joint State-Federal registration permit, for the fall and winter seasons.

The modified regulation should read:

Unit 12 — Moose

Unit 12—that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake —1 antlered bull ***by Federal registration permit.*** *~~The Nov.–Dec. season is open by Federal registration permit only~~.*	*Aug. 24~~–Aug. 28~~ ~~Sept. 8–Sept. 17~~* ***–Sept. 20*** *Nov.* ***1*** *~~20–Dec. 10~~* ***–Feb. 28***
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 antlered bull.	*Aug. 24–Sept. 30*
Unit 12 remainder—1 antlered bull; however, during Aug. 14–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

INTERAGENCY STAFF COMMITTEE COMMENT

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. The ISC notes that the Eastern Interior Regional Council recommendation further modifies the proposal to proceed using a Federal registration permit only, rather than await future Alaska Board of Game action to potentially endorse a joint State-Federal permit. The ISC agrees that if the Eastern Interior RAC recommendation is supported, subsistence users could use one Federal registration permit for both the fall and winter hunts, rather than needing a joint State/Federal permit for the fall hunt and a separate Federal registration permit for the winter hunt.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-71: This proposal requests liberalizing the federal subsistence fall moose hunting season dates in Unit 12. The proposal also requests development and requirement of a joint State-Federal registration permit. The portion of Unit 12 impacted by this proposal is not clearly stated but these comments will only address that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake.

Introduction: This proposal was submitted to change the federal subsistence moose hunting fall season dates in Unit 12 by changing the current two separate seasons into one longer season. If adopted, the Unit 12 federal subsistence fall hunting season would change from August 24 through August 28 and September 8 through September 17 to August 24 through September 20. The proponent indicates the current federal subsistence season does not benefit federally qualified users. The proponent indicates changing the current split season into one continuous season and adding liberalizing the hunting season by an additional 13 days would make it easier for federal subsistence users to harvest a moose. The proponent also indicates adoption of this proposal will legalize the current illegal out of season harvest by federal subsistence users between the existing seasons.

The proposal also requests requiring a joint State-Federal registration permit instead of the currently required state harvest ticket. While requiring a registration permit could improve harvest reporting accuracy, it is likely to create confusion among state hunters hunting along the main river corridors in this area, which pass in and out of the Tetlin NWR along their length. Requiring a registration permit on the Tetlin NWR would require state hunters to possess both a harvest ticket and a registration permit to hunt the entire length of these rivers.

Impact on Subsistence Users: Adoption of this proposal will result in a combination of 13 additional days of opportunity for federal subsistence users by opening the currently closed 12-day period between seasons and extending the season end date by three days. Adoption of this proposal will also require federal subsistence users to obtain a joint state-federal registration permit.

Opportunity Provided by State: State regulations for that identified area of Unit 12 follow:

> Resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from August 24 through August 28 or September 8 through September 17.
>
> Resident hunters who choose to participate in the community hunt are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by community harvest permit (CM300) from September 8 through September 17.

Non-resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from September 8 through September 17.

Conservation Issues: None. The most recent moose survey in this area was conducted in fall of 2008 by the Tetlin NWR, in coordination with ADF&G. The moose population estimate in this survey area increased from 844 moose in 2000 to 1,843 in 2008. The bull:cow ratio in 2008 was 61.7 bulls:100 cows, indicating hunting was likely having little if any impact on the population. The calf:cow ratio in 2008 was 24.5 calves:100 cows. The fall harvest on the Tetlin Refuge during 2002-2010 was 12-32 bull moose, with an average harvest of 20 bulls per year. The annual moose harvest on the Tetlin Refuge is likely to increase by 5-10% (1 to 2 bulls) with the proposed changes but is unlikely to impact the moose population.

Enforcement Issues: Adoption of this proposal will create divergent federal and state moose hunting season dates which will increase enforcement issues in areas with mixed land ownership. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 12 to ensure hunters are not hunting out of season on non-federal public lands.

Recommendation: Oppose. The State supports alignment of state and federal seasons whenever possible to reduce hunter confusion and enforcement issues. If the proposal is adopted, the state recommends the hunt be administered through a federal registration permit on the Tetlin NWR only in an effort to reduce enforcement issues and confusion among state hunters.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-72: This proposal requests significant liberalization of the federal subsistence inter moose hunting season dates in Unit 12. This proposal, in conjunction with WP12-71, also requests development and requirement of a joint State-Federal registration permit. The portion of Unit 12 impacted by this proposal is not clearly identified but these comments will only address that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake because it is the only are with an existing federal subsistence moose hunt within Unit 12.

Introduction: This proposal was submitted to liberalize the federal subsistence moose hunting winter season dates by extending the season for 120 days per year. The proposed season date changes for federal subsistence moose hunting season in the identified area of Unit 12 is from November 20 through December 20 to November 1 through March 31 (487% increase).
The proponent indicates the proposal is necessary because moose seasonally move off of federal public lands to higher elevations during the current federally subsistence moose hunting winter season dates. The proponent indicates starting the season 20 days earlier in November will provide some opportunity to harvest moose that have not migrated off of federal public lands and extending the season end date by 89 days will allow opportunity to harvest moose that have migrated back onto federal public lands. Additionally, the proponent indicates extending the season into March will increase snowmachine access to parts of federal public lands that have received little hunting in the past due to inaccessibility without good snow conditions.

The proposal also requests requiring a joint State-Federal registration permit instead of the currently required state harvest ticket. While requiring a registration permit could improve harvest reporting accuracy with no state season during this period it is not necessary to have a joint permit.

Impact on Subsistence Users: Adoption of this proposal will result in a significant increase in additional days of opportunity for federal subsistence users to harvest moose. Adoption of the proposal could allow federal subsistence users access to moose in areas and times of year previously unavailable. Adoption of this proposal will also require federal subsistence users to obtain a joint state-federal registration permit.

Additionally, bull moose shed their antlers by late December and if this proposal is adopted, little of any additional harvest opportunity will be provided to federal subsistence users targeting antlered moose during the months of January through March.

Opportunity Provided by State: State regulations for that identified area of Unit 12 follow:

> Resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from August 24 through August 28 or September 8 through September 17.

Resident hunters who choose to participate in the community hunt are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by community harvest permit (CM300) from September 8 through September 17.

Non-resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from September 8 through September 17.

Conservation Issues: None. The most recent moose survey in this area was conducted in fall of 2008 by the Tetlin NWR, in coordination with ADF&G. The moose population estimate in this survey area increased from 844 moose in 2000 to 1,843 in 2008. The bull:cow ratio in 2008 was 61.7 bulls:100 cows, indicating hunting was likely having little if any impact on the population. The calf:cow ratio in 2008 was 24.5 calves:100 cows. The fall harvest on the Tetlin Refuge during 2002-2010 was 12-32 bull moose, with an average harvest of 20 bulls per year. The annual moose harvest on the Tetlin Refuge is likely to increase by 5-10% (1 to 2 bulls) with the proposed changes but is unlikely to impact the moose population.

Enforcement Issues: Adoption of this proposal will expand divergent federal and state moose hunting season dates which will increase enforcement issues in areas with mixed land ownership. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 12 to ensure hunters are not hunting out of season on non-federal public lands.

Recommendation: The State recommends retaining the current fall season dates to align regulations and reduce user confusion. State and federal managers are in agreement to leave the federal permit in place rather than adopt a joint permit.

WRITTEN PUBLIC COMMENTS

Support Proposals WP12-71/72 **as modified** in the OSM staff recommendation (winter season ending February 28). There is not a conservation concern for moose in this part of Unit 12, and extending the season will benefit subsistence users by providing additional opportunity. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-75 Executive Summary	
General Description	Proposal WP12-75 requests that the fall moose harvest season be changed from August 24 – September 25 to August 20 – September 30 in a portion of Unit 20E, to match the existing season in another portion of the unit, and that the end date of the season in the remainder portion of the unit be extended to September 30. *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee*
Proposed Regulation	**Unit 20E — Moose** *Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull* — *Aug. 20 –Sept. 30* *Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull* — *Aug. ~~24~~**20**–Sept. ~~25~~**30*** *Unit 20E remainder—1 bull by joint Federal/State registration permit only.* — *Aug. 24–Sept. ~~25~~ **30***
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-75 **with modification** to leave the Unit 20E remainder season dates unchanged. The modified regulation should read: **Unit 20E — Moose** *Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull* — *Aug. 20 –Sept. 30* *Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull* — *Aug. ~~24~~**20**–Sept. ~~25~~**30*** *Unit 20E remainder—1 bull by joint Federal/State registration permit only.* — *Aug. 24–Sept. 25*
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP12-75 **with Modification.** The department supports a season end date of September 25th for GMU 20E Remainder which is road system accessible.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-75

ISSUE

Proposal WP12-75, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests that the fall moose harvest season be changed from August 24 – September 25 to August 20–September 30 in a portion of Unit 20E, to match the existing season in another portion of the unit, and that the end date of the season in the remainder portion of the unit be extended to September 30.

DISCUSSION

The proponent is requesting that the dates of the Federal fall moose season for Bureau of Land Management administered lands in Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage, be changed to August 20–September 30 to match the season dates in the portion of Unit 20E within the Yukon-Charley Rivers National Preserve (Preserve). The proponent states that adoption of this proposal would benefit Federally qualified subsistence users by providing an additional 9 days to hunt moose in the affected area and would also align fall season dates in the portions of Unit 20E off the road system on Federal lands.

Existing Federal Regulations

Unit 20E — Moose

Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull	*Aug. 20 –Sept. 30*
Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull	*Aug. 24–Sept. 25*
Unit 20E remainder—1 bull by joint Federal/State registration permit only.	*Aug. 24–Sept. 25*

Proposed Federal Regulations

Unit 20E — Moose

Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull	*Aug. 20 –Sept. 30*
Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull	*Aug. ~~24~~**20**–Sept. ~~25~~**30***
Unit 20E remainder—1 bull by joint Federal/State registration permit only.	*Aug. 24–Sept. ~~25~~ **30***

Existing State Regulations

Unit 20E — Moose

Unit 20E drainages of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage	*Resident: One bull*	*Harvest permit*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 20E remainder	*Resident: One bull by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865*	*RM865*	*Aug. 24–Aug. 28* *Sept. 8–Sept. 17*
	OR		
	Resident: One bull by permit in the Ladue River Controlled Use Area	*DM794 / 796*	*Nov. 1–Nov. 30*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit available in person in Tok, Delta Junction, Eagle and Fairbanks beginning Aug. 18; may not possess RC860 at the same time as RM865	*RM865*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20E; 4% Bureau of Land Management managed lands and 20% National Park Service managed lands (**Map 1**).

Customary and Traditional Use Determination

Rural residents of Unit 20E, Unit 12 (north of Wrangell-St. Elias National Preserve), Circle, Central, Dot Lake, Healy Lake and Mentasta Lake have a positive customary and traditional use determination for moose in Unit 20E.

Regulatory History

In 2000, the Alaska Board of Game created registration hunt RM865 in Unit 20E (excluding the Middle Fork Fortymile River) and split the moose season into two periods: August 24–28 and September 8–17, except within the Yukon River drainage, where the season became August 24–28 and 5–25 September. The Alaska Board of Game also stipulated that a hunter could hunt both moose (RM865) and caribou (RC860), but not hold a registration permit for both species at the same time. These actions were in response to increased moose harvest, due to increasing numbers of caribou hunters in most of Unit 20E, and were designed to stabilize the moose harvest to maintain the bull:cow ratio within the management objective (listed below).

In 2002, the Alaska Board of Game reduced the season within the Yukon River drainage to match the season in the remainder of Unit 20E (August 24–28 and September 8–17).

Prior to the 2004–2005 regulatory year, the Alaska Board of Game changed to the present area descriptions (listed above in State regulations), from the previous area descriptions of **"***Unit 20E draining into the Middle Fork of the Fortymile River upstream from the drainage of the North Fork Fortymile River"* and *"Remainder of Unit 20E."* The seasons and bag limits did not change.

In 2006, the Alaska Board of Game identified the entire Unit 20E moose population as being important for providing high levels of human consumptive use under the Intensive Management law (AS 16.05.255[e]–[g]), and applied the intensive management objectives to the entire unit. From 2000 to 2005, these intensive management objectives only applied to the moose populations within the drainages of the Fortymile and Ladue rivers.

In February 2010, the Eastern Interior Alaska Subsistence Regional Advisory Council deliberated wildlife proposal WP10-101, submitted to the Federal Subsistence Board, and recommended breaking out the proposed single, all-encompassing Unit 20E area description into three area descriptions to retain the Yukon-Charley Rivers National Preserve portion and to closely align the other two portions with State regulations for purposes of permit administration and harvest reporting. The Board adopted the Council's recommendation and the (current) regulations were effective 1 July 2010.

Unit 20E State Management Goals and Objectives for moose (Gross 2008):

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem
- Continue sustained opportunities for subsistence use of moose
- Provide for a sustained harvest and promote moose habitat enhancement by allowing natural fires to alter vegetation.

Management Objective

- Maintain a post hunting ratio of at least 40 bulls:100 cows in all survey areas

Biological Background

The ADF&G conducted moose population estimation surveys in southern Unit 20E, within the Tok West and Tok Central survey areas during 1998—2009, using the geospatial population estimator (GSPE) moose survey technique (Ver Hoef 2001, Kellie and DeLong 2006). The data collected were utilized to determine population trends, herd composition in the survey areas and to estimate moose numbers in the entire unit by extrapolation (**Table 1**).

The highest densities of moose have been in a portion of southern Unit 20E, entirely within the Tok West and Tok Central moose survey areas, including the Mosquito Fork Fortymile River drainage downstream from and including Mosquito Flats, the West Fork Fortymile River drainage and the northern Mount Fairplay — lower Dennison Fork Fortymile River areas, where habitat availability and quality are also highest.

The bull:cow ratio remained above 40 bulls:100 cows (1998–2009), but varied across the unit. In the most popular hunting areas — Nine Mile Trail, Mitchell's Ranch, and along the Yukon River and the Taylor

Table 1. Moose population estimates for portions of Unit 20E using GSPE, fall 1998—2009 (Gross 2008; 2010).

Year	Bulls: 100 Cows	Yearling bulls:100 Cows	Calves: 100 Cows	Percent Calves	Total moose observed	Density moose/mi^2 (90% CI)	Population estimate (90% CI)
1998[a]	64	18	19	10	278	0.56	1,086
1998[b]	59	14	23	14	450	0.62	1,694
1999[a]	80	16	22	10	365	0.47	901
2000[a]	60	11	14	8	561	0.58	1,115
2000[c]	49	11	21	13	347	0.70	1,272
2001[a]	76	9	14	7	531	0.47	915
2001[d]	51	6	10	6	624	0.75	2,026
2002[a]	59	10	25	14	364	0.60	1,166
2002[d]	71	8	20	10	396	0.63	1,707
2003[e]	64	9	15	9	355	0.58	1,128
2003[d]	53	5	11	6	297	0.51	1,379
2004[f]	61	11	26	14	283	0.59	1,435
2004[g]	48	11	23	14	233	0.37	802
2005[f]	55	13	30	16	543	0.73	1,801
2005[g]	48	8	16	10	344	0.50	1,097
2006[f]	39	9	37	20	584	0.98	2,398
2006[g]	46	3	24	14	520	0.45	979
2007[f]	50	11	30	16	503	0.86	2,098
2007[g]	46	11	22	13	440	0.62	1,348
2008[f]	47	11	27	16	509	.83	2040
2008[g]	72	16	31	16	356	.72	1571
2009[f]	63	18	34	18	585	1.00	2445
2009[g]	51	11	25	14	461	0.68	1471

[a] Tok West Survey Area, 1,932 mi$^{2)}$ sampled
[b] Tok Central Survey Area, 2,750 mi$^{2)}$ sampled
[c] Tok Central Survey Area, 1,821 mi$^{2)}$ sampled
[d] Tok Central Survey Area, 2,703 mi$^{2)}$ sampled
[e] Tok West Survey Area, 1,944 mi$^{2)}$ sampled
[f] Tok West Survey Area, 2,452 mi$^{2)}$ sampled
[g] Tok Central Survey Area, 2,178 mi$^{2)}$ sampled

Highway — bull populations were noticeably lower, but still the bull:cow ratio remained ≥ 40 bulls:100 cows (**Table 1**) (Gross 2008; 2010).

Twinning rates in the southern portion of Unit 20E were moderate at 24–30% in 2004, 2005 and 2007, but higher in 2006 at 47% (Gross 2008). These twinning rates indicate that nutritional status is adequate to support an increase in the moose population (Boertje et. al. 2007).

Harvest History

Between 1998 and 2009, the reported number of hunters in Unit 20E averaged 647 per year, with a range of 472–913 (**Table 2**). The reported harvest averaged 144 moose per year, with a range of 95–174 (**Table 3**). Illegal harvest is estimated at 5–10 moose per year (Gross 2008).

Table 2. Unit 20E reported moose hunter residency and success, regulatory years 1998–1999 through 2006–2009 (Gross 2008; 2010)

	Successful hunters					Unsuccessful hunters					
Regulatory Year	Local[a] Res	Non Local Res	Non Res /Uknwn	Total (%)		Local[a] Res	Non Local Res	Non Res /Unkwn	Total (%)		Total Hunters
1998–1999	47	91	12	150	(32)	76	205	39 / 2	322	(68)	472
1999–2000	36	77	17 /1	131	(23)	98	299	30 / 4	431	(77)	562
2000–2001	36	84	15	135	(26)	98	255	33 / 1	387	(74)	522
2001–2002	33	88	16 /1	138	(19)	222	323	58 / 4	607	(81)	745
2002–2003	29	119	20 /1	169	(18)	200	449	92 / 3	744	(82)	913
2003–2004	21	81	26 /1	129	(16)	143	448	74 / 4	669	(84)	798
2004–2005	20	55	19	94	(19)	102	238	47 / 3	390	(81)	484
2005–2006	25	83	29	137	(22)	129	311	58 / 1	499	(78)	636
2006–2007	27	85	18	130	(19)	131	364	68 / 2	565	(81)	695
2007–2008	25	107	12	144	(19)	141	374	90	605	(81)	749
2008–2009	26	130	23	179	(23)	134	375	81	591	(77)	770

[a] Residents of Unit 12 and Unit 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

Effects of the Proposal

If the proposal were adopted, the fall season dates in portions of Unit 20E would be changed to August 20–September 30. This aligns Federal regulations in those portions of Unit 20E off the road system on Federal lands.

If adopted, this proposal would provide an additional 9 days of harvest opportunity for Federally qualified subsistence users in the portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage; more days to hunt without competition from non-subsistence users. Federally qualified subsistence users would also be provided an additional 5 days of harvest opportunity in Unit 20E remainder.

Table 3. Unit 20E reported moose harvest, regulatory years 1998–1999 through 2008–2009 (Gross 2008; 2010)

Regulatory	General and registration				Drawing permits			TOTAL
Year	Bulls	Cows	Unk	Total	DM794	DM796	Total	
1998–1999	145	0	5	150	1	10	11	161
1999–2000	127	0	4	131	3	9	12	143
2000–2001	135	0	0	135	2	6	8	143
2001–2002	137	0	1	138	5	3	8	146
2002–2003	169	0	1	170	1	3	4	174
2003–2004	129	0	0	129	0	0	0	129
2004–2005	93	0	1	94	1	0	1	95
2005–2006	137	0	0	137	1	0	1	138
2006–2007	129	1	0	130	0	0	0	130
2007–2008	144	0	0	144	0	0	0	144
2008–2009	176	0	0	176	1	2	3	179

There would likely be an increase in the number of moose harvested, due to the season extending into the rut, when moose are more vulnerable. The population appears healthy enough to allow for a few more bulls to be harvested.

OSM CONCLUSION

Support Proposal WP12-75.

Justification

The fall season dates would become uniform for Federally qualified subsistence users in those portions of Unit 20E off the road system.

Federally qualified subsistence users would be provided an additional 9 days of harvest opportunity in the affected portion of Unit 20E (outside the Preserve), and 5 more days to hunt in Unit 20E remainder without competition from non-subsistence users.

The population appears healthy enough to allow for a few more bulls to be harvested.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP12-75. The Council finds no conservation concerns and it will benefit those residents of the region with customary and traditional use determinations.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-75 **with modification** to leave the Unit 20E remainder season dates unchanged. The Council sees no conservation concerns and feels that the proposal provides consistency among multiple hunts.

The modified regulation should read:

Unit 20E — Moose

Unit 20E—that portion within Yukon-Charley Rivers National Preserve—1 bull	*Aug. 20 –Sept. 30*
Unit 20E—that portion drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage—1 bull	*Aug. ~~24~~**20**–Sept. ~~25~~**30***
Unit 20E remainder—1 bull by joint Federal/State registration permit only.	*Aug. 24–Sept. 25*

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-75: This proposal would extend the federal subsistence moose season in portions of Unit 20E.

Introduction: This proposal would lengthen the recently liberalized federal subsistence moose season in that portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage from August 24 through September 25 to August 20 through September 30 (27% increase). If adopted, this proposal would also lengthen the federal subsistence moose hunt in Unit 20E Remainder from August 24 through September 25 to August 24 through September 30 (15% increase). The proponent indicates adoption of this proposal would provide greater opportunity and time for federally qualified subsistence moose hunters in this area. The proponent also indicates adoption of this proposal would match the season closure dates for all of Unit 20E as well as the start date for two of the three areas.

Impact on Subsistence Users: Extending the federal subsistence moose hunting season in August and September in the portion of Unit 20E drained by the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage would likely increase the Unit 20E moose harvest by federally qualified subsistence users by a few moose annually, as would extending the end of the season an additional 5 days for the Unit 20E Remainder.

Opportunity Provided by State: The state moose hunting regulations for the applicable portions of Unit 20E follows:

> Residents are allowed on bull by harvest ticket for that portion of 20E consisting of the drainages of the Middle Fork of the Fortymile River upstream from and including the Joseph Creek drainage from August 24 through August 28 or from September 8 through September 17. Non-residents may take one bull with 50-inch anglers or with 4 or more brow tines on one side between September 8 and September 17.
>
> Residents are allowed one bull by registration permit (RM865) for Unit 20E Remainder from August 24 through August 28 or from September 8 through September 17 or one bull by drawing permit (DM796) in the Ladue River Controlled Use Area from November 1 through November 30. Non-residents may harvest one bull with 50-inch antlers or antlers with 4 or more brown tines on at least one side by registration permit (RM865) from September 8 through September 17.

Conservation Issues: The proposed liberalization of the August season would likely increase the Unit 20E moose harvest by federally qualified subsistence users by a few moose annually likely without an effect on the moose population. Federal subsistence moose hunting season liberalizations occurred in 2010 which resulted in a harvest of

three additional moose. Although very little federal public land exists in Unit 20E, these lands are easily accessible from the road system where there has been a recent unprecedented increase in permit applications, over 200 in the past few years.

Enforcement Issues: Differing federal and state season dates present enforcement complications. An open federal subsistence season during a state season closure could allow a hunter to harvest a moose on state land when the season is closed and claim it was taken on federal land.

Other Comments: The department supports these season extensions, but recommends close monitoring of the harvest over the next several years until impact of the change is more fully understood.

Recommendation: Support with Modification. The department supports a season end date of September 25th for GMU 20E Remainder which is road system accessible.

WP12-76 Executive Summary	
General Description	Proposal WP12-76 requests that the Red Sheep and Cane Creek drainages be closed to non-Federally qualified users during the Aug. 10 – Sept. 20 portion of the season in the Arctic Village Sheep Management Area (AVSMA) of Unit 25A. *Submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council*
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~~, 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*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Support**
North Slope Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-76

ISSUES

Proposal WP12-76, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests that the Red Sheep and Cane Creek drainages be closed to non-Federally qualified users during the Aug. 10 – Sept. 20 portion of the season in the Arctic Village Sheep Management Area (AVSMA) of Unit 25A.

DISCUSSION

The proponent states that the Red Sheep Creek and Cane Creek drainages are important subsistence and cultural areas for residents of Arctic Village and that the influx of non-Federally qualified hunters into these drainages has interfered with the traditional uses and practices of Arctic Village 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 nonsubsistence uses. The Secretaries have empowered the Federal Subsistence Board (Board) to implement Title VIII of ANILCA, and as such, may restrict use to continue subsistence uses. 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 [emphasis added];

The Board may reopen public lands to non-Federally qualified users if new information or changed conditions indicate that the closure is no longer warranted.

Existing 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, 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~~, 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*

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. 22. 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. No motorized access from the Dalton Highway.	*Oct. 1 – Apr. 30*
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**).

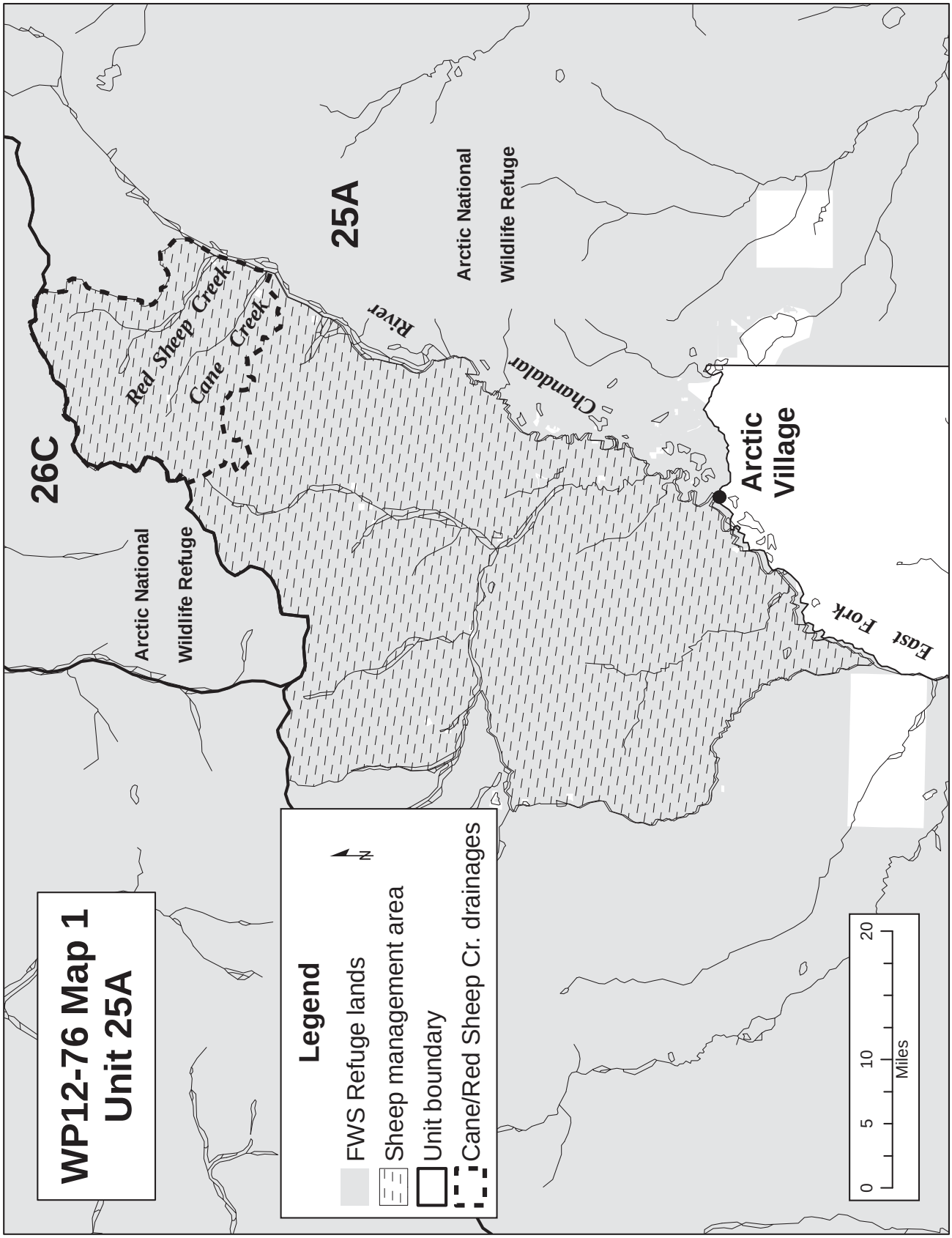
Customary and Traditional Use Determinations

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 establishment of the AVSMA and the opening and closing of the Red Sheep and Cane Creek drainages to non-Federally qualified users have been before the Federal Subsistence Board nine times since 1991 (see **Appendix A** for a listing of proposals). Residents of Arctic Village have been trying to keep the Red Sheep Creek and Cane Creek drainages area of the AVSMA closed to non-Federally qualified subsistence users, while other user and interest groups have been trying to keep it open. The issue has been contentious.

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). More recently, Proposal WP06-57, submitted by Alaska Department of Fish and Game (ADF&G), requested removal of the Federal closure within the AVSMA. The Board rejected the proposal in May 2006, but requested that the Arctic National Wildlife


WP12-76 Map 1
Unit 25A
Legend
FWS Refuge lands
Sheep management area
Unit boundary
Cane/Red Sheep Cr. drainages
N
0
5
10
20
Miles
26C
25A
Arctic National
Wildlife Refuge
Arctic National
Wildlife Refuge
Red Sheep Creek
Cane Creek
Chandalar
River
Arctic
Village
East Fork

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 to all but Federally qualified users in the AVSMA 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 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).

For additional regulatory history on this closure see **Appendix A**.

Biological Background

The current ADF&G management objectives for the Unit 25 sheep population are to manage for a harvest of Dall sheep rams with full-curl or larger horns (Caikoski 2008).

Surveys were conducted in 2006, 2007, and 2008 within the Red Sheep and Cane Creek areas that are within the AVSMA, but as of 2007, are no longer closed to non-Federally qualified users. Densities of sheep varied: 1.7 sheep/mile^2 in 2006 (Payer 2006) and 0.8 sheep/mile^2 in 2007 (Brackney and Payer 2007). Densities may have differed due to differing survey areas associated with mineral licks that could have attracted sheep from outside the survey unit (Wald 2010, pers. comm.). 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.

In 1991, 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 and 2007. 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).

The Dall sheep population in the Red Sheep and Cane Creek drainages may have declined between 1991 and 2007, while the trend for the southern part of the AVSMA is unknown. However, 2008 composition data indicated good production (Payer 2008). Anecdotal reports from hunters suggest that sheep populations in the area continue to be relatively low, corroborating survey results presented above (USFWS 2010).

Harvest History

Arctic National Wildlife Refuge staff 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, a not uncommon phenomenon for 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).

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.).

Cultural 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 tie to 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

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).

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 and Proposal 54 in 1994) pointed to regular use of these drainages by residents of Arctic Village (USFWS 1993 and 1995). In the final report for a Fisheries Resource Monitoring Program project, Gustafson discusses the importance and continued use of the Red Sheep Creek Area for sheep hunting (USFWS 2004). Testimony by Arctic Village residents in 2006, 2007, and as recently as 2011 at the Eastern Interior Regional Advisory Council meeting about hunting in the Red Sheep and Cane Creek drainages demonstrates continued (though sporadic) hunting. 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.).

A story about how Red Sheep Creek was named illustrates the link between subsistence and religious practices and beliefs among the Gwich'in of Arctic Village. It also underlies the importance of this area to local people. The story relates Red Sheep Creek to the Episcopalian Church, a primary influential factor in establishing Arctic Village, and also sheds some light on why Arctic Village residents consider Red

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 Unknown	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

Sheep Creek a revered place (Dinero 2007, 2011 pers. comm.). The story begins that people were hungry and one day at the church someone spotted something moving in the brush. People thought they saw caribou, but upon closer inspection the people realized they were sheep. They were not just any sheep, but these sheep had red stripes, 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.). It is significant that the story of the red sheep links a prestigious subsistence resource (sheep) to traditional and modern beliefs and practices (i.e., the Church and hunting sheep along Red Sheep Creek). This demonstrates the complementary nature of subsistence to place, tradition, culture, and modern beliefs.

Because of the importance of this area to residents of Arctic Village, they have repeatedly argued that it should remain closed to non-Federally qualified users. They feel strongly that these lands are theirs, and that access should be limited. As one Arctic Village resident stated at a public meeting in 2006, “Those are our traditional lands, our traditional homelands, our traditional hunting grounds that our fathers and forefathers have hunted for generations and generations” (EIRAC 2006:130). Arctic Village residents have also long argued that the presence of non-Federally qualified users has affected their access and reduced their harvest opportunities (EIRAC 2006, 2011a; FSB 1991, 1995, 1995, 2006, and 2007; USFWS 1993, 1995, 1996, 2006, 2007; Swaney 2011, pers. comm.; Gilbert 2011, pers. comm.; John

2011, pers. comm.; and see Appendix A). Arctic Village residents have repeatedly told the Board that they believe that plane traffic and use by non-Federally qualified users has 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). These disturbances have also been related by local residents (Swaney 2011, pers. comm., John 2011 pers. comm., Gilbert pers. comm.). One study corroborates this type of disruption: 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.

In summary, while there are no conservation reasons to close Red Sheep and Cane Creek to non-Federally qualified users, from the perspective of local users there are cultural reasons to do so. Arctic Village residents believe 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 experience in their traditional hunting area, and impairs their ability to successfully harvest sheep.

Other Alternatives Considered

When necessary for the conservation of healthy populations of fish and wildlife or to continue subsistence uses of such populations, the Federal Subsistence Board is authorized to restrict or to close the taking of fish and wildlife by subsistence and non-subsistence users on Federal public lands and waters (ANILCA Sections 804 and 815(3)). The Federal Subsistence Board Policy on closures states "the analysis will identify the availability and effectiveness of other management options that could avoid or minimize the degree of restriction to subsistence and non-subsistence users" (FSB 2007). The Board may reopen public lands to non-subsistence uses if new information or changed conditions indicate that the closure is no longer warranted.

Three alternatives to the closure to non-Federally qualified users were considered, (1) a 10-day season extension for Federally qualified subsistence users, (2) removing the ram restriction to allow for the harvest of any sheep by Federally qualified subsistence users, and (3) establishing a community harvest system.

Extend the season opening by ten days

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.

Harvest of any sheep

The removal of the ram restriction for Federally qualified subsistence users would increase harvest opportunity by providing for a less selective harvest. Federal regulation currently allows for the harvest of two rams within the Unit 25A Arctic Village Sheep Management Area. There is a lack of population and harvest information for sheep in the Red Sheep and Cane Creek drainages, which affects the ability of managers to monitor the impacts of harvesting ewes. In 2008, this population showed good productivity with a ratio of 59 lambs:100 ewes. Thus, it would not be advisable to liberalize a harvest that includes the harvest of ewes, which have a higher reproductive value than rams. In addition, Federally qualified subsistence users currently have more harvest opportunity than non-Federally qualified users as Federal regulations allow for the harvest of two rams, while State regulations have a harvest limit of one ram with full-curl horn or larger.

Establish a community harvest system

The final alternative considered was to establish a community harvest system for sheep in Arctic Village, which could allow Federally qualified users to harvest sheep in a manner more consistent with customary and traditional practices of the village residents. In accordance with Federal subsistence management regulations, 36 CFR 242.26(e)(2) and 50 CFR 100.26(e)(2), "An animal harvested under Federal or State regulations by any member of a community with an established community harvest limit counts toward the community harvest limit for that species." Members of a community with a community harvest system do not have individual harvest limits; all harvests, both State and Federal, are combined for the community. A community harvest system can create a more efficient and less costly hunt, as multiple sheep could be harvested in one trip. A community harvest system might also help to address low compliance with harvest reporting, as typically a hunt administrator would be responsible for ensuring that all harvests are reported.

This alternative was not further considered because a community harvest system should not be implemented without more information on harvests and discussions with members of the community to establish a harvest limit. If the Eastern Interior Regional Advisory Council, Arctic Village residents, and the Arctic Refuge support this alternative, then a community harvest limit should be proposed for consideration by the Federal Subsistence Board.

Summary of New Information Provided at the Eastern Interior Alaska Subsistence Regional Advisory Council

The Eastern Interior Subsistence Regional Advisory Council met on October 11 and 12, 2011 in Fairbanks. A total of 14 people testified in support of Proposal WP12-76; six called in and eight testified in person (EIRAC 2011b: 18-29, 164-167, 314-368). The testifiers were from Arctic Village or had ties to Arctic Village. One other testifier, a sheep-hunting guide, was neutral on the proposal (EIRAC 2011b: 18-29). The testimony supported the information provided in this analysis in the cultural considerations section; however, there was some new information provided in the testimony. A summary of the new information is as follows:

- Community harvest: Two people testified that they would like to see the sheep hunt be a under the community harvest provisions (EIRAC 2011b:342 and 348), one said that "we have asked repeatedly for a community harvest system and the feeling was that the [community harvest system]….would be less threatening" (EIRAC 2011b:348).

- Harvest seasons: An earlier season prior to the State hunt would not solve the problem because it is too warm to hunt sheep during that time period (EIRAC 2011b:349). The preferred time to harvest sheep is after a particular berry turns half red (EIRAC 2011b:349). Sheep meat is only taken in the fall (EIRAC 2011b:338). The Gwich'in name for November means sheep (the name for September means moose, and October means caribou) (EIRAC 2011b:338; 346-347).

- Origin of the name for Red Sheep Creek: The name in Gwich'in for Red Sheep Creek means "my mother's land" (EIRAC 2011b:338-339). There's a red streak in the back of Red Sheep Creek that comes from the red clay, which is high in minerals. The name for Red Sheep Creek comes from the red clay in the area, which the sheep suck. The red rock is used for its medicinal properties. Red Sheep Creek are also used for medicinal purposes. The Gwich'in consider Red Sheep Creek to be special and cannot be replaced by anything else. The medicine is sacred to the Gwich'in (EIRAC 2011b: 319 and 343).

- Origin of the respect for sheep: Red Sheep Creek is sacred to the Gwich'in. The Gwich'in have a special respect for any animal that takes a long time to become an adult, like sheep. Because of this respect, the only time the backdoor of the house is used is when sheep meat is brought into the house (EIRAC 2011b:342).

- Sheep meat is a delicacy and only given to elders: Sheep meat is a delicacy and is only eaten by the elders (EIRAC 2011b:338). One man noted that he was finally old enough to eat sheep, even though he hunted for them many times (EIRAC 2011b:352).

- Uses of sheep: All parts of the sheep are used; there is a "juicy little sack between the big toe and the other toe" that is used like lip gloss and a taste of it can provide energy. The best part of the sheep is the chest. The "skin" is incredibly warm (EIRAC 2011b:344-345).

- Trespassing/ Native allotments: Trespassing and leaving trash on one woman's Native allotment occurred recently (she was there three months prior to the Council meeting) (EIRAC 2011b:337). There are at least three allotments in the Red Sheep Creek area and one airstrip on an allotment (EIRAC 2011b:333 and 342). One man noted that there are three allotments on the map the Refuge provided, but he said there are more than three allotments. Allotments are 160 acres (EIRAC 2011b:343).

Effects of Proposal

If adopted, this proposal would close the Aug. 10 – Sept. 20 sheep hunting season to non-Federally qualified hunters in Red Sheep and Cane Creek drainages. There is a strong concern by Arctic Village hunters that non-Federally qualifies users are interfering with subsistence users' access and ability to harvest of sheep in the area. The closure would eliminate competition with non-Federally qualified users.

Federally qualified users can take rams of any age and are not limited by the full curl restriction required of non-Federally qualified users; however, this may not provide adequate opportunity for the subsistence harvest of sheep if efforts are thwarted by unsuccessful hunts due to non-Federally qualified hunters also seeking the same resource during the same time period

OSM CONCLUSION

Oppose Proposal WP12-76.

Justification

Section 815(3) of ANILCA allows for restrictions on the taking of fish and wildlife for nonsubsistence 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. The proposal under consideration appears to address the subsistence use clause of Section 815(3).

While it is recognized that Red Sheep Creek and Cane Creek are culturally important to the people of Arctic Village and that this is a longstanding issue for the people of Arctic Village, reinstating the Federal closure is not supported by the available biological data or formal harvest data. Although relatively low compared to some areas of the state, sheep densities are more a reflection of the poor habitat quality of the area. The most recent population surveys indicate good productivity of the sheep population. Allowing sheep hunting by non-Federally qualified hunters in these drainages should not have an adverse effect on the population since these users are limited to one full curl ram during the hunting season. Based on the harvest information and population surveys, allowing sheep hunting by non-Federally qualified hunters does not have a measurable effect. A partial harvest of full curl rams would not reduce the productivity of the local sheep population.

In addition, reinstating this closure is not necessary to meet the continued use clause of Section 815(3). Despite past closures to non-Federally qualified hunters and a more liberal subsistence harvest limit, there has been relatively little hunting reported in the Red Sheep and Cane Creek drainages by Arctic Village and other Federally qualified communities. Since subsistence users can take two rams of any age, the number of sheep available to them is much greater than the number of full-curl rams to which non-Federally qualified hunters are limited.

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APPENDIX A. REGULATORY HISTORY FOR UNIT 25A SHEEP.

Regulatory Year Initiated: 1991

Proposal number of initial closure and any subsequent proposals: The establishment of the Arctic Village Sheep Management Area (AVSMA) closed Federal public lands to non-Federally qualified users in 1991. The establishment of the AVSMA did not include the Cane Creek and Red Sheep Creek drainages. OSM was not able to find the original proposal for the establishment of the AVSMA. The Federal Subsistence Board (Board) meeting transcript for June 4, 1991 mentions the establishment of the AVSMA at the "last meeting;" however, the previous Board meeting transcript (December 17, 1990) does not include proceedings regarding the AVSMA.

1991 — Proposal 91-21, submitted by Brooks Range Arctic Hunts, requested that the Board remove the closure restriction to allow for the harvest of sheep by non-Federally qualified users in the closure area. The Board rejected the proposal.

1991 — Proposal 91-25, submitted by the Arctic Village Council, requested that the Board include the drainages of Cane Creek and Red Sheep Creek into the Federal closure area. The Board rejected this proposal.

1993 — Proposal P93-58, submitted by the Arctic Village Council, again requested the Board to include the drainages of Cane Creek and Red Sheep Creek within the Management Area. The Board rejected the proposal on the basis that the drainages of Cane Creek and Red Sheep Creek supported adequate numbers of sheep to provide for both subsistence and nonsubsistence harvest.

1995 — Proposal 95-54, submitted by the Arctic Village Council, again requested the Board to include the drainages of Cane Creek and Red Sheep Creek into the Federal closure area. A representative of Arctic Village told the Board that Cane Creek and Red Sheep Creek drainages contain many allotments and traditional cultural sites and that this area is the key sheep hunting area for the village. The Board was told by the proponents that the issue was one of displacement of the subsistence users because of considerable air traffic causing the sheep to remain high in the mountains where Arctic Village hunters cannot get to them; and because Arctic Village hunters could not compete with nonlocal hunters using more sophisticated equipment such as more powerful scopes and the use of aircraft to track sheep. The Board recognized that the issue was not one of resource abundance, as staff reported the population could support both subsistence and nonsubsistence harvests. The Board tabled the proposal in April 14, 1995 until they could revisit it in June 1995, after the Arctic Refuge staff had worked with Arctic Village residents. The Board adopted the proposal with a commitment to review the issue the following year. Following that Board's decision, the Alaska Department of Fish and Game (ADF&G) submitted a Request for Reconsideration 96-06, which was rejected by the Board.

1996 — Proposal 96-55, submitted by the ADF&G, requested to exclude Cane Creek and Red Sheep Creek from the Federal closure area. The analysis of Proposal 96-55 included the results of an Arctic National Wildlife Refuge monitoring project: In a 30-day period during the previous sheep hunting season, forty-two aircraft events by guides based in Red Sheep Creek, who were guiding hunts in drainages east of Red Sheep Creek, were observed. The Board rejected the proposal, expressing disappointment with the absence of dialogue between the State and Arctic Village.

2005 — A 2005 analysis of the Federal closure of the Unit 25A sheep regulations for the Management Area was conducted by OSM staff. The closure was evaluated using three criteria: 1) How the current

resource abundance is related to the management objectives for the species, 2) the current resource population trend, and 3) the current hunter harvest trend and/or hunter effort. OSM staff reached a preliminary conclusion that there was no current need for the regulatory closure based on the evaluation of the three criteria, and recommended the affected Councils initiate a proposal to modify or eliminate the closure. OSM staff presented the closure review analysis at the fall 2005 Council meetings. The North Slope and Eastern Interior Regional Councils recommended maintaining the closure after reviewing the closure analysis at their fall 2005 meetings. The Councils felt that the information presented in the closure review analysis did not support the need to eliminate the closure.

Justification for original closure (Section 815(3) criteria): The Board established the AVSMA in 1991 in response to concerns raised by residents of Arctic Village, who felt that non-Federally qualified hunters interfered with sheep hunting by Arctic Village residents. In 1995, the Board extended the original boundary of the AVSMA to include the Cane Creek and Red Sheep Creek drainages, but then eliminated these areas from Federal closure in 2007. The Board also established the management area to facilitate better harvest reporting. The AVSMA was established in response to social concerns of Federally qualified users to continue subsistence uses (Section 815(3) criteria), and not in response to any biological concerns about the status and trends in the sheep population.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-76. The Council sees no conservation concerns and finds that the proposal enhances the ability of the residents of Arctic Village to pursue subsistence opportunities and may reduce incidents of trespass and resource damage. The Council appreciated the extensive information provided during public testimony and recognizes the powerful connection between residents of Arctic Village and the subject area as one that is deeply culturally rooted. The Council was compelled by extensive and detailed public testimony.

North Slope Subsistence Regional Advisory Council

Support Proposal WP10-76. The Council supports the closure to non-Federally qualified users. The amount of travel time by rural residents is a concern due to distance required to travel and the cost of fuel. Subsistence users are concerned that non-Federally qualified users are interfering with subsistence uses, particularly the people of Arctic Village.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-76: Reclose a portion of Unit 25A sheep hunt to non-federally qualified users.

Introduction: This proposal requests reclosing the Red Sheep Creek and Cane Creek drainages to non-federally qualified sheep hunters. The proponent indicates recent non-federally qualified hunters have interfered with traditional subsistence uses and practices of Arctic Village residents. The proponent also indicates if this proposal is adopted, trespass issues will be eliminated and the sheep population will retain more of its full-curl rams which contribute to breeding.

Red Sheep and Cane creeks drainages were reopened to non-federally qualified hunters by emergency action (WSA 06-03) in July 2006. The Federal Subsistence Board could not justify maintaining the closure based upon their closure policy.

Impact on Subsistence Users: Little or no effects. Harvest history indicates few of any residents harvest sheep from the Red Sheep Creek and Cane Creek drainages under state or federal subsistence regulations. If adopted, the Residents of Arctic Village will have sole access to these populations of sheep.

Opportunity Provided by State: State sheep hunting regulations for 25A east of the Middle Fork of the Chandalar River follow:

> Unit 25A - One ram with full curl horn or larger with a harvest ticket between August 10 and September 20. Nonresident hunters must be accompanied by a registered guide. or
>
> Three sheep by permit RS595 available online or in person in Fairbanks and Kaktovik beginning September 21 for season between October 1 and April 30. The use of aircraft for access to hunt sheep and transport harvested sheep is prohibited in this hunt except into and out of Arctic Village and Kaktovik airports. No motorized access from Dalton Highway.

Conservation Issues: None

Enforcement Issues: If this proposal is adopted, federal land managers will be responsible for enforcement of this closure.

Other Comments: Section 815(3) of ANLICA authorized a restriction of taking of fish and 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 reason set forth in section 816, to continue subsistence uses of such populations, or pursuant to other applicable law. The sheep populations in Red Sheep Creek and Cane Creek drainages are healthy and can support harvest of both

federally qualified and non-federally qualified users. This closure is not necessary for continuation of subsistence users for the residents of Arctic Village.

Other Alternatives: The department has made a formal agenda change request for 5AAC 90.003 to the Alaska Board of Game for the purposes of introducing a proposal before the Board at its March 2012 meeting to require an orientation class prior to hunting in this area and is currently working with multiple stakeholders to increase awareness for hunting ethics and land status issues.

Recommendation: Oppose.

WP12-61 Executive Summary	
General Description	Proposal WP12-61 seeks to lower the wolf harvest limit in Unit 22 from no limit to 10 wolves. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**Unit 22—Wolf Hunting** ~~*No limit*~~ ***10 Wolves*** *Nov. 1–April 15*
OSM Conclusion	**Oppose**
Seward Peninsula 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 recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-61

ISSUES

Proposal WP12-61, submitted by the Defenders of Wildlife, seeks to lower the wolf harvest limit in Unit 22 from no limit to 10 wolves.

DISCUSSION

Proposal WP12-61 requests that the harvest limit for wolf hunting in Unit 22 be reduced to 10 wolves. The proponent notes that in Unit 22, wolves are vulnerable to tracking, pursuit and shooting by hunters using snowmachines.

Existing Federal Regulation

Unit 22— Wolf Hunting

No limit	*Nov. 1–April 15*

Wolf Trapping

No limit	*Nov. 1–April 30*

Proposed Federal Regulation

Unit 22—Wolf Hunting

~~*No limit*~~ ***10 Wolves***	*Nov. 1–April 15*

Existing State Regulation

Unit 22—Wolf Hunting

20 Wolves	*Aug. 1–April 30*

Wolf Trapping

No Limit	*Nov. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 33% of Unit 22 and consist of 18% Bureau of Land Management (BLM) managed, 11% is National Park Service (NPS) managed and 2% U.S. Fish and Wildlife Service (FWS) managed lands (see **Unit 22 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 21D (north and west of the Yukon River), 22, 23, and Kotlik have a positive customary and traditional use determination to harvest wolves in Unit 22.

Regulatory History

There has been no harvest limit for wolf hunters in Unit 22 since the beginning of the Federal Subsistence Management Program in 1990. Units 25A and 22 are the only units in Alaska that currently have no Federal harvest limit for wolves in the hunting regulations.

The Federal Subsistence Management Program wolf hunting season in Unit 22 extended from August 10–April 30 in 1990. Action taken on a proposal from the Seward Peninsula Subsistence Regional Advisory Council (Proposal 47) changed the wolf hunting season to November 1–April 15 in regulatory year 1995/96. With a trapping license, during trapping season, a trapper may take free ranging wolves with a firearm on BLM and FWS lands of Unit 22. The Federal Subsistence Management Program wolf trapping season in Unit 22 is from November 1–April 15 with no harvest limit. Hunters may take wolves under State regulations on FWS, BLM, and Bering Land Bridge Nation Preserve lands in Unit 22.

The Unit 22 State wolf hunting regulations diverged from Federal regulations beginning with the 1992–1993 regulatory year when the wolf hunting limit was changed to 5 wolves with the season running from August 10–April 30. Beginning in 2008–2009 the Board of Game changed the wolf hunting season in Unit 22 to August 1–May 31 and changed the harvest limit to 20 wolves. No Federal proposals were received to make similar proposals.

Defenders of Wildlife submitted a proposal (Proposal 6) to the Alaska Board of Game requesting a November 1–March 31 season and 10 limit for wolf hunters in Unit 22. At its November 2009 meeting, the Alaska Board of Game rejected that proposal noting that the Unit 22 wolf harvest is currently low and that there are no conservation concerns for wolves in Unit 22 (Ardizzone 2009, pers. comm.).

Two years ago the Alaska Wildlife Alliance submitted a proposal (WP10-81) asking for the very same regulatory change that is requested in the current proposal. WP10-81 was opposed by the Seward Peninsula Regional Advisory Council and rejected by the Federal Subsistence Board.

Biological Background

Wolves (*Canis lupus)* are found throughout Unit 22 and are well adapted to the mountains, tundra, and river valleys of the unit. Unit 22 contains extensive open habitat. Their main prey is caribou; wolves often move toward areas of high caribou concentrations. Other prey species may be used if caribou are not available; these include reindeer, small mammals, moose, hare, and beaver. Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Pups constituted about half of the wolf population each August in a central Brooks Range study area, and these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008). Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in northern Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. Radio collared wolves from other areas of Alaska have been found in Unit 22 (Persons 2006).

The size of the home range is dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation

by other wolves is probably the major cause of natural mortality among adult wolves (Adams et al. 2008). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

The wolf population density in Unit 22 is not known. Persons (2006) observed that since 1960 wolf numbers in Unit 22 have gradually increased and wolves expanded their range westward across the Seward Peninsula. In 1980 the wolf population was estimated at fewer than 100 wolves (Grauvogel 1980). Persons (2006) and ADF&G (2009) reported that wolf numbers in Unit 22 have increased based on data from sealing certificates and anecdotal information from observations by staff, reindeer herders, and other local residents.

Seasonal movements of the Western Arctic Caribou Herd influences wolf distribution (Ballard et al. 1997, Persons 2006). In some years, up to 17% of radio-collared wolf packs followed the migrating Western Arctic Caribou Herd and then returned to their original territory for denning (Ballard et al. 1997). When a portion of the Western Arctic Caribou Herd has wintered on the Seward Peninsula, wolves followed the caribou (Persons 2006). She observed that wolves were most abundant in the southern half of Norton Sound where caribou frequently wintered. Persons (2006) reported that the Unit 22 wolf population increased during winter months when caribou were present and that wolves were becoming permanent residents of Unit 22. Ballard et al. (1997) observed that when caribou densities were low, wolves switched to preying on resident moose.

Harvest History

The harvest of wolves, and the use, barter, and sale of pelts has long been important for subsistence uses in Unit 22.

State and Federal regulations currently require that wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. One of ADF&G's management objectives for Unit 22 is to maintain license vendors and fur sealers in all Unit 22 villages (Persons 2006). The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

The reported annual harvest of wolves in Unit 22 has been highly variable. From regulatory year 1999/2000 to 2009/10, the wolf harvest in Unit 22 ranged from 18 to 66 wolves/year and most were shot (**Table 1**). According to Dau (2007) substantially fewer caribou have wintered on the Seward Peninsula during the winters of 2003/2004 through 2006/2007 compared to 1996/1997 through 2002/2003. These were also years where there is lower reported harvest for wolves in **Table 1**, a possible explanation for some of the variability in the harvest data. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported. Persons (2006) observed the magnitude of the unreported wolf harvest in Unit 22 is substantial, and fur-sealing data provides a minimum estimate of the harvest. Often hunters and trappers only seal pelts that will be commercially tanned or sold to fur buyers. Many wolf hides are home tanned and used locally, so people see no reason to get them sealed (Persons 2006). Village-based harvest surveys completed in 5 villages in Unit 22 (Stebbins, Unalakleet, St. Michaels, Shaktoolik and Koyuk) in May 2002 and 2003, and June 2004 revealed that only about 1/3 of their wolf harvest was sealed (Persons 2006). A Bering Strait Region local traditional knowledge survey for Units 22A, 22B, 22D and 22E conducted by Kawerak Inc. indicated 37.7 wolves were harvested in regulatory year 2005/06 (Ahmasuk and Trigg 2007).

Table 1. Reported wolf harvest and method of take for Unit 22, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Method of take for total harvest from Unit 22				
		Trap/snare	%	Shot	%	Unknown
1999/2000	66	5	8	44	67	17
2000/01	65	4	6	56	86	5
2001/02	41	3	7	38	93	0
2002/03	45	5	11	32	71	8
2003/04	22	1	5	21	95	0
2004/05	39	4	10	34	87	1
2005/06	29	5	17	23	79	1
2006/07	19	3	16	13	68	3
2007/08	18	0	0	18	100	0
2008/09	24	4	17	17	71	3
2009/10	44	6	14	38	86	0

Other Alternatives Considered

Consideration was given to recommending a 10 or 20 wolf limit for hunters in Unit 22. There are no records of a person shooting ≥ 10 wolves per year in Unit 22.

Effects of the Proposal

If Proposal WP12-61 is adopted, the Federal wolf hunting harvest limit for Unit 22 would decrease to 10 wolves. This proposal would make the Federal subsistence wolf hunting harvest limit lower than State regulations. Currently, there is no limit on the number of wolves that can be taken by hunters under Federal regulations in Unit 22.

The Unit 22 wolf population does not appear to be declining under the current regulations. ADF&G (2010) believes that current Unit 22 wolf harvests are within sustained yield for the population. It appears that the Unit 22 wolf population is regulated more by natural factors than by the harvest by hunters and trappers.

While it is possible that Proposal WP12-61 will negatively impact subsistence users, it does not appear that this will be the case. Based on ADF&G's wolf harvest records from1990/91 to 2009/10, there are zero records of a person shooting ≥ 10 wolves in a given regulatory year in Unit 22 (ADF&G 2011).

OSM CONCLUSION

Oppose Proposal WP12-61.

Justification

Two years ago, the Alaska Wildlife Alliance requested this same regulatory change. The Seward Peninsula Regional Advisory Council opposed that request and the Federal Subsistence Board rejected that proposal.

Wolves have long been an important subsistence resource in Unit 22. It appears that the wolf population in Units 22 is regulated more by natural factors than from the harvest by hunters and trappers. The wolf population does not appear to be declining under the current regulations. It is possible that a hunter may be able to harvest more than 10 or 20 wolves in Unit 22. This proposal would make the Federal subsistence wolf hunting harvest limit lower than State regulations.

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SEWARD PENINSULA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-61. The Council noted that there is no conservation concern, thus there is no need to restrict subsistence users. There is no need to align with the State. The harvest of no limit should be continued as there has been no abuse.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-61: This proposal changes the wolf hunting season unlimited bag limit to 10 wolves in Unit 22.

Introduction: Wolf populations in Unit 22 are not censused; however, harvest and observation information suggest that populations have increased in recent years. The state bag limit for hunting wolves was set at 20 wolves in 2007 by the Alaska Board of Game. Current season (August 1 through April 30) allows for maximum opportunity within areas that do not have predator management programs. Total hunting and trapping harvests was approximately 41 wolves per year based on sealing records from 1997-2008. Hunters accounted for approximately 15 wolves annually of the 1997-2008 total harvest. Among hunters/trappers taking wolves, no individual has reached the total bag limit of 20 wolves per season. In November 2009, the Alaska Board of Game rejected a proposal to change the hunting season bag limit to 10 wolves (similar proposal to WP12-61).

Impact on Subsistence Users: Reducing the bag limit 10 wolves will reduce opportunity for the few federally qualified subsidence users who successfully harvest more than 10 wolves by hunting in Unit 22.

Opportunity Provided by State: In Unit 22, the state wolf hunting season is from August 1 through April 30 with a bag limit of 20 wolves. The hunt is open to both residents and nonresidents; requires a tag for nonresidents; hide must be sealed within 30 days of harvest.

Conservation Issues: None.

Enforcement Issues: Differing bag limits for wolves across federal land, approximately 1/3 of the unit, and non-federal lands, 2/3 of the unit, will create enforcement problems due to differing land status in Unit 22.

Other Comments: Adult wolves have learned to avoid humans through experience and are the most difficult pack members to harvest. These populations can easily sustain the small reduction in pups born by the taking of a few pregnant females. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the mature adults, including pregnant and lactating females, which are responsible for obtaining large prey, and are therefore subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose.

WP10-69 (Deferred) Executive Summary	
General Description	Proposal WP10-69 requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18. *Submitted by Kuskokwim Native Association*
Proposed Regulation	**Unit 21E—Moose** *Rural residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission****.***
OSM Conclusion *(From 2010 analysis)*	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission****.*** ***Remainder****—Residents of Unit 21E and Russian Mission.*
Western Interior Regional Council Recommendation	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). See the OSM Conclusion for the modified regulation.
Yukon-Kuskokwim Delta Regional Council	The Council did not review this proposal at its fall 2011 meeting.
Interagency Staff Committee Comments	
ADF&G Comments	
Written Public Comments	**None**

STAFF ANALYSIS
WP10-69 (Deferred)

In 2010, the Federal Subsistence Board deferred WP10-69 to allow the Western Interior Subsistence Regional Advisory Council the opportunity to form a subcommittee to address Proposal WP10-69, which requests a revision to the customary and traditional use determination for moose in Unit 21E (FSB May 20, 2010: 487). The Board also asked for participation by the Office of Subsistence Management, the Bureau of Land Management, and the Bureau of Indian Affairs. The subcommittee met October 3 in Aniak. Representatives from affected communities—Lower Kalskag, Upper Kalskag, Aniak, Chuathbaluk—were invited to attend. The following proposal analysis was presented to the Board in May 2010.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Support Proposal **WP10-69 with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**).

The Council feels that the addition of four larger communities to the customary and traditional use determination for Unit 21E south of Paimiut Slough would potentially result in over harvest during the winter moose hunt. The council feels strongly that the four new C&T communities should be precluded from winter moose hunting in GMU 21E, until such time as regulations are established to maintain biological health. Therefore the Council would like the Innoko Moose Management Plan, Section 1.9 be reviewed regarding GMU winter moose harvest. The Council would also like to submit a proposal during the 2013 wildlife cycle requesting that two management zones be established for GMU21E. The proposal intent is to establish zone 1 (the new C&T area as shown in Map 4) and zone 2 (the remainder of GMU 21E) with biologically supported allocations.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

The Yukon-Kuskokwim Delta Council did not review this proposal at its fall 2011 meeting.

WP10-69 Executive Summary (2010 Analysis)	
General Description	Proposal WP10-69 requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18. *Submitted by Kuskokwim Native Association*
Proposed Regulation	**Unit 21E—Moose** *Rural residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
OSM Preliminary Conclusion	**Support** Proposal WP10-69 **with modification** to include only the Paimiut Slough area of Unit 21E and to exclude Chuathbaluk (see **Map 3**). The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
OSM Conclusion	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*

continued on next page

WP10-69 Executive Summary *(continued)*	
Western Interior Regional Council Recommendation	**Support** Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The modified regulation would read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—*** *Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
Yukon-Kuskokwim Delta Regional Council	**Support** Proposal WP10-69 **with modification** described in the OSM Preliminary Conclusion (to include only the Paimiut Slough area of Unit 21E; see **Map 3**) with an additional modification to keep Chuathbaluk on the list of communities with a positive customary and traditional use determination. The modified regulation should read: **Customary and Traditional Use Determination** **Unit 21E—Moose** ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.* ***Remainder****—Residents of Unit 21E and Russian Mission.*
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	Although the Department **supports** this proposal in general, it is conditional. *See full comments following the analysis.*
Written Public Comments	**None**

STAFF ANALYSIS
WP10-69

ISSUES

Proposal WP10-69, submitted by Kuskokwim Native Association (KNA), requests the recognition of customary and traditional uses of moose in Unit 21E for residents of Lower Kalskag, Upper Kalskag,[1] Aniak, and Chuathbaluk. The communities of Upper Kalskag, Aniak, and Chuathbaluk are located in Unit 19A; Lower Kalskag is in Unit 18.

DISCUSSION

The proposal is being submitted for all of Unit 21E; however, the proponent states that it is the Paimiut Slough area that is customarily and traditionally used by Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk (see **Map 1**), and it encourages the Western Interior Subsistence Regional Advisory Council to consider modifying the proposal to include that area only. The proponent further states that this proposal reflects comments received from residents of the communities named in the request, and that historically these communities depended on moose from Unit 21E to feed their families.

In part, this request is being made because of the growing scarcity of moose in Unit 19A and the Kuskokwim River drainage portion of Unit 18 and regulatory restrictions that resulted beginning in 2003. The impetus for KNA to request a modification to the existing customary and traditional use determination for moose in Unit 21E is the closure and then removal of the State-managed winter moose hunt in Unit 21E in 2003/04. Only the Federal winter moose season has remained open, and as a consequence, the winter moose season has been closed to all but the Federally qualified communities of Grayling, Anvik, Shageluk and Holy Cross (collectively known as GASH) and Russian Mission. The GASH communities are in Unit 21E, and Russian Mission is located in Unit 18.

While caribou can be harvested in Unit 21E under Federal subsistence regulations by residents of some communities in Unit 19A—Aniak, Chuathbaluk, and Crooked Creek—currently no community in Unit 19A is included in the customary and traditional use determination for moose in Unit 21E.

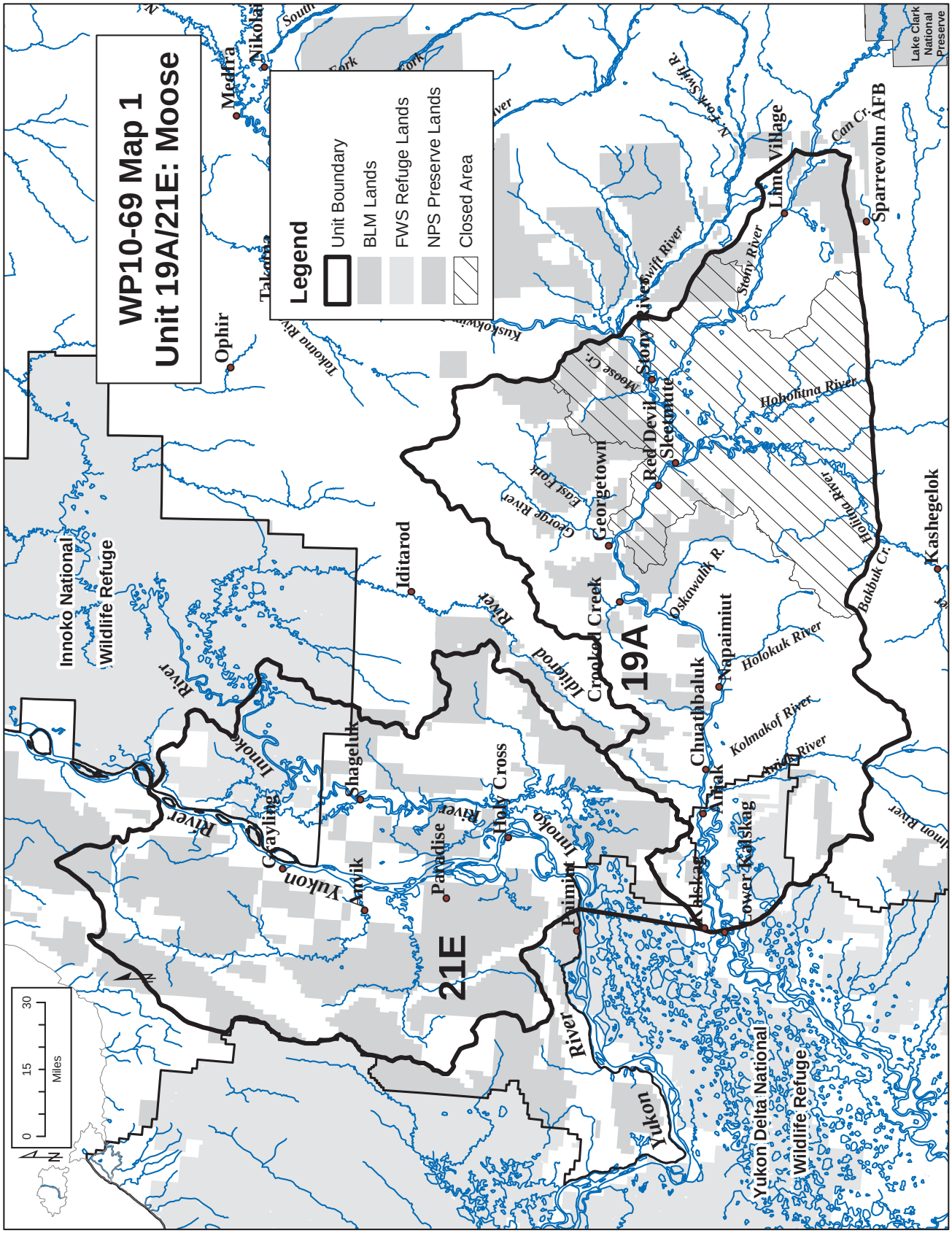
Existing Federal Regulation

Customary and Traditional Use Determination

Unit 21E—Moose

Rural residents of Unit 21E and Russian Mission.

[1] For the purposes of this analysis, Upper Kalskag is designated as “Upper” to clarify the difference between Upper Kalskag and Lower Kalskag.


WP10-69 Map 1
Unit 19A/21E: Moose
Legend
Unit Boundary
BLM Lands
FWS Refuge Lands
NPS Preserve Lands
Closed Area
19A
21E
Medfra
Nikolai
Ophir
Takotna
Takotna River
Kuskokwim
South Fork
Innoko National Wildlife Refuge
Iditarod
Iditarod River
Crooked Creek
Georgetown
Red Devil
Sleetmute
Stony River
Swift River
Moose Cr.
George River
East Fork
Hoholitna River
Holitna River
Bakbuk Cr.
Oskawalik R.
Napaimiut
Holokuk River
Kolmakof River
Chuathbaluk
Aniak
Kalskag
Lower Kalskag
Kwethluk
Paimiut
Holy Cross
Paradise
Anvik
Shageluk
Grayling
Yukon River
Innoko River
Yukon Delta National Wildlife Refuge
Lake Clark National Preserve
Lime Village
Sparrevohn AFB
Can Cr.
Kashegelok
N. Fork Swift R.
0 15 30
Miles

Proposed Federal Regulation

Customary and Traditional Use Determination

Unit 21E—Moose

Rural residents of Unit 21E, ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 21E and consist of 79% Bureau of Land Management and 21% U.S. Fish and Wildlife Service lands (**Map 1**).

Background

A similar request was submitted by KNA to the Federal Subsistence Board (Board) in February 2008 in the form of a special action request (WSA08-01). The Board rejected the request in part because of the differences in the Yukon Kuskokwim Delta and Western Interior Councils' recommendations suggesting that additional public participation and discussion was necessary. The Board encouraged KNA to submit a regular-cycle proposal. That regular cycle proposal is the topic of this analysis.

As noted, this request was made in part because of the growing scarcity of moose in Unit 19A. In March 2006, ADF&G and the Board closed the eastern portion of Unit 19A to all moose hunting due to conservation concerns. Subsequently, in September 2006, hunting opportunity in the western portion of Unit 19A was reduced through Tier II and ANILCA Section 804. Initially, this occurred through a special action and emergency order but these restrictions were subsequently passed into regulation in May 2007. This situation has resulted in reduced opportunity and harvest of moose in all of Unit 19A, the primary area used by the proponents for hunting moose. Since the 2006/07 season, a State Tier II permit or a Federal permit has been required to hunt moose in Unit 19A. The Central Kuskokwim Moose Management Plan, published in June 2004, guides moose management in Units 19A and 19B (ADF&G 2004).

For the Kuskokwim River drainage portion of Unit 18, in the fall of 2004 a five-year moratorium on moose hunting, intended to increase moose numbers, went into effect (ADF&G 2006:4). In September 2009, State-managed lands in this area opened for moose hunting with a quota of 75 moose. The hunting season was 10 days.

For Unit 21E, the GASH Fish and Game Advisory Committee and State of Alaska Board of Game did not support the State winter season for antlerless moose in 2003/04 due to concerns about the possibility of a decline in the moose population (ADF&G 2006:3). The winter season has not opened since that time. State antlerless moose seasons require approval by a majority of the active advisory committees located in, or the majority of members reside in, the affected unit or subunit (see 5 AAC 98.005 and AS 16.05.780). The Federal winter moose season has remained open. Regulatory changes in units to the south of Unit 21E have caused increased concern about displaced hunters causing increased hunting pressure in Unit 21E (ADF&G 2006:4). However, in recent years the moose population has grown in the lower Yukon River area in Unit 18, which has resulted in fewer hunters traveling upriver (ADF&G 2006:1; WIRAC 2010:187).

The Yukon-Innoko Moose Management Plan, published in December 2006, guides management actions in Units 21A and 21E (ADF&G 2006). An Adaptive Plan for Intensive Management of Moose in Unit 21E was completed by ADF&G in 2008 (2008a). The Working Group that drafted the Yukon-Innoko Moose Management Plan did not identify requests to expand the customary and traditional use determination for moose in Unit 21E as a major issue to be considered in the plan; however, it recommended that "if the federal customary and traditional subsistence use determination (C&T) for Unit 21E is revised to make a large number of additional communities eligible, the federal winter season should be eliminated" (ADF&G 2006:22). The Working Group deferred further comment of customary and traditional use determinations to the Federal subsistence regional advisory councils representing the area (ADF&G 2006:23).

Regulatory History

This proposal is the first to request the expansion of the customary and traditional use determination for moose in Unit 21E to include Unit 19A communities. However, the Board has dealt with a number of proposals requesting the expansion of the customary and traditional use determination for moose in Unit 21E to include communities in Unit 18. The Board deferred those proposals until local users could work out a compromise, which has not been achieved.

The current customary and traditional use determination for moose in Unit 21E, adopted from the State at the inception of the Federal Subsistence Management Program in 1990, is for rural residents of Unit 21E and Russian Mission.

Aniak and Chuathbaluk are included in the customary and traditional use determination for moose in Unit 19 only. Upper Kalskag is included in the customary and traditional use determination for moose in Unit 18 and Unit 19 only. Lower Kalskag is included in the customary and traditional use determination for Unit 18, Unit 19A, and Unit 19B only. These customary and traditional use determinations were adopted from the State in 1990.

Community Characteristics

The communities of Upper Kalskag, Aniak, and Chuathbaluk are located along the middle Kuskokwim River in Unit 19A, and Lower Kalskag is located in Unit 18 downriver from the Unit 19A boundary and adjacent to Upper Kalskag. The unit boundary goes between the two villages that are otherwise connected. With the exception of a State-maintained 4.2-mile gravel road connecting Upper and Lower Kalskag, no road connections exist between the other communities (ADCCED 2008). However, boats are used to travel between villages, and trails and the frozen river are used by people on snow machines and ATVs during winter. A trail runs from the Paimiut Portage, linking Upper Kalskag to the now-abandoned village of Paimiut on the Yukon River (see **Map 1**; Burch 1976:1–10).

Before 1900, in the area of the above named communities, people lived in semi-permanent villages, often in semi-subterranean dwellings. Most people moved seasonally to harvest various species of fish and wildlife at sites within 30 miles of each other in a relatively fixed range (Fienup-Riordan 1984:68). Before 1900 many seasonal dwelling places and semi-permanent villages existed between present-day Lower Kalskag and Napaimute, such as Kolmakovski Redoubt, Crow Village, and Ohagamute. Several more permanent communities were established after an epidemic of influenza in 1900 when villages experiencing high death rates re-grouped into fewer villages—Kalskag,[2] Ohagamute, Napaimute, and Crooked Creek. The migration to permanent communities continued to the 1950s at which time most

[2] Before the village divided into two villages, Kalskag and Lower Kalskag.

residents were living in permanent communities, traveling seasonally to temporary camps to harvest wild resources (Fienup-Riordan 1984:82–85).

Between 1950 and 1960, another population shift occurred, prompted by the requirement to send children to school imposed by the territorial government (Nick 1984). Some Paimiut residents initially moved to Upper and Lower Kalskag along the Kuskokwim River, and then some of those people again relocated to Russian Mission in the 1960s (Pete 1991:18-19). Descendents of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDRAC 2008:79, 81–82). Mining and trading enterprises also contributed to the movement of people.

Crow Village, an abandoned village that was located near present-day Chuathbaluk, and Paimiut were the farthest inland settlements whose residents spoke only Central Yup'ik (Oswalt and VanStone 1967:1). According to Charnley (1984), in 1983 Upper and Lower Kalskag, and Chuathbaluk were composed primarily of Yup'ik Eskimos. Sleetmute, Stony River, and Crooked Creek included individuals of both Yup'ik and Athabascan descent. Aniak, the regional center, was composed of both non-Native and Yup'ik people. Aniak is located approximately 26 miles upriver from Lower Kalskag, and 11 miles downriver from Chuathbaluk.

In 2000 these four communities consisted of an estimated 1,200 people in 335 households (U.S. Census 2000; **Table 1**).

Table 1. Community population 1950 - 2000 and and number of households 2000 (Rollins 1978, U.S. Census 2000).

Community	1950	1960	1970	1980	1990	2000	Number of Households in 2000
Lower Kalskag	88	122	183	246	297	267	66
Upper Kalskag	139	147	122	129	172	230	62
Aniak	142	308	205	341	540	572	174
Chuathbaluk			94	105	97	119	33
Total	369	577	604	821	1,106	1,188	335

Eight Factors for Determining Customary and Traditional Uses

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

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

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

A holistic evaluation of eight factors for residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk is described below.

In the late 19th century, moose were not numerous in the Middle Kuskokwim Area, an area generally encompassing the Kuskokwim River drainage from Lower Kalskag to Stony River in Units 18 and 19 (Seavoy 2008); however, caribou were more common (Charnley 1983:5). For example, according to John Kilbuck, a missionary for the Moravian Church who arrived in Bethel in 1885, during a trip upriver, Kilbuck wrote that a man near Napaimute shot four deer [caribou] with five bullets that were all he had. "To get home with the meat, he made a flat boat with two skins, and in this he descended a small creek, up/into the river and then on down" (Fienup-Riordan 1988:187). Additionally, Kilbuck wrote of the people of the Middle Kuskokwim Area:

> *The Upper River people were the first to use firearms—from the blunder-buss with its flint and flash pan, whose chief value as a weapon of defense was the deafening report it could make, when fired. —A few of the old people still carry powder marks on their faces from the use of this ancient arm. The blunder-buss was replaced by the musket, and the musket was replaced by the Kentucky rifle. Now the latest improved repeating rifle is the equipment of the modern hunter* (Fienup-Riordan 1988:7).

Moose began entering this area in larger numbers in the early 1900s and populations have increased in size and distribution throughout the area since that time (Charnley 1983:5).

The primary sources of information on resource use by residents of these communities contain observations made over 30 years ago: Brelsford et al.'s research in Aniak (Brelsford et al. 1987), Charnley's work in Chuathbaluk (Charnley 1983, 1984), and Stickney's central Kuskokwim food survey (Stickney 1981). All indicate that land mammals and salmon and nonsalmon fish were critical resources for these communities. An attempt to update these observations has been made through Krauthoefer and Koster's (2006) research; however, the findings focus on the results of household harvest surveys almost entirely and offer little insight into possible changes in moose use patterns of the residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

Harvest and Use Levels

In the area of these communities, as in much of rural Alaska, household surveys tend to provide a more accurate accounting of harvests than do returned harvest tickets (Andersen and Alexander 1992). Consequently, in 2003, 2004, and 2005, three 12-month household surveys were conducted to provide

an accurate estimate of the number of moose taken by residents of these communities (Krauthoefer and Koster 2006) (**Table 2).** With the exception of a household survey at Chuathbaluk in 1983 (Charnley 1983), no other household surveys have been conducted for moose at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk.

Table 2. Summary of household participation in harvest surveys that included moose, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

Community	Study Year	Type of Sample	Total Identified Households	Surveyed Households	Percentage of Total	Estimated Human Population
Aniak	2003	Census	163	82	50%	509
	2004	Census	155	92	59%	492
	2005	Census	168	124	74%	545
Chuathbaluk	1983	Census	29	29	100%	132
	2003	Census	30	17	57%	125
	2004	Census	23	17	74%	108
	2005	Census	42	21	50%	124
Lower Kalskag	2003	Census	72	34	47%	303
	2004	Census	73	59	81%	303
	2005	Census	84	30	36%	336
Upper Kalskag	2003	Census	59	34	58%	243
	2004	Census	52	50	96%	243
	2005	Census	68	34	50%	266

The estimated harvest (from all areas) and use of moose during the four study years—1983, 2003, 2004, and 2005—at Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are reported in **Table 3** and **Table 4.** The estimated moose harvest ranged from an annual high of 46 moose by Aniak residents in 2005, to a low of one moose by a Chuathbaluk resident in 2004 (**Table 3**). This difference between these two harvest numbers is in part because Aniak's human population was much larger than Chuathbaluk's population of people in the study years (**Table 1**; U.S. Census 2000).

Krauthoefer and Koster (2006) determined that in 2003, 2004, and 2005 moose were taken from Units 18, 19, and 21 by residents of the communities in the request (**Table 5**). No household from any of the four communities reported taking a moose in Unit 21E in 2003. In 2004 an estimated 6 moose total were taken in Unit 21E by residents of the four communities; and in 2005, an estimated 5 moose total were taken in Unit 21E by residents of the four communities. This is 0%, 9%, and 8%, respectively, of the total moose harvest of all four communities combined in 2003, 2004, and 2005. However, Lower Kalskag and Chuathbaluk had no reported moose harvest in Unit 21E in any of the three survey years. It is important to note that residents of these communities were no longer eligible to participate in the winter hunt in Unit 21E beginning in 2003/2004.

Another source of information is the ADF&G harvest ticket database. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (cf. Andersen and Alexander 1992). Because of the potential for under reporting, conventional ADF&G harvest reporting systems do not always reflect the true level of harvest. From 1983 to 2006 a cumulative total of 80 returned permits reported hunting in Unit 21E by residents of the four communities, and a cumulative total of 47 moose

Table 3. The use and harvest of moose based on household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

		Percentage of Households					Moose Harvest				
Community	Study Year	Using Moose (%)	Hunting Moose (%)	Harvesting Moose (%)	Giving Moose (%)	Receiving Moose (%)	Reported (Number)	Expanded to Households Not Surveyed (Number)	Lower Estimate (Number)	Higher Estimate (Number)	95% Confidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	12	24	12	37	53
	2004	80	71	23	24	65	23	38	25	51	33
	2005	80	62	25	22	60	34	46	31	55	19
Chuathbaluk	1983	NA	72	24	NA	NA	16	16	16	16	0
	2003	29	35	18	18	24	3	5	3	10	103
	2004	59	35	6	12	53	1	1	1	1	0
	2005	29	29	10	0	24	2	4	2	10	147
Kalskag	2003	74	62	24	24	62	14	30	14	53	75
	2004	36	41	17	8	24	10	12	10	15	29
	2005	40	30	3	3	37	1	2	1	8	279
Upper Kalskag	2003	74	59	29	26	59	12	21	12	32	51
	2004	72	76	16	14	64	9	9	9	10	14
	2005	59	50	18	15	44	6	12	6	21	78

NA=not asked.

Table 4. The harvest of moose by weight per household and per person from harvest surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, all study years (ADF&G 2008b).

		Percentage of Households					Moose Harvest Levels in Pounds Usable Weight[a]		
Community	Study Year	Using Moose (%)	Hunting Moose (%)	Harvesting Moose (%)	Giving Moose (%)	Receiving Moose (%)	Per Household (Pounds)	Per Person (Pounds)	Confidence Interval (+/- %)
Aniak	2003	85	62	15	16	74	79	25	53
	2004	80	71	23	24	65	80	42.5	33
	2005	80	62	25	22	60	109	46	19
Chuathbaluk	1983	NA	72	24	NA	NA	394	87	0
	2003	29	35	18	18	24	95	23	103
	2004	59	35	6	12	53	24	9	0
	2005	29	29	10	0	24	26	17	147
Lower Kalskag	2003	74	62	24	24	62	222	53	75
	2004	36	41	17	8	24	74	25	29
	2005	40	30	3	3	37	6	5	279
Upper Kalskag	2003	74	59	29	26	59	191	46	51
	2004	72	76	16	14	64	94	26	14
	2005	59	50	18	15	44	48	24	78

NA=not asked.

[a] Conversion factor is 540 lb per moose.

Table 5. Estimated harvest of moose by unit from household surveys, Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag, 2003/04, 2004/05, and 2005/06 (Krauthoefer and Koster 2006).[a]

Unit	Lower Kalskag	Upper Kalskag	Aniak	Chuathbaluk	Total	Percentage
2003/04						
18	13	2	0	0	14	18%
19A	15	10	14	5	44	56%
19B	0	0	2	0	2	3%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	0	0	0	0	0%
Unknown	2	9	8	0	19	24%
Subtotal	30	21	24	5	80	100%
2004/05						
18	1	3	0	0	4	7%
19A	11	4	29	1	45	73%
19B	0	0	0	0	0	0%
19D	0	0	2	0	2	3%
21A	0	0	3	0	3	5%
21E	0	2	3	0	6	9%
Unknown	0	0	2	0	2	3%
Subtotal	12	9	39	1	62	100%
2005/06						
18	0	0	0	0	0	0%
19A	3	8	34	2	47	82%
19B	0	0	1	0	1	2%
19D	0	0	0	0	0	0%
21A	0	0	0	0	0	0%
21E	0	2	3	0	5	8%
Unknown	0	2	0	2	4	7%
Subtotal	3	12	38	4	57	100%

[a] Residents of the four communities were not Federally qualified to participate in the Federal winter hunt in Unit 21E.

Table 6. The moose harvest in Unit 1E 1983 - 2006 (ADF&G 2008c and 2008d).

	1983-2006 Cumulative Reported Moose Harvest	
Community	Number of Hunters	Number Harvested
Aniak	50	29
Chuathbulak	0	0
Lower Kalskag	11	9
Upper Kalskag	19	9
TOTAL	80	47

harvests were reported in Unit 21E (**Table 6**). Only Chuathbaluk did not report hunting moose in Unit 21E during this period.

For 2003, 2004, and 2005, survey results document that many households in the communities used moose, ranging from a high of 85% at Aniak in 2003, to a low of 29% at Chuathbaluk in 2003 and 2005 (**Table 3**). Many households attempted to harvest moose (ranging from 76% at Upper Kalskag in 2004, to 29% at Chuathbaluk in 2005), but few (16% and 0%, respectively) were successful.

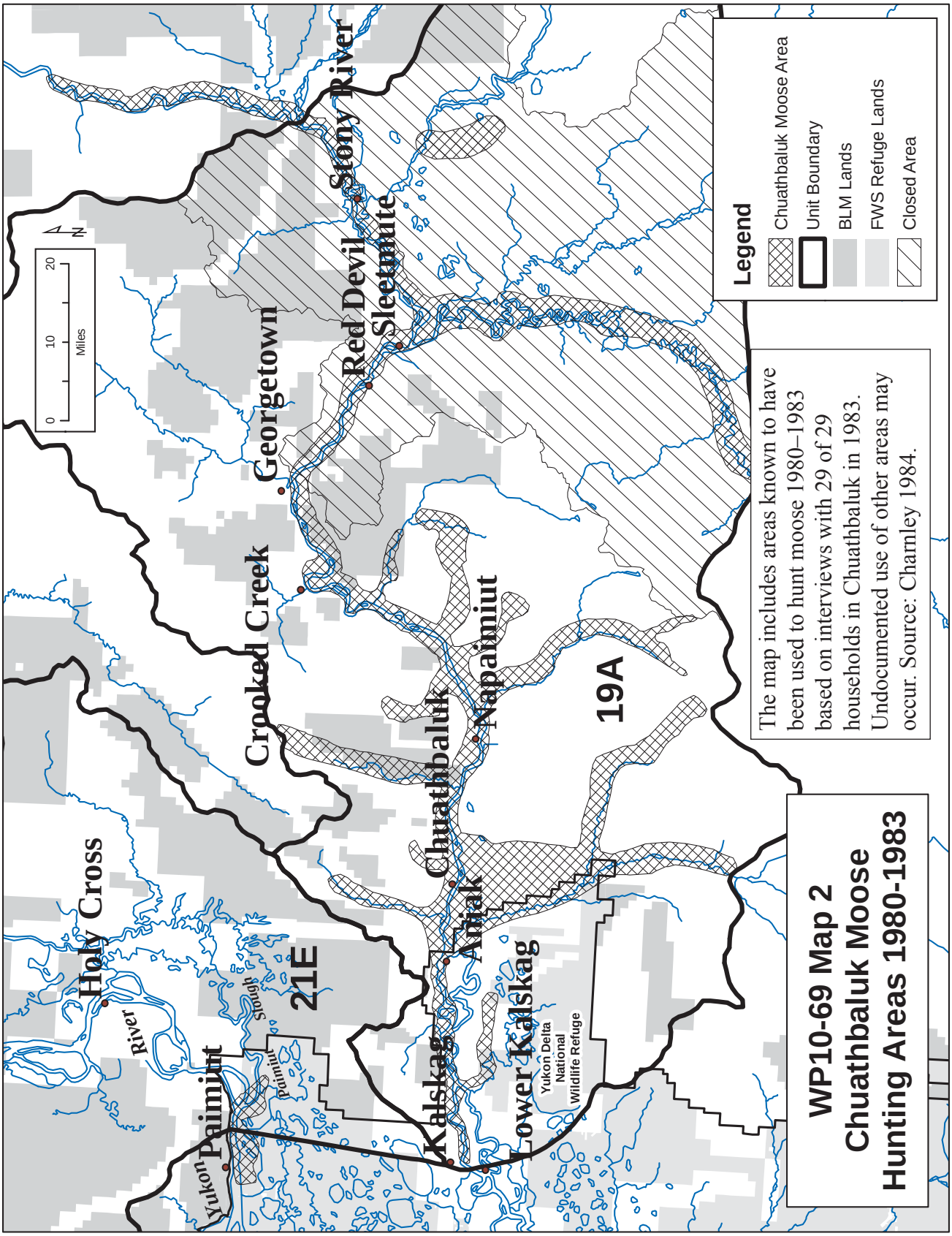
The harvests of moose by residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk are shared extensively with other households having kinship and other ties to hunters (Charnley 1983:35; Krauthoefer and Koster 2006). Sharing was documented in 2003, 2004, and 2005, at Lower Kalskag, Upper Kalskag, Aniak and Chuathbaluk. For example, for the three study years in each community, between 24% and 74% of households reported receiving moose from other households (Table 3).

Chuathbaluk

Charnley's (1983) research offers an in-depth view of the harvest and use of moose in Chuathbaluk. Although over 30 years old, the general use pattern she documented (including seasonality of harvests, work groups, and preferences) is probably being followed today. Some findings of her research, however, are probably less applicable, such as the lack of refrigeration for preserving moose meat. According to Charnley (1983), Chuathbaluk residents hunted moose year-round, however, the intensity of harvest effort was influenced by weather conditions and regulations. Moose were available to hunters July, August, and September in habitats such as willows bordering rivers, creeks, and lakes. Bulls and cows were especially fat during these months (Charnley 1983:9). Bulls entered the rut in late September. In October the better-tasting meat of cows was preferred. In fall, access to moose habitat was possible if and when rivers and creeks were swollen from heavy rain. However, moose were more sedentary in rainy weather and harder to find, and gravel bars, where moose could sometimes be found feeding, became submerged (Charnley 1983:10). Freeze-up along the middle Kuskokwim River usually occurred in November, and it was often unsafe for travel. Warm spells in winter could return rivers and creeks to dangerous conditions for travel by hunters. Deep snow aided hunting by allowing travel by snow machine, and by hampering moose mobility (Charnley 1983:11).

At Chuathbaluk moose hunting was almost always engaged in by the adult and adolescent men (Charnley 1983:17). During September an extended family group that often included the wife, sisters, mother, and daughters of the hunters camped together for up to a week. At this time, generally, women and children gathered berries while men hunted moose and black bear. Sometimes two or three households camped together in one area. The November and February hunts usually involved the male members of a household only, and hunting occurred while checking trap lines and during day or overnight trips from the village. In February, camping was limited by cold weather (Charnley 1983:17).

During house to house interviews residents of Chuathbaluk reported hunting moose in Unit 21E in the area of Paimiut, located in Unit 21E, in 1980–1983 (see **Map 2**, ADF&G 1986:Plate 3) . It is important to note that Chuathbaluk was re-established as a village in 1954 for religious purposes by people from other villages, including Aniak, Crooked Creek, Sleetmute, Upper Kalskag, Napaimute, and Crow Village (Charnley 1983:21–22). As a result, and perhaps not surprisingly, moose hunting areas documented by Charnley in 1983 reflected individuals' affiliations to their original villages. These use areas, located in Unit 19, were described as follows, beginning with former community of residence: Upper Kalskag—the Whitefish Lake area; Crow Village—Discovery and Swift creeks, and the Aniak River; Aniak—the Aniak River; Napaimute—the Holokuk River; Crooked Creek—the Oskawalik and George rivers; and Sleetmute—the Holitna and Hoholitna rivers.


WP10-69 Map 2
Chuathbaluk Moose
Hunting Areas 1980-1983
The map includes areas known to have been used to hunt moose 1980–1983 based on interviews with 29 of 29 households in Chuathbaluk in 1983. Undocumented use of other areas may occur. Source: Charnley 1984.
Legend
Chuathbaluk Moose Area
Unit Boundary
BLM Lands
FWS Refuge Lands
Closed Area
0
10
20
Miles
N
Stony River
Red Devil
Sleetmute
Georgetown
Crooked Creek
Chuathbaluk
Napaimiut
19A
Holy Cross
21E
Amiak
Kalskag
Lower Kalskag
Yukon Delta National Wildlife Refuge
Yukon
River
Paimiut
Slough
Paimiut

Chuathbaluk is not located in immediate proximity to a major Kuskokwim tributary that has high natural resource potential (Charnley 1983:22). However, Charnley (1983) noted that since living in Chuathbaluk, residents had begun to utilize smaller tributaries in the vicinity of the village, all located in Unit 19A, including Veahna Creek, the Kolmakof River, and the Owhat River. During the 1982/83 hunting season hunters traveled as far as McGrath, located in Unit 19D, to hunt moose, as competition increased in their traditional hunting areas (Charnley 1983:26).

Aircraft were seldom used in moose hunting by residents of Chuathbaluk, and moose were typically hunted from boats in the fall. Motors were shut off and boats were allowed to drift downstream, guided by oars. Most moose hunting took place within one mile of either side of the waterway that was being hunted (Charnley 1983:13–15). Snow machines also were used to travel to areas where moose were likely to be found. Fresh tracks were followed on snow machine or foot. Moose were sometimes tracked with snowshoes to beds where they were resting for the day (Charnley 1983:15).

Generally, moose were butchered at the kill site by members of hunting parties, taken back to the village, and further processed (Charnley 1983:18). According to Chuathbaluk residents, in their lifetimes meat was dried and smoked at fall hunting camps. When enough animals had been taken, skin boats were constructed using the animal hides, and the hunters drifted back downstream (Charnley 1983:13).

According to Charnley (1983:13), dry meat was a staple food eaten throughout the summer when families were at fish camp. In 1982 electricity became available in Chuathbaluk, and at that time most residents did not own freezers and did not plan on acquiring one immediately due to the expense (Charnley 1983:31). Most villagers depended on the weather to prevent their meat from spoiling. For this reason, hunting seasons that occurred during months when temperatures had already fallen below freezing were preferred. The hind and front quarters and rump were commonly hung in a salmon smokehouse, or suspended from a rack, wrapped with material such as burlap to protect them from animals (Charnley 1983:32).

During warm months, meat was placed in garbage bags and submerged in creeks to be kept cool. If meat was hung it was also brushed with a brine solution to discourage flies from laying eggs. The large, butchered parts of the animal such as legs, rump, and ribs were smoked to create a hardened outer layer over the meat. This protective layer kept flies off of the meat (Charnley 1983:32).

Preparing moose meat for meals commonly meant boiling it, and less often frying, roasting, and barbequing. Marrow from the leg bone was considered a delicacy. Moose head soup was a favorite dish, the nose, tongue, cheek meat, and brains being the most desirable parts. The liver, heart, kidneys, part of the stomach muscle, and one of the four stomachs were all eaten. Moose fat was highly valued and was cooked and eaten or rendered into oil (Charnley 1983:34).

Aniak

At Aniak, Brelsford et al. (1987) studied the period 1964–1986 and reported that:

> *Harvest areas employed by the people of Aniak are particularly extensive, ranging along the Kuskokwim River from near Tuluksak to McGrath, and from the Iditarod Flats southward to the Aniak-Chikuminuk Lake complex* [including areas located in Unit 21E]. *The large number of households at Aniak contributes to make the community pattern especially widespread. This also is influenced by the distinctive pattern of a small number of Aniak households who employ aircraft extensively in their hunting and trapping activities (Brelsford et al. 1987:21; bracketed text inserted by analysis author).*

The focus of harvest was the lowlands between the Kuskokwim River and the Kilbuck Mountains, on the Aniak River, in an area north of Aniak, in the George River Basin, and throughout the Holitna Basin. However, other areas also were used (Brelsford et al. 1987:21–22, cf. FWS 1996:Western Interior 27). Brelsford et al. (1987:21) observed that at Aniak in the mid-1980s households used aircraft in their hunting and trapping activities.

Upper and Lower Kalskag

According to the Yukon Delta National Wildlife Refuge comprehensive conservation plan (FWS 1988), for Upper and Lower Kalskag,

> *Moose hunting occurs in a large area extending up the Kuskokwim River to the refuge boundary and beyond and north of the communities to the Yukon River, particularly in the Paimiut Slough area* [located in Unit 21E] *during the winter. The Aniak drainage including the Whitefish Lake area is hunted as well (FWS 1988:183; bracketed text inserted by analysis author).*

Additional Use Area Information from March 2010 Regional Advisory Council Meetings

The Western Interior Subsistence Regional Advisory Council discussed this proposal at its February 24 and 25, 2010, meeting in Fairbanks. Several Council members said that the Unit 19A residents living near the boundary of Unit 21E hunt moose in a part of Unit 21E primarily in winter (WIRAC 2010:190, 200). One Council member described the use in Unit 21E by Unit 19A residents as coming primarily from families that are descended from residents of Paimiut, located in southwestern Unit 21E (WIRAC 2010:204). One Council member described that in his lifetime the area south of the mouth of Paimiut Slough to the last or upper high bank on the slough was used by Unit 19A residents for hunting and berry picking (WIRAC 2010:226–227). The member of the Council from Aniak was absent from this discussion (WIRAC 2010:226). The Chair referred Council members to the Aniak member's testimony at the October 28 and 29, 2008, meeting in McGrath when it reviewed the Special Action Request for the customary and traditional use determination encompassed by this proposal. At that time the Aniak Council member stated that he had participated in the State moose hunt in Unit 21E almost every winter, as did others; this demonstrated a history of use in the area even though it may be by only a few people (WIRAC 2008:101).

The Yukon Kuskokwim Delta Subsistence Regional Advsory Council met on March 2 and 3, 2010 and discussed this proposal. One Council member described former residents of Paimiut and their descendents hunting in Unit 21E (YKDRAC 2010:258). Specifically mentioned was a family from Paimiut living in Old Crow Village hunting in Unit 21E. Later the family moved to Chuathbaluk. The Council member from Upper Kalskag said that he did not think that there is a history of residents of Chuathbaluk coming from the Yukon River area, and he knew of no hunter from Chuathbaluk hunting in Unit 21E, even in winter (YKDRAC 2010:259). Public testimony included that there were additional communities, located on the lower Kuskokwim River drainage, that went to Unit 21E to hunt moose (YKDRAC 2010:260).

Summary

In summary, the communities of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk use only a part of Unit 21E, primarily the area that was used by former residents of Paimiut, the Paimiut Slough area, in winter (ADF&G 1986:Plate 3; Brelsford et al. 1987:21; FWS 1988:183). Descendents of Paimiut residents currently reside in middle Kuskokwim communities, including Lower Kalskag, Upper Kalskag, and Aniak (Pete 1991:19; YKDRAC 2008:79, 81–82). The hunting pattern demonstrated by these

individuals differs from that of residents of communities in Unit 21E, Grayling, Anvik, Shaguluk, and Huslia, who are known to hunt moose in areas of the entire 21E subunit (Brown et al. 2004; Brown and Koster 2005; Wheeler 1998).

Additionally, access to Unit 21E by Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk is overland in winter, typically on snow machines or snowshoes. Several factors have been identified that influence the decision to travel to Paimiut Slough to hunt moose (Charnley 1983:44–47). One is a low success rate in the fall season, and second is if favorable travel conditions occur in February. If favorable travel conditions do not exist, hunters are unlikely to travel to the area.

Effects of the Proposal

If this proposal is adopted, residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk would be eligible to harvest moose in Unit 21E under Federal regulations. Conservation concerns are addressed through implementation of seasons and harvest limits and are not part of the consideration in making customary and traditional use determinations. No effects on non-Federally qualified users are anticipated as the February season in the area is currently closed to nonsubsistence uses. If the proposal is not adopted, the communities of Aniak, Chuathbaluk, Lower Kalskag, and Upper Kalskag would continue to not be able to harvest moose under Federal regulations on Federal public lands in Unit 21E.

OSM PRELIMINARY CONCLUSION

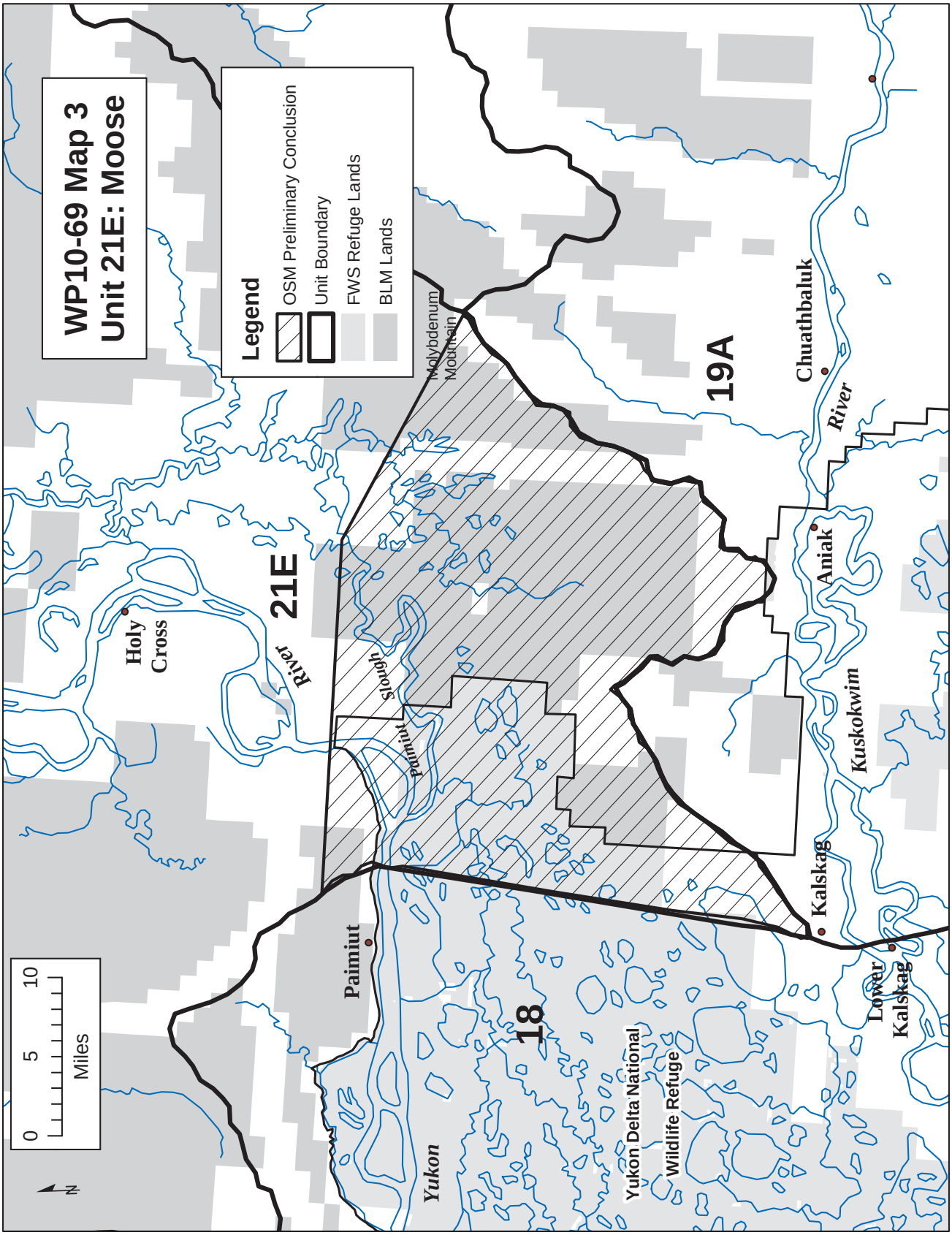
Support Proposal WP10-69 **with modification** to include only the Paimiut Slough area of Unit 21E and to exclude Chuathbaluk (see **Map 3**).

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

Justification

Based on a review of the eight factors, residents of Lower Kalskag, Upper Kalskag, and Aniak have demonstrated customary and traditional uses of moose in a wide area accessible to them by boat and snow machine, including the Paimiut Slough area of Unit 21E; however, information to support a recommendation for Chuathbaluk is very sparse. This is based on the data collected during three annual household surveys and reported on harvest tickets to ADF&G since 1983, and the findings of ethnographic studies describing areas used by the communities to harvest moose.


WP10-69 Map 3
Unit 21E: Moose
Legend
OSM Preliminary Conclusion
Unit Boundary
FWS Refuge Lands
BLM Lands
Molybdenum Mountain
19A
Chuathbaluk
River
Aniak
Kuskokwim
Kalskag
Lower Kalskag
Holy Cross
21E
River
Slough
Paimiut
Paimiut
18
Yukon
Yukon Delta National
Wildlife Refuge
0
5
10
Miles
N

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**).

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

Justification

Based on a review of the eight factors and testimony at the winter 2010 Council meetings, residents of Lower Kalskag, Upper Kalskag, Aniak, and Chuathbaluk have demonstrated customary and traditional uses of moose in a wide area accessible to them by snow machine, snowshoes, and foot including the southwestern portion of Unit 21E. Available information supporting this customary and traditional use determination included the results of annual household harvest surveys and data reported on harvest tickets returned to ADF&G since 1983, and the findings of ethnographic studies describing areas used by the communities to harvest moose. The former residents and their descendents of Paimiut (located in the southwestern corner of Unit 25E) reside in Aniak, Chuathbaluk, Kalskag, and Lower Kalskag. These communities are within a couple of miles of the Unit 21E boundary. There is evidence that residents of these four communities have been harvesting moose from Unit 21E recently and in the past based on household harvest surveys and harvest ticket returns. Travelling off the river and creek corridors is difficult until winter when residents of these communities are able to access the southern part of Unit 21E by snowshoe, and snowmachine. Former residents of communities including Aniak and Upper Kalskag came together in the 1950s to form the community of Chuathbaluk, located approximately 11 miles up the Kuskokwim River from Aniak and 10 miles from the Unit 21E boundary. Moose hunting area information for Chuathbaluk presented in Map 2 and testimony at the Council meetings indicated that residents of Chuathbaluk have also travelled to the southwestern part of Unit 21E to harvest moose. The available information indicates that the portion of Unit 21E south of Paimiut Slough is the only area of Unit 21E that has been customarily and traditionally used by the communities in the request.

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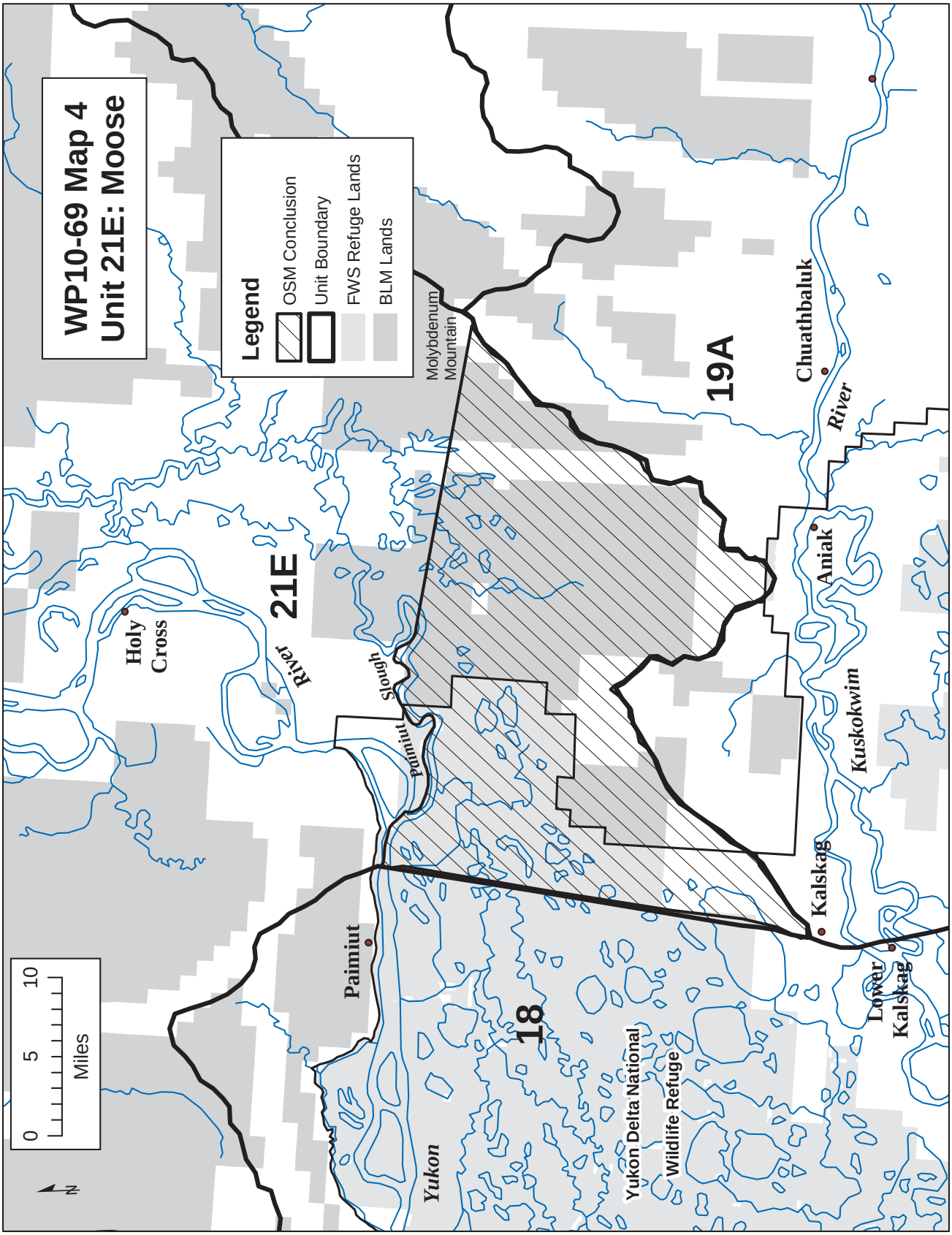
WP10-69 Map 4
Unit 21E: Moose
Legend
OSM Conclusion
Unit Boundary
FWS Refuge Lands
BLM Lands
Molybdenum Mountain
19A
Chuathbaluk
River
Aniak
Kuskokwim
Kalskag
Lower Kalskag
Holy Cross
21E
River
Slough
Paimiut
Paimiut
18
Yukon
Yukon Delta National
Wildlife Refuge
0
5
10
Miles
N

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REGIONAL ADVISORY COUNCIL RECOMMENDATION

WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-69 **with modification** to include only the area of Unit 21E south of Paimiut Slough (see **Map 4**). The recommended boundary has natural identifiers known to local residents. The two zones [the area north of Paimiut Slough and south of Paimiut Slough] will ensure that harvest is allocated throughout the entire unit.

The modified regulation would read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near the mouth of Paimiut Slough, extending easterly along the south bank of Paimiut Slough to Upper High Bank, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E—****Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL

Support Proposal WP10-69 **with modification** described in the OSM Preliminary Conclusion (to include only the Paimiut Slough area of Unit 21E; see **Map 3**) with an additional modification to keep Chuathbaluk on the list of communities with a positive customary and traditional use determination. Residents of Kalskag, Lower Kalskag, Aniak, and Chuathbaluk were proposed to have customary and traditional use determinations in Unit 21E by the Kuskokwim Native Association. These communities are all in the same area and likely to have similar harvest use patterns. Chuathbaluk was excluded from some hunting opportunity in Unit 21E. Historic harvest information record is limited. The Central Kuskokwim Fish and Game Advisory Committee supports the Kuskokwim Native Association's original proposal.

The modified regulation should read:

> **Customary and Traditional Use Determination**
>
> **Unit 21E—Moose**
>
> ***South of a line beginning at the western boundary of Unit 21E near Tabernacle Mountain, extending easterly to the junction of Paimiut Slough and Innoko Slough, and southeasterly in the direction of Molybdenum Mountain to the juncture of Units 19A, 21A, and 21E****—Residents of Unit 21E,* ***Aniak, Chuathbaluk, Kalskag, Lower Kalskag,*** *and Russian Mission.*
>
> ***Remainder****—Residents of Unit 21E and Russian Mission.*

INTERAGENCY STAFF COMMITTEE COMMENTS
WP10-69

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

Comments WP10-69
April 30, 2010; Page 1 of 2

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

Wildlife Proposal WP10-69: Submitted by Kuskokwim Native Association, this proposal requests a positive finding of customary and traditional use of moose in Game Management Unit 21E by residents of Lower Kalskag, located in Unit 18, and by residents of Upper Kalskag, Aniak, and Chuathbaluk, located in Unit 19A.

Customary and Traditional Determination: For the most part, the analysis appears to be complete and accurate, although the Department did not attempt to check the specific data presented in the tables or qualitative data. Recent information from Division of Subsistence was used, which was applicable to the issues. The information presents the kind of documentation that is relevant to evaluate the eight federal regulatory factors for making a customary and traditional use determination of a specific wildlife population by specific communities.

However, more specific information is needed to clarify the differences in the boundaries of the proposed area encompassed by the customary and traditional determination and to discuss why Chuathbaluk should not be included. The community clearly has had a pattern of customary and traditional use before residents set up the new community for religious reasons and still exhibits family patterns of harvest and sharing according to some discussion in the federal staff analysis.

The Western Interior Regional Advisory Council, which represents Central Kuskokwim (where the proponents are from) and the GASH (area most affected by the proposal), made a recommendation that parallels the recommendation by the Office of Subsistence Management (OSM), but retains the community of Chuathbaluk that OSM proposes to delete and proposes a different boundary. The Yukon-Kuskokwim Regional Advisory Council supports modification in the boundary proposed by OSM but retains the community of Chuathbaluk as well.

Recommendation: Although the Department supports this proposal in general, it is conditional upon necessary clarification as discussed above.

WP12-56 Executive Summary		
General Description	Proposal WP12-56 requests an extension of the fall moose season by seven days (from Sept. 5 – Oct. 1 to Sept. 5– Oct. 8) in a portion of Unit 21B. *Submitted by Kathleen ZuRay of the Tanana Tribal Council*	
Proposed Regulation	*Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1 bull; a State registration permit is required during Sept. 5–25. A Federal registration permit is required during the Sept. 26–Oct. ~~1~~**8** season.*	*Sept. 5–Oct. ~~1~~**8***
	Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1antlered bull. A Federal registration permit is required during the five-day season and shall be limited to one per household. The five-day season may be announced by the Koyukuk/Nowitna National Wildlife Refuge Manage after consultation with ADF&G and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Ruby Fish and Game Advisory Committee.	*Five-day, to-be-announced season between Dec. 1 and Mar. 31*
	Units 21A and 21B remainder—1bull	*Aug. 20–Sept. 25* *Nov. 1–Nov. 30*
OSM Conclusion	**Oppose**	
Western Interior Regional Council Recommendation	**Oppose**	
Eastern Interior Regional Council Recommendation	**Support**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Oppose**	
Written Public Comments	**None**	

STAFF ANALYSIS
WP12-56

ISSUES

Proposal WP12-56, submitted by Kathleen ZuRay of the Tanana Tribal Council, requests an extension of the fall moose season by seven days (from Sept. 5 – Oct. 1 to Sept. 5– Oct. 8) in a portion of Unit 21B.

DISCUSSION

The proponent is requesting that the Federal-only moose season in a portion of Unit 21B be extended from Sept. 26–Oct. 1 to Sept. 26–Oct. 8 to provide additional harvest opportunities for Federally qualified subsistence users. The remainder of the season (Sept. 5 – 25) overlaps with State regulations and would remain the same. The proponent states that, due to warm weather conditions, fall moose movements have been delayed and the season extension is needed to harvest moose. The proposal affects rural residents of Units 21B, 21C, Tanana, Galena, and Ruby and would extend the season on Federal public lands in Unit 21B, which are primarily within the Nowitna National Wildlife Refuge (**Map 1**).

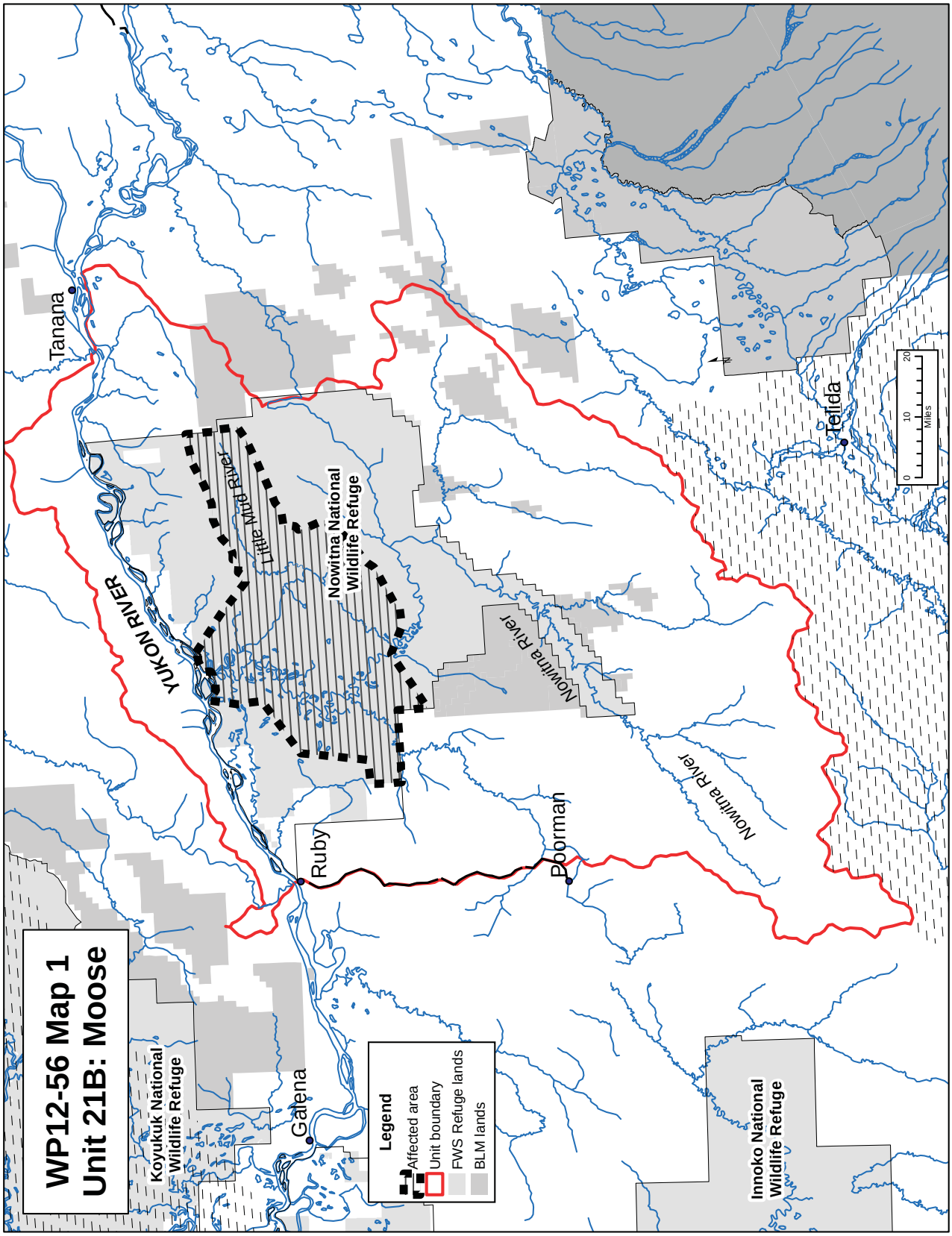
Existing Federal Regulation

Unit 21B — Moose

Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1 bull; a State registration permit is required during Sept. 5–25. A Federal registration permit is required during the Sept. 26–Oct. 1 season.	*Sept. 5–Oct. 1*
Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1 antlered bull. A Federal registration permit is required during the five-day season and shall be limited to one per household. The five-day season may be announced by the Koyukuk/Nowitna National Wildlife Refuge Manage after consultation with ADF&G and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Ruby Fish and Game Advisory Committee.	*Five-day, to-be-announced season between Dec. 1 and Mar. 31*
Units 21A and 21B remainder—1bull	*Aug. 20–Sept. 25* *Nov. 1–Nov. 30*

Proposed Federal Regulation

*Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1 bull; a State registration permit is required during Sept. 5–25. A Federal registration permit is required during the Sept. 26–Oct. ~~1~~**8** season.*	*Sept. 5–Oct. ~~1~~**8***


WP12-56 Map 1
Unit 21B: Moose
Koyukuk National Wildlife Refuge
Galena
Ruby
Tanana
YUKON RIVER
Little Mud River
Nowitna National Wildlife Refuge
Nowitna River
Poorman
Nowitna River
Tetlin
Innoko National Wildlife Refuge
Legend
Affected area
Unit boundary
FWS Refuge lands
BLM lands
0
10
20
Miles
N

Unit 21B—that part of the Nowitna River drainage downstream from (and including) the Little Mud River drainage—1antlered bull. A Federal registration permit is required during the five-day season and shall be limited to one per household. The five-day season may be announced by the Koyukuk/Nowitna National Wildlife Refuge Manage after consultation with ADF&G and the Chairs of the Western Interior Alaska Subsistence Regional Advisory Council and the Ruby Fish and Game Advisory Committee.	*Five-day, to-be-announced season between Dec. 1 and Mar. 31*
Units 21A and 21B remainder—1bull	*Aug. 20–Sept. 25* *Nov. 1–Nov. 30*

Existing State Regulation

Unit 21B that portion within the Nowitna River drainage upstream from the Little Mud River drainage, and outside a corridor extending two miles on either side, and including, the Nowitna River.	*Resident: One bull*		*Aug. 22–Aug. 31* *Or* *Sept. 5–Sept. 25*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side		*Sept. 5–Sept. 25*
Unit 21B remainder	*Resident: One bull by permit, available at hunt.alaska.gov or in person at license vendors in Units 21B, 21D, 24, and ADF&G in Fairbanks beginning Aug 18. Trophy value must be destroyed*	*RM834*	*Aug. 22–Aug. 31* *Sept. 5–Sept. 25*
	Resident: One bull by permit.	*DM802/806 808/810*	*Sept. 5–Sept. 25*
	Nonresident: One bull with 50-inch antlers or 4 or more brow tines on at least one side by permit	*DM802/805 808/809/811*	*Sept. 5–Sept. 25*

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 38% of Unit 21B and consist of 34% Fish and Wildlife Service, 4% Bureau of Land Management managed lands (**Unit Map 21B**).

Customary and Traditional Use Determinations

Residents of Units 21B, 21C, Tanana, Galena, and Ruby have a positive customary and traditional use determination for moose in Unit 21B.

Regulatory History

Federal regulations for Unit 21B moose were adopted by the Federal Subsistence Board (Board) from State regulations in 1990. A summary of the regulatory history for Unit 21B is as follows:

July 1, 1990 – June 30, 1996: Units 21B, 1 bull, Sept. 5 – 25.

July 1, 1996 – June 30, 2006: Units 21B, 1 bull by State registration permit, Sept. 5–25.

Proposal WP04-62, submitted by the Tanana Tribal Council, requested extending the Unit 21B Federal fall moose hunt season from Sept. 5–Sept. 25 to Aug. 27–Sept. 25. This proposal was rejected due to low and declining bull moose numbers and increased hunter effort. Problems with increased hunter effort had been addressed by a 2004 Alaska Board of Game decision to replace the general harvest permit with subsistence registration permits (trophy value had to be destroyed) and resident and nonresident drawing permits. The Board required a State registration permit for harvesting of moose on Federal public lands in Unit 21B (FSB 2004).

Special actions WSA05-07 and WSA05-08 were submitted to the Board by the community of Ruby and the Ruby Fish and Game Advisory Committee. The proponents requested a Sept. 26–Oct. 2 season extension for the Unit 21B moose seasons. These requests were also based on warmer than normal fall temperatures that hampered hunter success during the fall seasons. An emergency order petition, in companion to WSA05-08, was also sent to the Alaska Board of Game. The Federal Board and the Alaska Board of Game rejected the three requests based on the fact that the proposals did not meet the criteria for Special Actions or Emergency Orders. WSA05-07 and WSA05-08 did not meet the stated criteria in §___.19(a) and (c) for accepting Special Action requests. There had been no changes to the affected moose population that would have impacted the local 2005 fall harvest in Unit 21B. Warmer than normal fall temperatures and higher than normal rainfall are not new challenges for moose hunters. Moose harvest within the Nowitna drainage for 2005 was not notably lower than the reported harvest by local and non-local hunters in recent years. A Board special action was not necessary to assure the continued viability of the affected moose population, to provide a meaningful priority, to continue subsistence uses, or for reasons of public safety or administration.

The ADF&G submitted proposal WP06-35 to the Board and a similar proposal (State Proposal 96) to the Alaska Board of Game for consideration in May 2006 and March 2006, respectively. The proposed actions were to establish a Federal/State Dec.1–10 season in Unit 21B. ADF&G also submitted State Proposal 96A to the Alaska Board of Game eliminating the Dec. 1–10 season and established an Aug. 22–31 season. The intent of the proposals was to provide users the opportunity to harvest bull moose during December in a remote area not easily accessed during the fall moose seasons. In support of the Western Interior Subsistence Region Advisory Council (Council) recommendation, the Board did not adopt the Dec. 1–10 season for Unit 21B and retained the Aug.20–Sept.25 and Nov. 1–30 season for Unit 21A. The Board also adopted the Council modification to adopt the Aug. 22–31 season for Unit 21B that was recommended to the Alaska Board of Game by the Ruby Fish and Game Advisory Committee.

Proposal WP06-34, submitted by the Council, requested a change in the closing dates for the fall moose seasons in Units 21A, 21B, 21D, and 21E, and Unit 24 from Sept. 25 to Oct. 1 and in the Koyukuk Controlled Use Area in Unit 21D and Unit 24 from Sept. 20 to Oct. 1. The proponent's intent was based on warmer than normal fall temperatures that had limited moose harvests for local residents in the affected areas. At its March 2006 meeting, the Council stated that it would support an Aug. 22–31 season over the proposed Sept. 26–Oct. 1 season extension, should the Alaska Board of Game adopt the proposed Aug.22–31 State season. Following the Council's request and the Alaska Board of Game's March 2006 action that adopted the Aug. 22–31 season instead of the Sept. 26–Oct.1 season, the Board adopted the earlier August season for Unit 21B.

The current Federal moose season regulations for Unit 21B were established when the Board adopted WP07-36 and a modification of WP07-37. Both proposals were submitted by the Council. Proposal WP07-36 requested the elimination of the Aug. 22–31 season and the extension of the Sept. 5–25 season to Sept. 5–Oct. 1. The extended portion of the season (Sept. 26–Oct. 1) was out of alignment with State regulations and required an additional Federal registration permit. The intent of the season adjustments was to provide additional harvest opportunity for moose when temperatures are cooler and bull moose are more actively moving. The modified WP07-37 proposal established the five-day winter "to-be-announced" moose season that takes place between Dec. 1 and Mar. 31. The five-day season is opened at the discretion of the Koyukuk/Nowitna National Wildlife Refuge Manager, after consultation with ADF&G and the chairs of the Council and the Ruby Fish and Game Advisory Council.

Biological Background

The State management objectives for Unit 21B (Stout 2008) are to:

- Provide for harvest of 50 – 200 moose or 5% of the annual moose population estimate, whichever is less.
- In combination with Unit 21C, implement at least two habitat enhancement activities every five years.
- Maintain a moose population of greater than 4,000–5,000.

The moose population for most of Unit 21B (8,565 mi^2 out of 9,311 mi^2) was estimated at 2,317 moose (90% CI: 1,899 to 2,735) in 2008 (Havener 2011, pers. comm.). These estimates were based on aerial surveys on the Nowitna NWR. Stout (2008) estimated the Unit 21B moose population to be 4,049 moose (90% CI: 2,449 to 5,649) for 2005/2006 from surveys in the lower Nowitna River area and by extrapolating moose density data into the portion of Unit 21B upstream of the Little Mud River drainage.

Aerial moose trend surveys were conducted on the Koyukuk/Nowitna NWR from November 1–15, 2010. Note that these results are for areas of the Nowitna NWR and not all of Unit 21B. Results from the combined trend count areas (TCA) extending from the Little Mud River down to the Nowitna River mouth (Nowitna/Sulatna Confluence and Nowitna Mouth TCAs) showed improved fall calf abundance and low yearling recruitment (Bryant and Scotton 2010) (**Figure 1**). Yearling bull numbers declined, probably in response to very low calf numbers in 2009. The medium and large bull numbers were average in 2010. The 2010 bull and calf counts were above average, despite the observed low recruitment of yearling bulls. The estimated densities in 2010 were 1.37 total moose/mi^2 and 0.84 cow moose/mi^2, both of which were slightly lower than the 2001–2010 means of 1.47 total moose/mi^2 and 0.98 cow moose/mi^2 (Bryant and Scotton 2010).

Population composition data in the area affected by this proposal (Nowitna River area) are different from the rest of Unit 21B (**Table 1**), suggesting hunting pressure along the Nowitna River has lowered the bull:cow ratio (Havener 2011, pers. comm.). Note, however, the survey years differ for the two areas. Over the long term, the Nowitna moose population appears stable at a low density. A conservative harvest strategy is warranted due to poor recruitment into the population, fluctuating cow numbers, and the recently recovered bull:cow ratio from a low in 2003 (Byrant and Scotton 2010).

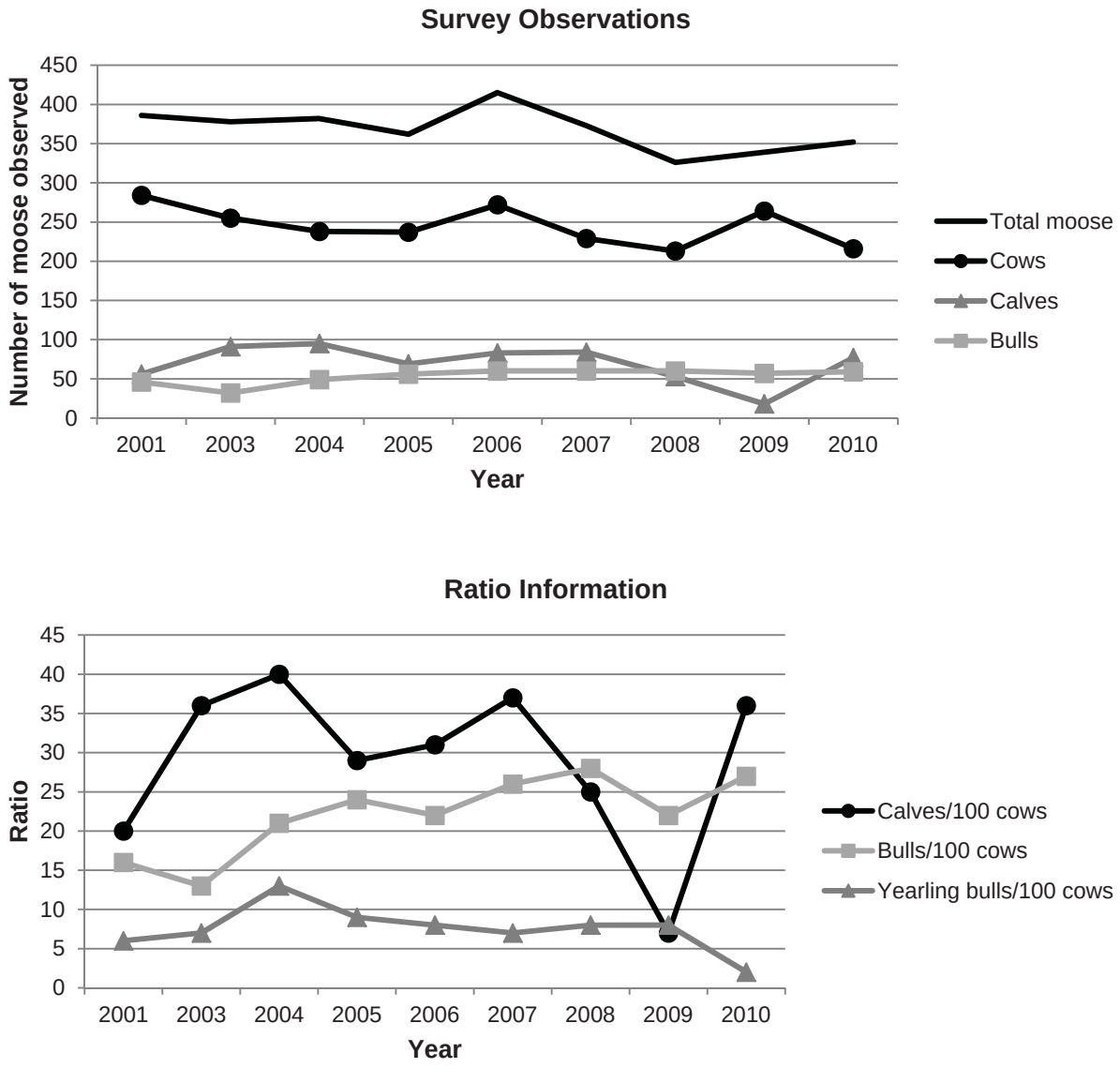


Figure 1. Moose observations and ratio information from aerial surveys in the Lower Nowitna River composition area, which includes the Nowitna/Sulatna Confluence and Nowitna Mouth Trend Count Areas, 2001–2010.

No habitat enhancement or monitoring activities were conducted in Unit 21B between 2005 and 2007 (Stout 2008). However, a wildfire was allowed to burn in the upper drainage of the Little Mud River in 2005; and this could improve habitat in the affected area (Stout 2008).

Harvest History

Moose continue to be the most important and widely used large animal for the subsistence users of the Interior Region. Brown et al. (2004) found 92% of Middle Yukon and Koyukuk River community households used moose. Household surveys conducted in 2002–2003 resulted in total harvest estimates of 31 moose for Ruby households and 60 moose for Tanana households (Brown et al. 2004). These harvest estimates were expanded from surveys within a sample of households in each community and are not limited to harvest within Unit 21B. In 2002, reportedly 99% of Tanana households used moose, 72%

Table 1. Estimated composition ratios of the overall moose population in Unit 21B (2008 survey) and within the Nowitna River area of Unit 21B (2010 survey).

Ratio	All of Unit 21B	Nowitna River Area[a]
Bulls:cows	50:100	27:100
Yearling bulls:cows	12:100	2:100
Calves:cows	49:100	36:100

[a] Combined Nowitna/Sulatna Confluence and Nowitna Mouth Trend Count Areas.

attempted to harvest moose, and 39% harvested moose. Thirty-six percent reported giving moose to other people and 86% reported receiving moose. In 2002, 88% of Ruby residents reported using moose, 64% attempted to harvest moose, and 40% harvested moose. Twenty percent reported giving moose to others in the community and 54% reported receiving moose.

Moose harvest in Unit 21B has been variable for all users (**Figure 2**). Harvest by all Alaska residents (under State and Federal registration permits) was higher between 1983 and 1990, but has since leveled off at lower stable numbers. Overall, the mean annual harvest by all Alaska residents (local and nonlocal) has been 75 moose. The mean nonresident harvest of moose in Unit 21B has been 10 moose per year, but this harvest dropped to 8 moose per year between 2004 and 2009. The drop in nonresident harvest coincides with the State's 2004 implementation of a drawing system to reduce harvest effort. Ruby residents harvested an average of 13 moose per year under Federal and State registration permits between 1983 and 2009, and reported harvests were above average from 2007 to 2009 after a period of below-average harvests (1994–2006) (**Figure 2**). Tanana residents harvested an average of 5 moose per year under Federal and State registration permits between 1983 and 2009, and reported harvests were low in 2006 and 2008–2009 (**Figure 2**).

The current Federal season (Sept. 26 – Oct. 1) was initiated in 2007 to provide additional harvest opportunity for Federally qualified subsistence users. Residents of Ruby and Tanana reportedly harvested six bull moose on Federal public land in Unit 21B between 2007 and 2010 (**Table 2**). Recent use of the Federal season and harvest in Unit 21B have primarily been associated with Ruby residents, as they account for five of the six harvested moose (2007–2010) and all of the issued permits in 2009 and 2010. Residents of Tanana were issued 11 permits between 2007 and 2008, but only 3 residents reportedly used their permit and one moose was harvested in 2007. No permits were requested or issued to Tanana residents for this hunt in 2009 or 2010.

Effects of the Proposal

Adoption of this proposal would extend the end date for the fall moose hunt on a portion of Federal public lands in Unit 21B from Oct. 1 to Oct. 8. The one-week season extension would provide additional opportunity for Federally qualified subsistence users to harvest a bull moose. The proponent states that warmer temperatures have delayed fall movements of moose, which has affected harvest opportunity. By extending the season an additional week, bull moose may be more accessible to subsistence users due to increased movements.

The adoption of the extended season would not likely lead to a large increase in bull moose harvest in Unit 21B, especially with recent low participation rates by Federally qualified subsistence users. Use of the current Federal fall moose season extension (Sept. 26 – Oct. 1) has decreased, as fewer residents of Galena and Ruby have been acquiring permits and no permits have been issued to residents of Tanana

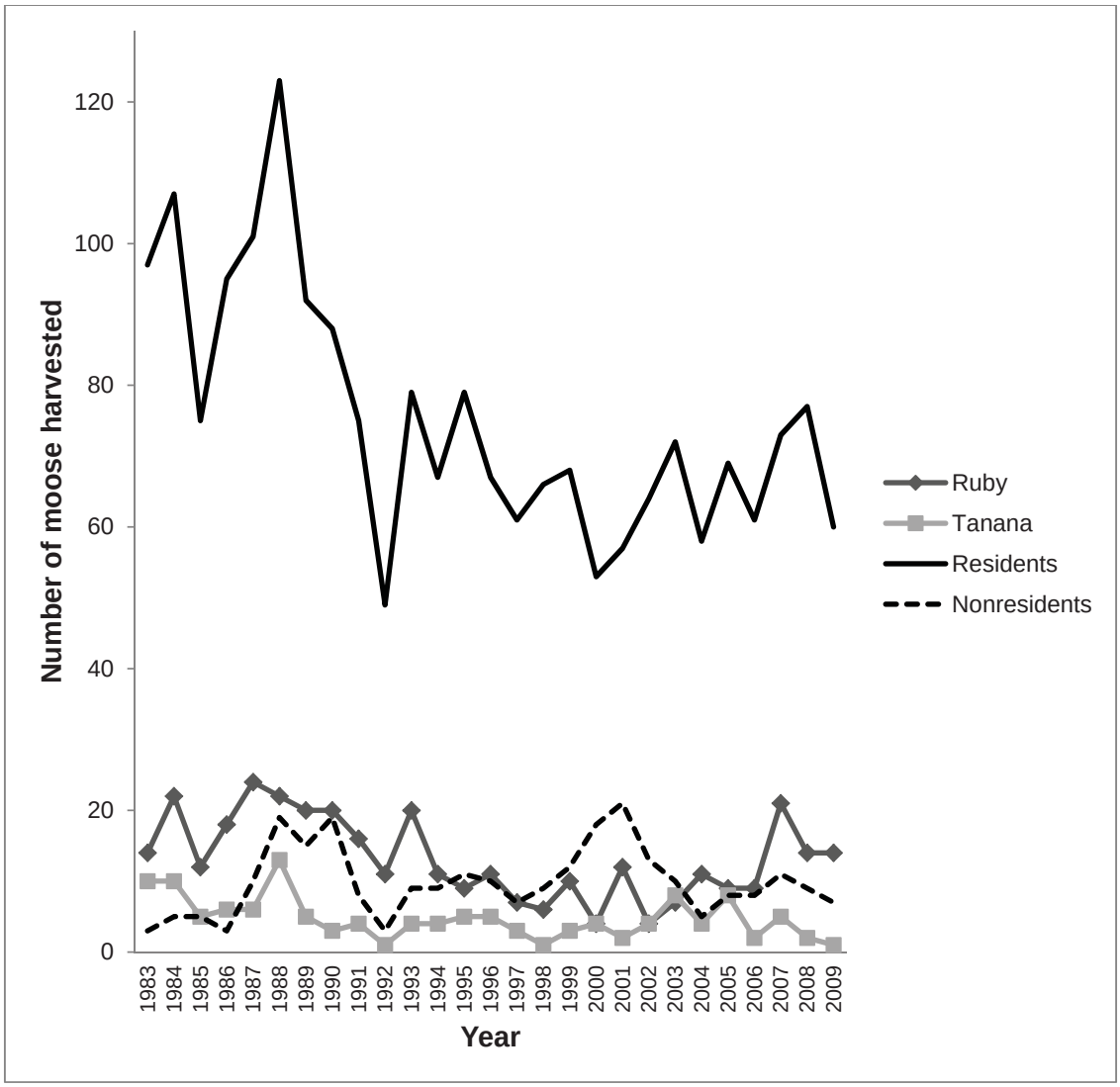


Figure 2. The number of moose harvested by the local communities of Ruby and Tanana, all residents, and nonresidents in Unit 21B using State and Federal registration permits from 1983 to 2009. Residents are all Alaska residents, including those from Ruby and Tanana.

Table 2. Harvest and permit information for the Federal subsistence moose season (Sept. 26 – Oct. 1) on the Nowitna National Wildlife Refuge from 2007–2010.

Year	No. of permits issued	No. hunters through check station	Moose harvested
2007	12	8	3
2008	12	6	0
2009	6	3*	2
2010	5	1*	1

* Check station closed early due to icing on the river and snow conditions.

since 2008. In addition, the extended season would not open all Federal public lands of Unit 21B for the proposed fall moose season. Only Federal public lands on the part of the Nowitna River drainage, downstream from and including the Little Mud River drainage would be included. Residents of Tanana would be required to travel approximately 70 river miles to reach the eastern boundary open area (**Map 1)**.

The proposed season extension would overlap with the peak of rut, which may affect the population. The peak of the rut in Alaska is estimated as October 5 and ranges from September 28–October 12 (Schwartz 2007). There appears to be little variation in breeding season dates among years, suggesting an association with photoperiod rather than temperature (Wilton 1992, references therein; Schwartz 2007); however, other factors such age and proportion of males and body mass of females may also affect timing of ovulation (Garel, et al. 2009). Wilton (1992, 1995) suggested seasons that overlap with the rut could have adverse effects on moose populations, including degradation of genetic diversity by removing dominant breeding individuals. However, the extent of such impacts from harvesting during the rut is not known, as much of effects are speculative and direct evidence of such impacts are lacking.

Potential impacts of harvesting during the rut are associated with the removal of prime breeding males. Prime (5–10 years of age; Timmermann 1992) breeding males may be more susceptible to harvest during the time period leading up to, and at, the peak of the rut due to increased movements while searching for cows and reduced wariness (Wilton 1992, Hundertmark 2007, Timmermann and Buss 2007). The removal of prime breeding males around the peak of the rut may affect the timing of breeding. Cows will still likely be bred as pregnancy rates remained high (90%) with bull:cow ratios as low as 4–9 bulls:100 cows (Bishop and Rausch 1974), but cows may be bred by younger or less dominant bulls. Younger bull moose come into rut later than older prime bulls which may lead to delayed pregnancy (Bubenik 2007). Moose are polyestrous, which means if they do not conceive on the first cycle of the breeding season, they will continue with subsequent cycles (Schwartz et al. 1994). The estrous period of most cow moose is approximately 15–26 hours and the duration of the estrous cycle is 22–28 days (Schwartz and Hundertmark 1993). Therefore, if breeding does not occur within the short estrous period of the first cycle, breeding is delayed at least 22 days. Calves conceived during the second, or later, estrous have been shown to enter the winter at a lower body mass, which can lead to higher winter mortality rates (Schwartz et al. 1994). In Quebec, Laurian et al. (2000) found more young males paired with cows in an intensely harvested population compared to an unharvested population, but did not observe overall effects on reproduction or population productivity. These results, however, may not be directly comparable due to different breeding strategies between moose in Quebec and Alaska moose (*Alces alces gigas*).

The proposed Federal season extension would occur during a period of uncertain ice conditions on the river. In 2009 and 2010, icing conditions on the river in late September forced refuge staff to close the check station early (Havener 2011, pers. comm.). Travel conditions on the rivers may affect use of the proposed season, especially as Tanana residents would have to travel approximately 70 river miles to reach the eastern boundary. It should also be noted that the season extension would require the Nowitna National Wildlife Refuge moose check station to remain open for an additional seven days (Moos 2011, pers. comm.). The Nowitna check station is set up on or about August 27 and camp is broken at the end of the Federal season (October 1). If icing trends continue, the refuge may not be able to safely operate the check station during the proposed season, which could result in the loss of important management data (Havener 2011, pers. comm.). Harvest reporting by other means, such as mail-in harvest reports, would have to be emphasized to monitor the proposed season.

OSM CONCLUSION

Oppose Proposal WP12-56

Justification

Due to low recruitment into the population, fluctuating cow numbers, and the recently recovered bull:cow ratio from a low in 2003, a conservative harvest strategy is warranted for the affected areas of Unit 21B (Bryant and Scotton 2010). Therefore, despite the uncertainty of biological effects of harvesting during the peak of the rut, the proposed season extension is not supported.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Western Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-56. The bull cow ratio is below management objective; there is already opportunity provided with the extension to October 1. Condition of the moose declines after Oct. 1; this extension is unwarranted.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-56. The Council does not find a conservation concern, and the proposal could provide a very important subsistence opportunity late in the season for subsistence users who may not have yet been successful. The Council also notes that recent climate changes have influenced historical rut times and cites traditional ecological knowledge that, even during rut, moose meat is not compromised unless it comes into contact with urine, and that later harvest can be beneficial to those with no or limited electricity.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP12-56
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Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-56: This proposal requests liberalizing a portion of the Unit 21B federal subsistence moose hunt season.

Introduction: This proposal was submitted to change the Unit 21B federal subsistence moose hunting season from September 26 through October 1 to September 26 through October 8. This requested change would only be applicable to the federal subsistence moose hunt in 21B that part of Nowitna River Drainage downstream from and including the Little Mud River drainage. The proponent indicates climate change may delay the timing of moose presence in the area of concern.

Impact on Subsistence Users: Adoption of this proposal will provide federally qualified subsistence users one additional week to harvest moose in the identified portion of Unit 21B.

Opportunity Provided by State: State moose hunting regulations for the identified portion of Unit 21B follows:

> Residents - one bull moose August 22 through August 31 or September 5 through September 25.
> Non Residents – one bull moose with a 50-inch antlers or antlers with 4 or more brow tines on at least one side between September 5 and 25.
>
> Meat-on-bone salvage requirements for all meat taken prior to October 1 in Unit 21.

Conservation Issues: The moose population in Unit 21B was estimated at 2,317 moose (± 419) and appears to be stable. The population is below the management objective of 4,000-5,000 moose. ADF&G alerted the affected federal agencies concerning this issue (attached correspondence to; K. Moos (USFWS) and S. Jacobson (BLM), 11 June 2010). The bull:cow ratio is high in Unit 21B at 40-50 bulls:100 cows, but lowest in the Nowitna River corridor portion of 21B at 25-30 bulls:100 cows. Bull:cow ratios in the Nowitna River corridor are likely lower due to relatively easier access and therefore higher hunting pressure. Regulations adopted in 2004 successfully increased bull:cow ratios in the corridor which had dropped to 10-15 bull:100 cows in 2003. Improved bull:cow ratios are believed to have contributed to increased harvest for the village of Ruby, the village with the highest use of Unit 21B (avg. harvest = 15 moose/year 2001-05; avg. harvest = 20 moose/year 2006-10). Increasing harvest of bulls during the fall is an essential management strategy to reduce the harvest of cows during the winter.

Research suggests populations with low bull:cow ratios composed of significantly elevated percentages of yearling bulls may be impacted by disruption of normal rutting activities. A late September hunt would occur during the beginning of the peak rutting period and may result in some level of disruption. Several biological concerns are raised regarding the potential adoption of an October 2 through October 8 season extension. The effects of hunting and the potential disruption to the rutting behavior of moose are not well studied, but research of other ungulates provides insight into what could reasonably be expected to occur in moose. Several authors have

identified the concern which moose hunts that occur during the rut subject mature bulls to higher levels of harvest due to their increased vulnerability (Timmerman and Buss, 1998, Ecol. Mgt. N. Amer. Moose).

Events which can reasonably be expected to cascade as a result of the reduction in the mature bull component of the population are listed below;

1) more immature bulls will breed,
2) immature bulls experience delayed reproductive status,
3) cows are not bred until their second estrus,
4) calving dates are delayed,
5) calving synchronization is reduced and potential predation rates are increased,
6) calving weights are lower entering the first winter of life and thus higher rates of mortality are experienced in the cohort (Mysterud et al., 2002, J. Anim. Ecol.).

In populations composed of male:female sex ratios heavily favoring females and mature male:immature male age ratios heavily favoring immature males, the effect is expected to have a potentially greater impact (Holland et al., 2002, JWM). Cows are receptive to breeding for only a brief period (18 hours) and the median dates for breeding are reported to range from September 29th to October 4th in a Denali NP study (Van Ballenberghe and Miquelle, 1993, Can. J. Zool.). Rut timing is a photoperiod response, and calving dates of radiocollared moose have not changed in interior Alaska from 1996–2005 (Boertje, 2006, pers. comm.), which demonstrates that fall weather patterns have not shifted the breeding dates. Analyses of weather patterns for the Galena area indicate there has been no significant increase in temperature during September (T. Paragi, pers. comm.).

Enforcement Issues: Adoption of this proposal will further misalign federal and state moose hunting season dates which may increase enforcement issues in areas with mixed land ownership.

Recommendation: Oppose.

ADF&G Comments on WP12-56
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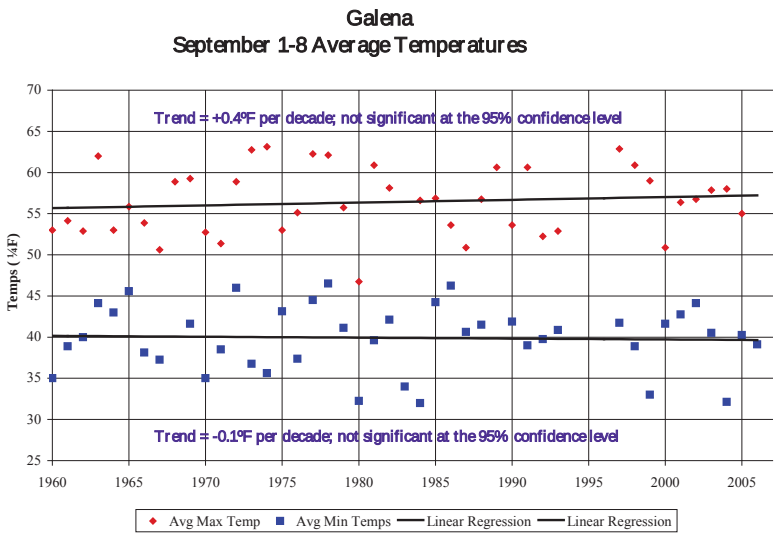

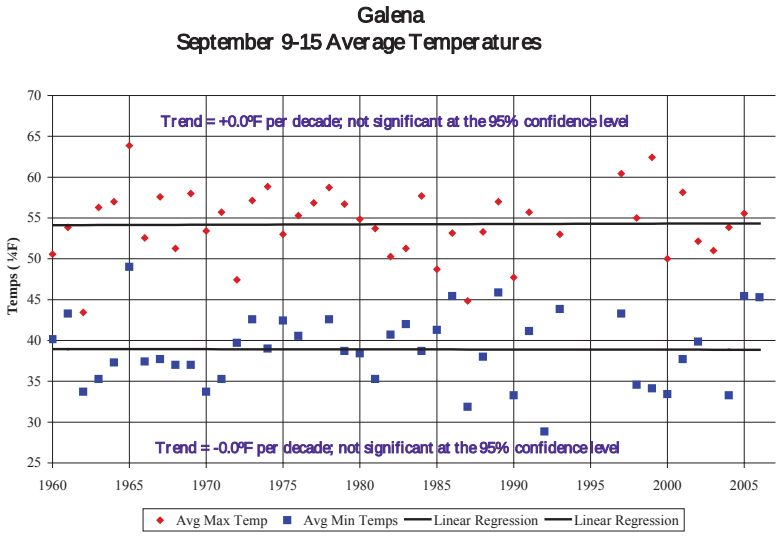

STATE OF ALASKA

DEPARTMENT OF FISH AND GAME

DIVISION OF WILDLIFE CONSERVATION

SEAN PARNELL, GOVERNOR

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Dear Kenton and Shelly:

I would like to bring to your attention two important moose management issues within the Nowitna River drainage that include National Wildlife Refuge (NWR) and Bureau of Land Management (BLM) lands.

The Alaska Department of Fish and Game (Department) produces a biennial moose management report for Game Management Unit (Unit) 21B which was completed this year. Within that report, the Department's management direction is outlined by our Management Goals and Objectives for the moose population, and activities that will be conducted to achieve those Goals and Objectives. Below is the current management direction for the moose population in Unit 21B.

> **GOAL 1:** Manage Unit 21B moose on a sustained yield basis to provide both hunting and other enjoyment of wildlife in a manner that complements the wild and remote character of the area and that minimizes disruption of local residents' lifestyles.
> OBJECTIVE 1: Provide for harvest of 50–200 moose or 5% of the annual moose population estimate, whichever is less.
> OBJECTIVE 2: In combination with Unit 21C, implement at least 2 habitat enhancement activities every 5 years.
> OBJECTIVE 3: Maintain a moose population of ≥4,000–5,000.
> *Activity* — Conduct trend count surveys annually or population estimation surveys when funding is available, and *notify relevant wildlife agencies if the population declines below 4,000–5,000 moose.*

ADF&G Comments on WP12-56
December 5, 2011, Page 5 of 6

Results from the population survey conducted in November 2008 indicated a total of 2,317 (1,899–2,736; 90% CI) observable moose over 9,311 mi^2 in Unit 21B (see attached table). Because the estimate falls well below the range of the population objective, including the upper confidence limit of the estimate, we concluded that our third management objective was not met for the reporting period of RY07–RY08. This assessment requires that we notify your agencies of our concern for this moose population.

The second issue that I want to bring to your attention regards the Alaska Board of Game adoption of a Positive Finding for Intensive Management for Unit 21B moose at their March 2010 meeting. A positive finding for intensive management will allow for a wider range of management options, including strategies to improve moose recruitment. Recruitment is our primary concern for Unit 21B because it determines our ability to achieve the population objective in the future.

The significance of the Board action is that the current population and harvest estimates (2,317 moose estimated; 3 yr. avg. = 99 moose harvested) fall below the Intensive Management objectives recently established. Based on historical moose population estimates and available habitat, the population and harvest objectives adopted by the Board were 4,000–6,000 moose and 200–300 moose respectively. We supported those objectives and are confident that the population objective represents a reasonable management strategy for Unit 21B. Additionally, at a harvest rate of 5% of the observable moose, the harvest objective demonstrates our continuing commitment to manage moose conservatively.

Based on regional workload and fiscal priorities, the Department will not be taking action at this time. However, we will continue to monitor the status of the population and harvest in the Nowitna River drainage and keep you informed. We encourage your continued cooperation and input regarding the management of moose in Unit 21B, particularly cooperative population estimation surveys such as the one conducted in 2008.

Thank you,

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907-459-7218

Cc:
David James – Regional Supervisor, ADFG
Roy Nowlin – Regional Management Coordinator, ADFG
Tom Paragi – Intensive Management Coordinator, ADFG

ADF&G Comments on WP12-56
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Unit 21B moose population estimates, regulatory years 1980–1981 through 2008–2009

Area/Regulatory Year	Area mi^2	Bulls:100 Cows	Calves:100 Cows	Yrlg bulls:100 Cows	Percent calves	Adults	Population Estimate (90% C.I.[a])	Density
21B–Nowitna West								
1980–1981[b]	1556	52.8	35.0	25.1	19	1125	1389 (±27%)	0.89
1986–1987[b]	1596	37.2	39.4	12.1	22	685	878 (±24%)	0.55
1990–1991[b]	1560	39.9	39.1	9.9	22	948	1214 (±18%)	0.78
1995–1996[c]	1338	33.8	30.1	14.5	18.6	856	1052 (±20%)	0.79
2001–2002[d]	1531	29.7	18.6	7.4	12.4	1203	1358 (±28%)	0.89
2008–2009[d]	1531	35.3	35.7	9.3	20.8	646	816 (±9%)	0.53
21B–Below Big Mud								
2001–2002[d]	4754	39.0	18.2	9.2	11.7	2772	3201 (±45%)	0.67
2008–2009[d]	4754	44.6	42.7	11.6	22.7	1110	1438 (±15%)	0.30
Total Area								
2008–2009[d]	8565	49.9	48.9	12.1	24.6	1747	2317 (±18%)	0.27

[a] Confidence interval (% ±).
[b] MOOSEPOP analysis of Gasaway survey with sightability correction factor (SCF).
[c] MOOSEPOP analysis (regression design) of Gasaway survey with SCF.
[d] Geospatial population estimate analysis without SCF.

WP12-57/58 Executive Summary		
General Description	Proposal WP12-57 requests an alignment of Federal and State boundaries for the winter moose season in Unit 24B. *Submitted by the Alaska Department of Fish and Game* Proposal WP12-58 requests additional language in the regulations to clarify that a State registration permit is allowed to harvest moose in the Kanuti Controlled Use Area of Unit 24B during the fall and winter seasons. The proposal also requests that additional language be included in the regulations to describe Federal public lands where a State registration permit is not required during the winter moose season. *Submitted by the Kanuti National Wildlife Refuge*	
Proposed Regulation	**Proposal WP12-57**	
	Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*
	Unit 24B—~~Kanuti National Wildlife Refuge and BLM lands~~ ***All drainages of the Koyukuk River downstream from and including the Henshaw Creek Drainage****—1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.*	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*
	A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream and including the Bonanza Creek drainage.	
	Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.	
	Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*
	WP12-58	
	Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*
	Unit 24B—Kanuti National Wildlife Refuge and BLM lands—1 antlered bull. ***A State registration permit is required.*** *A Federal registration permit is required for the Sept. 26–Oct. 1 period.*	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*

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WP12-57/58 Executive Summary *(continued)*		
Proposed Regulation (Continued)	*A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream of and including the **Fish**/Bonanza Creek drainage**.* *Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*	
	Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*
OSM Conclusion	**Oppose** Proposal WP12-57. **Support** Proposal WP12-58 **with modification** to require one Federal registration permit for the fall (Aug. 25–Oct. 1) and winter (Dec. 15–Apr. 15) moose seasons on Kanuti National Wildlife Refuge and BLM lands in Unit 24B. The modified regulation should read:	
	Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*
	*Unit 24B—Kanuti National Wildlife Refuge and BLM lands—1 antlered bull **by Federal registration permit**. ~~A Federal registration permit is required for the Sept. 26–Oct. 1 period.~~* *~~A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream of and including the Bonanza Creek drainage.~~* *Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*

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WP12-57/58 Executive Summary *(continued)*	
OSM Conclusion (Continued)	*Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.* *Aug. 25–Oct. 1*
Western Interior Regional Council Recommendation	**Support** Proposals WP12-57. **Support** Proposal WP12-58 **with modification** to require one Federal registration permit for the fall (Aug. 25–Oct. 1) and winter (Dec. 15–Apr. 15) moose seasons, as recommended in the OSM Conclusion. There is a need for a Federal permit to accommodate both fall and winter hunting opportunity; administrative simplification. See OSM Conclusion for modified regulation language.
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 Board may want to consider supporting the proposal with modification to align the harvest limit regulations for ptarmigan in Unit 18 with the recent changes made by the Alaska Board of Game while leaving the harvest season dates the same. If the Board were to support this proposal with modification, which would be contrary to the Council's recommendation, it could do so based on the 3rd exception clause of section 805c of ANILCA (that the Council recommendation would "be detrimental to the satisfaction of subsistence needs").
ADF&G Comments	**Support** Proposal WP12-57 / **Oppose** Proposal WP12-58.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-57/58

ISSUES

Proposal WP12-57, submitted by the Alaska Department of Fish and Game (ADF&G), requests an alignment of Federal and State boundaries for the winter moose season in Unit 24B.

Proposal WP12-58, submitted by the Kanuti National Wildlife Refuge (Kanuti NWR), requests additional language in the regulations to clarify that a State registration permit is allowed to harvest moose in the Kanuti Controlled Use Area of Unit 24B during the fall and winter seasons. The proposal also requests that additional language be included in the regulations to describe Federal public lands where a State registration permit is not required during the winter moose season.

DISCUSSION

Proposal WP12-57

The proponent states the proposal would align State and Federal hunt boundaries for the winter moose season in Unit 24B. The proponent believes the alignment of State and Federal hunt boundaries would eliminate the need for subsistence users to differentiate between State and Federal public land within the drainages of the Koyukuk River, downstream from and including the Henshaw Creek drainage. This may reduce the possibility that a Federally qualified subsistence user would unintentionally violate hunting regulations while hunting moose in the portion of Unit 24B near Bettles and Evansville, which has a checkerboard pattern of State and Federal land jurisdiction.

Proposal WP12-58

The proponent requests clarification in the regulations regarding the registration permit requirements for the fall and winter moose seasons in Unit 24B. The proponent believes a State registration permit could be used to harvest moose on closed Federal public lands within the Kanuti Controlled Use Area during the Sept. 1–25 season and Dec. 15–Apr. 15 season. The proponent believes this is an administrative action request that parallels several other hunts that have closed Federal public land and use one permit for reporting. The proponent states that the use of a single registration permit for the winter moose season in Unit 24B would lessen the burden on subsistence users and avoids duplicate harvest reporting.

The proponent also requests the description of the section of Unit 24B that is not covered by a State registration permit be clarified for the Dec. 15–Apr. 15 moose season. The proponent states the language in the public regulation booklet is incorrect and should include additional language which is in the §__.26(n)(24), which states “and upstream of and including the Bonanza Creek drainage.” Additionally, the proponent requests the Fish Creek drainage be added to the area description. This is an administrative change and no action by the Federal Subsistence Board is needed.

Existing Federal Regulations

Unit 24B — Moose

See **Map 1, Section 1** for the area affected by the following regulation

Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*

See **Map 1, Section 2** for the area affected by the following regulation.

Unit 24B—Kanuti National Wildlife Refuge and BLM lands—1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*
*A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream of and including the Bonanza Creek drainage.**	
Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.	

*NOTE: The Bonanza Creek drainage is included in the Federal subsistence regulations in §__.26(n)(24), but is not included in the public regulations book.

See **Map 1, Section 3** for the area affected by the following regulation.

Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*

Proposed Federal Regulations

Proposal WP12-57

See **Map 2, Section 1** for the area affected by the following regulation.

Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*

See **Map 2, Section 2** for the area affected by the following regulation.

Unit 24B—~~Kanuti National Wildlife Refuge and BLM lands~~ ***All drainages of the Koyukuk River downstream from and including the Henshaw Creek Drainage****—1 antlered bull. A Federal registration permit is required for the Sept. 26–Oct. 1 period.*	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*
A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream and including the Bonanza Creek drainage.	
Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.	

See **Map 2, Section 3** for the area affected by the following regulation.

Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*

Proposal WP12-58

See **Map 1, Section 2** for the area affected by the following regulation.

Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*

See **Map 1, Section 3** for the area affected by the following regulation.

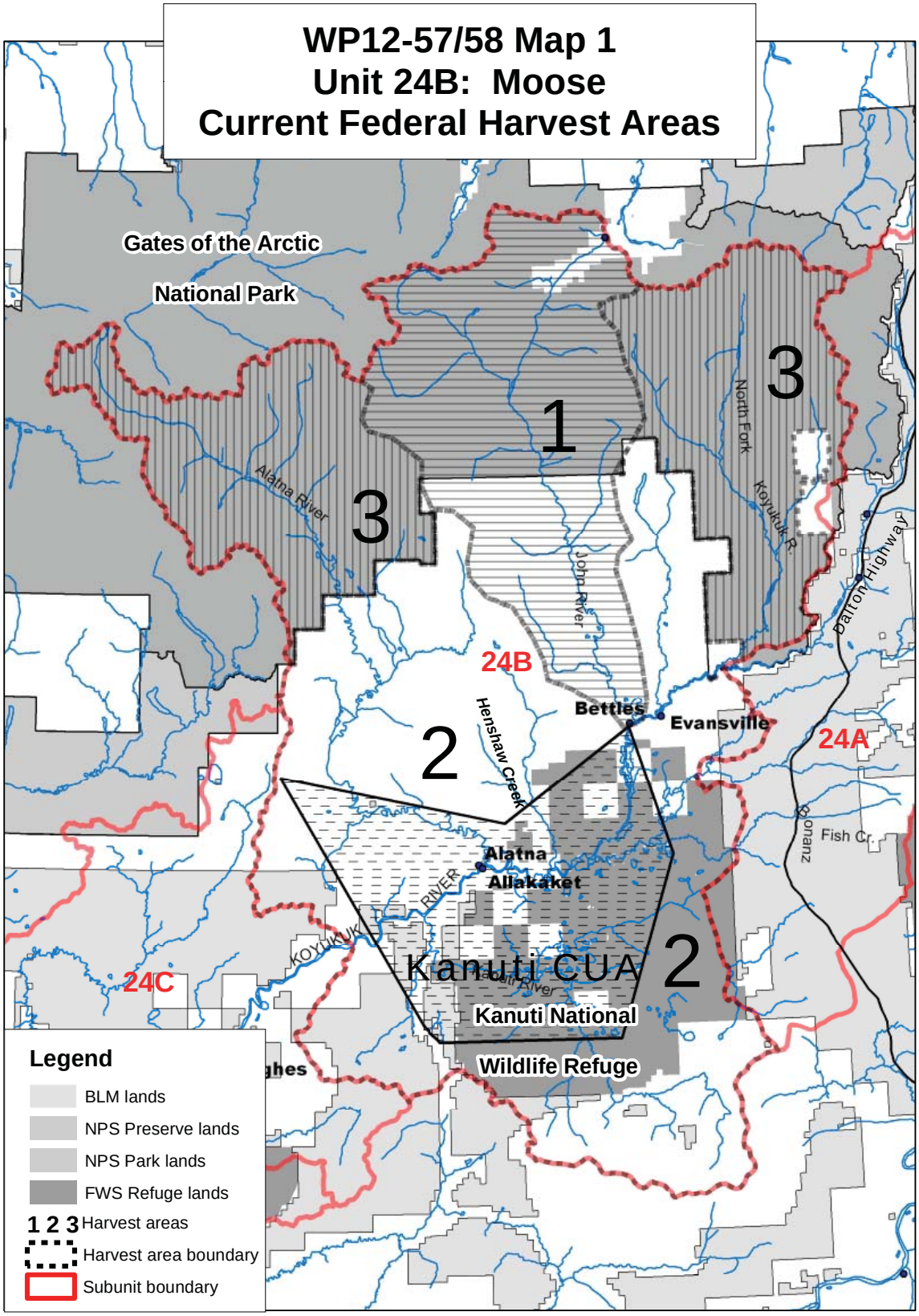
Unit 24B—Kanuti National Wildlife Refuge and BLM lands—1 antlered bull. ***A State registration permit is required.*** *A Federal registration permit is required for the Sept. 26–Oct. 1 period.*	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*
A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream of and including the ***Fish****/Bonanza Creek drainage****.* *Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.*	

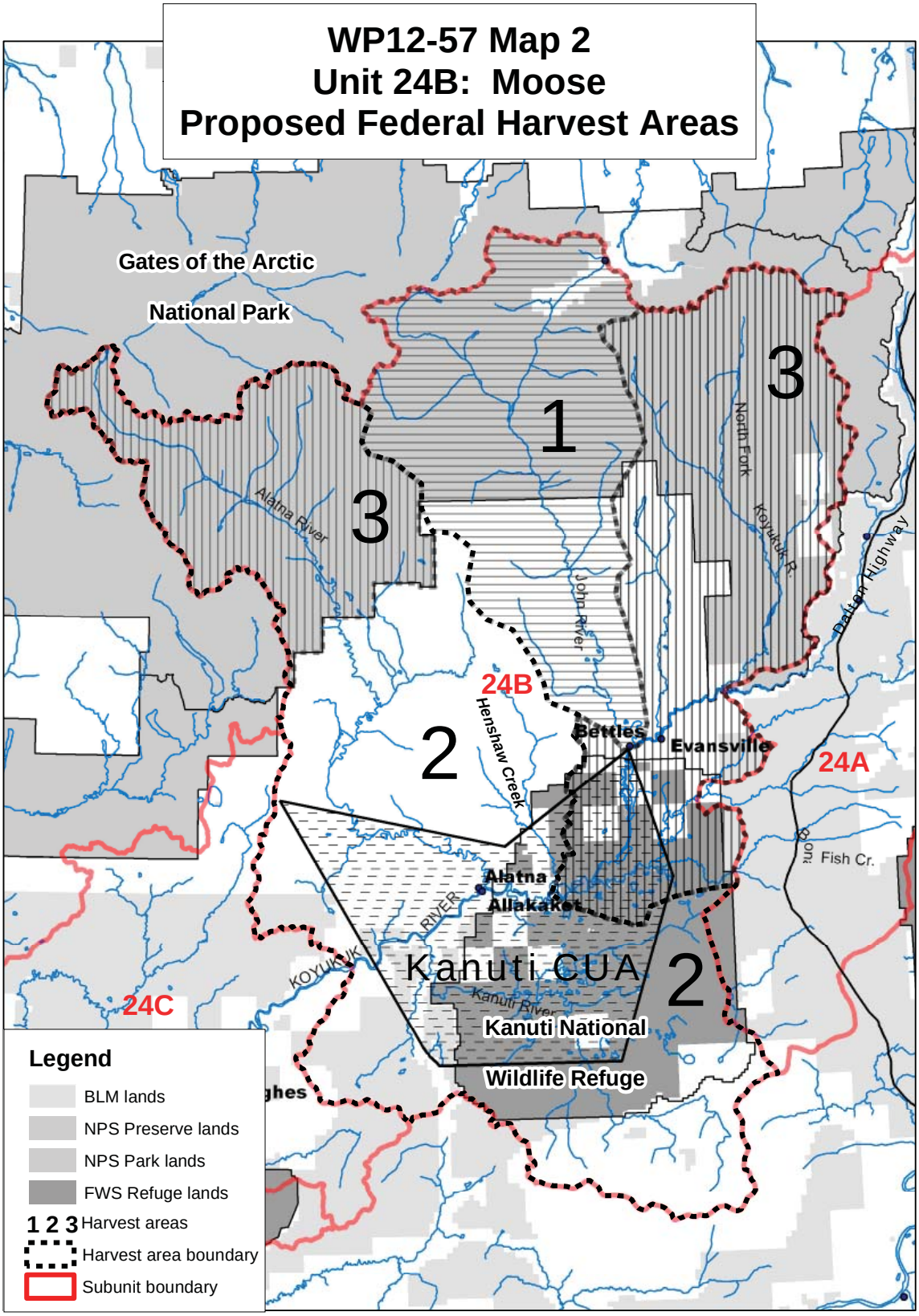
See **Map 1, Section 3** for the area affected by the following regulation.

Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*

Existing State Regulations

Unit 24B all drainages of the Koyukuk River upstream from the Henshaw Creek drainage, excluding the North Fork of the Koyukuk River drainage.	*Resident: One bull*		*Sept. 1–Sept. 25*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side		*Sept. 5–Sept. 25*
Unit 24B remainder	*Resident: One bull*		*Sept. 1–Sept. 25*
	Resident: One antlered bull by permit, available at hunt.alaska.gov or in person in Hughes, Allakaket or Fairbanks beginning December 15	*RM833*	*Dec. 15–Apr. 15*


WP12-57/58 Map 1
Unit 24B: Moose
Current Federal Harvest Areas
Gates of the Arctic
National Park
1
3
3
2
2
Alatna River
John River
North Fork
Koyukuk R.
Dalton Highway
24B
Henshaw Creek
Bettles
Evansville
24A
Alatna
Allakaket
Fish Cr.
Dinanz
KOYUKUK RIVER
Kanuti CUA
Kanuti National
Wildlife Refuge
24C
Legend
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
1 2 3 Harvest areas
Harvest area boundary
Subunit boundary


WP12-57 Map 2
Unit 24B: Moose
Proposed Federal Harvest Areas
Gates of the Arctic
National Park
1
2
3
3
24A
24B
24C
Alatna River
John River
North Fork
Koyukuk R.
Dalton Highway
Henshaw Creek
Bettles
Evansville
Alatna
Allakaket
KOYUKUK
RIVER
Kanuti CUA
Kanuti River
Kanuti National
Wildlife Refuge
Fish Cr.
Legend
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
1 2 3 Harvest areas
Harvest area boundary
Subunit boundary

Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side	*Sept. 5–Sept. 25*

Extent of Federal Public Lands/Waters

Federal public lands comprise approximately 64% of Unit 24 and consists of 22% National Park Service, 21% Bureau of Land Management, and 21% Fish and Wildlife Service managed lands (**Unit 24 Map)**.

Customary and Traditional Use Determinations

Residents of Unit 24, Anaktuvuk Pass, Koyukuk, and Galena have a positive customary and traditional use determination for moose in Unit 24.

Regulatory History

Recent regulatory changes in Unit 24B have been associated with the need to provide additional opportunities for Federally qualified subsistence users to harvest moose. Proposal WP10-67 was adopted in 2010 with a modification to provide the current four-month (Dec. 15–Apr. 15) winter/spring hunt on all Kanuti NWR and BLM lands in Unit 24B. Recent winter seasons consisted of more limited five-day "to-be-announced" seasons. The five-day seasons have not had much harvest success 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, 24B, 24C, and 24D.

The Kanuti Controlled Use Area (CUA) was adopted from State regulations into Federal regulations on July 1, 1990 when the Federal Government took over the management of subsistence use of fish and wildlife resources on public lands. 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 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. Thus, the boundaries of the State Kanuti CUA are currently out of alignment with Federal regulations. The excluded area of the Kanuti CUA, a triangular-shaped section near the villages of Bettles and Evansville, is among the areas that WP12-57 requests to be removed from the Federal winter moose season.

The Alaska Board of Game adopted State Proposal 90A in 2010, which established a December 15–April 15 moose 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. State Proposal 90A replaced an existing Dec. 1–10 moose season in Unit 24B remainder. 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. The State previously had a 10-day winter hunt (Mar. 1–10) that included drainages north of the Koyukuk River near Bettles and Evansville until June 30, 2001. 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" season when the WP05-13 was adopted with modification by the Federal Subsistence Board in May 2005.

Biological Background

The Koyukuk River Moose Management Plan 2000–2005 (Management Plan) (ADF&G 2001) set the management goals/objectives for the Koyukuk River moose population. For the portion of Unit 24 where the Kanuti Controlled Use Area is located, the management goal is to maintain or increase moose populations while continuing to provide moderate levels of hunter participation and harvest. The Management Plan listed biological decision-making factors for managing moose the moose population along the upper Koyukuk River (upstream of Hughes). The factors prescribed ratios of up to 30–40 bulls:100 cows to allow for adequate breeding in this low density population and 30–40 calves:100 cows to support population growth (ADF&G 2001).

Population surveys have been conducted on the Refuge since 1989, but surveys in 1989 and 1993 are not easily compared to more recent surveys due to different survey methods. Surveys conducted from 1999 to 2008 employed the GeoSpatial Population Estimator technique (Kellie and Delong 2006) and can be compared more readily (Gasaway et al. 1986).

The moose population on the Kanuti NWR has been relatively stable but at low levels since 1999. Moose population estimates on the Refuge have ranged from a low of 588 moose in 2007 to a high of 1,068 in 2010 (**Table 1**). Bull:cow ratios were above the Management Plan's range for adequate breeding (30 – 40 bulls:100 cows) in all survey years since 1989 (**Table 1**). Calf:cow ratios were above within or above Management Plan's range for adequate recruitment (30–40 calves:100 cows) in all survey years since 1993 (**Table 1**). The higher bull:cow ratios suggest this population can support current harvest levels. Density estimates are typical of Western Interior moose populations, which range from 0.25–2.0 moose/mi2 (Stout 2008), and are similar to the mean density of predator limited moose populations in Alaska and the Yukon Territory (0.38 moose/mi2, Van Ballenbergh and Ballard 2007).

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). Between 2004 and 2009, an average of 31 moose were harvested by Alaska residents and nonresidents in Unit 24B (**Figure 1**), of which an average of 25 moose were harvested by Alaska residents.

Household participation in the moose harvest varies among communities in the region. During the 2002/2003 season, most Allakaket and Alatna households (>67%) attempted to harvest moose, and residents of these two communities harvested an estimated 47 moose (Brown et al. 2004). By contrast, Bettles/Evansville households reported low harvest attempts (9%), and they reportedly harvested zero moose in 2002/2003 (Brown et al. 2004). Residents of Allakaket and Alatna harvested an average of 8.5

Table 1. Summary statistics for eight moose population estimates (90% confidence intervals) in the Kanuti National Wildlife Refuge Survey Area, Game Management Unit 24B, Alaska. Surveys conducted in 1989 and 1993 employed the Gasaway method, while subsequent surveys were conducted using the GeoSpatial Population Estimator method.

							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
1989	2,615	na[b]	1,172 (867–1,476)	0.45	na	na	64	4	17
1993	2,644	na[b]	2,010 (1,567–2,453)	0.76	na	na	61	8	33
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

[a] Survey areas vary among years depending on how survey units are delineated.

[b] Survey units varied in shape and size and are not comparable to units used in subsequent years.

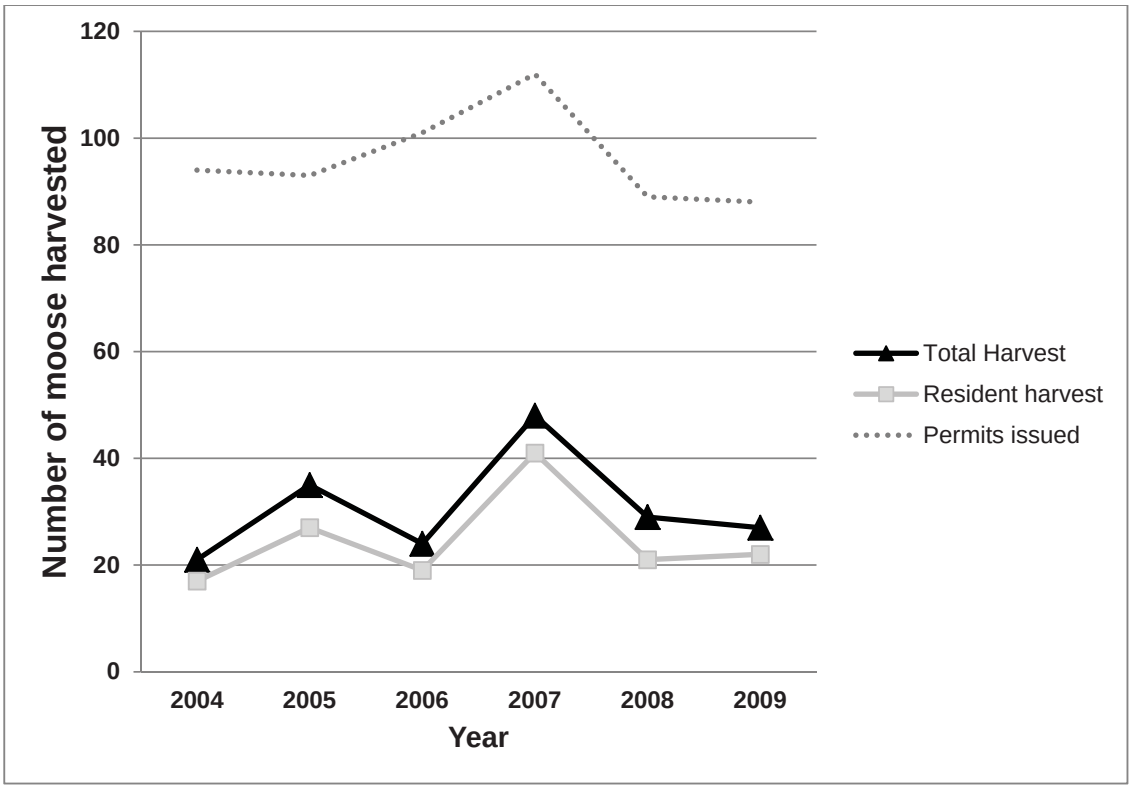


Figure 1. The number of moose harvested, as reported on harvest reports, in Unit 24B by Alaska residents and total harvest between 2004 and 2009. The number of State and Federal permits issued each year is also presented as a dashed line to show approximate hunter success. All issued permits were reportedly used in an attempt to harvest a moose.

moose per year in Unit 24B between 1983 and 2009, according to registration permit harvest reports. Recent reported annual harvests have been near or below average, with the exception of 2007 (16 moose harvested), while the number of registration permits issued has increased (**Figure 2**). It should be noted that harvest estimates from household surveys (Brown et al. 2004) may be higher than harvest report data because the former are extrapolated to account for unsurveyed households. Residents of Bettles and Evansville harvested an average of 4.3 moose per year in Unit 24B between 1983 and 2009. There has been a decreasing trend in the number of moose harvested by and registration permits issued to Bettles and Evansville residents, and annual harvests have been below average since 1996 (**Figure 2**). Despite differences in harvest and effort (number of permits), moose were reportedly used by >88% of households in all of these communities (Brown et al. 2004).

Local subsistence users had difficulties harvesting moose during previous years, which prompted the establishment of additional seasons or season extensions (see Regulatory History). Approximately 95% of the moose harvested throughout Unit 24, including Unit 24B, were harvested during the Sept. 1–25 season (Stout 2008), but the winter seasons provide opportunities for those subsistence users that were unable to harvest a moose in the fall. Current and previous Federal moose seasons (beyond Sept. 1–25) have been primarily used by residents of Allakaket, while use among residents of Alatna and Bettles/Evansville has been low (**Table 2**). Harvest success has been low among all Federally qualified subsistence users attempting to harvest moose during these Federal moose seasons (**Table 2**).

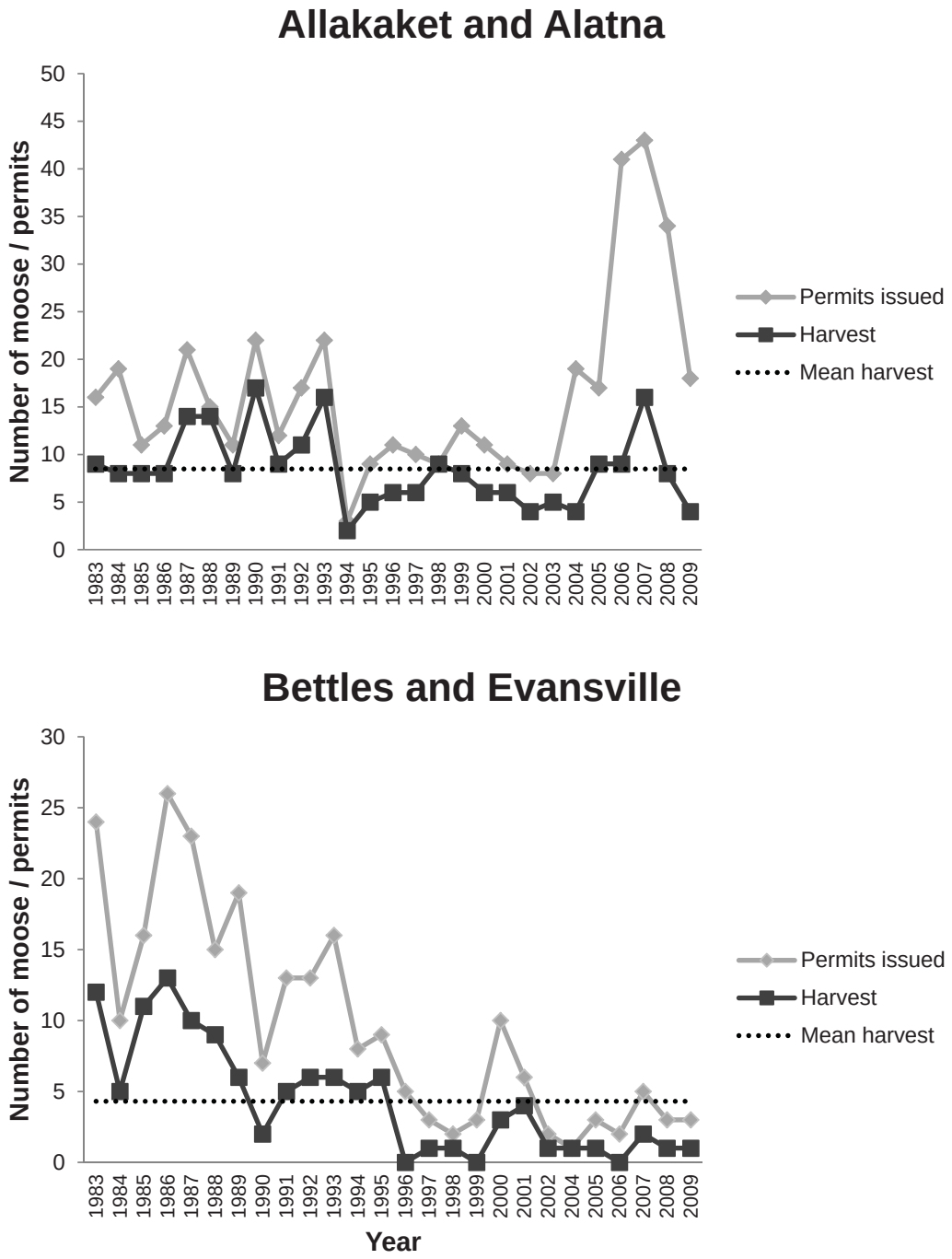


Figure 2. Annual moose harvest and the number of State and Federal registration permits issued in Unit 24B for residents of Allakaket/Alatna and Bettles/Evansville from 1983 to 2009. Mean harvest values for Allakaket/Alatna (8.5 moose/year) and Bettles/Evansville (4.3 moose/year) are for the entire period (1983–2009).

Effects of the Proposal

Proposals WP12-57 and WP12-58 would not affect the portion of Unit 24B within the John River drainage, which has a separate Aug. 1–Dec. 31 Federal moose season. The current Federal harvest areas are shown on **Map 1**.

Proposal WP12-57

If the proposal were adopted, the State and Federal boundaries would be aligned by removing a section of Federal public land from the Dec. 15–Apr. 15 moose season (**Map 2**–section labeled #3 south of Bettles). The affected area would include all Federal public lands in drainages of the Koyukuk River, upstream from Henshaw Creek. The affected area, near the villages of Bettles and Evansville, has a checkerboard pattern of State and Federal public land that makes it difficult for subsistence users to know which lands they are on and complicates law enforcement. Federally qualified subsistence users may unintentionally violate State regulations by hunting on non-Federal lands in the affected area, as these sections of land are closed under the State's Dec.15 – Apr. 15 moose season. Users with a State registration permit may also unintentionally violate Federal regulations by hunting on closed Federal public lands in the Kanuti CUA. The State registration permit for the Dec. 15 – Apr. 15 moose season covers portions of Unit 24B, except for drainages of the Koyukuk River upstream from the Henshaw Creek drainage, excluding the North Fork of the Koyukuk River drainage (Unit 24B remainder under State regulations), and does not include Federal lands within the Kanuti CUA. Federal lands within the Kanuti CUA are closed to the harvest of moose by non-Federally qualified users. The boundary alignment may reduce the incidence of unintentional violations by users harvesting moose under Federal registration permits.

Adoption of the proposal may reduce subsistence harvest opportunity for Federally qualified subsistence users from Bettles and Evansville. The boundary alignment would exclude Federal public lands in the Koyukuk River drainage, upstream from the Henshaw Creek drainage, from the Dec. 15–Apr. 15 moose season. These are local subsistence harvest areas for Bettles and Evansville residents. To harvest moose in the winter/spring season, residents of these villages would have to travel approximately 25 miles down the Koyukuk River to the Henshaw Creek drainage, which is outside their normal travel and subsistence use patterns (Spindler 2011, pers. comm.).

Federally qualified subsistence users from Allakaket and Alatna may be negatively affected by increased competition from Bettles and Evansville hunters. The Federal public lands along the Koyukuk River, downstream from the Henshaw Creek drainage, are traditional hunting areas for Allakaket and Alatna residents (Spindler 2011, pers. comm.). Residents of Bettles and Evansville would have to shift their hunting effort to areas near Allakaket and Alatna to harvest moose during the winter season.

The proposal would likely have little effect on the moose population, but harvest pressure may change in some areas of Unit 24B. Likewise, hunting pressure would be reduced in the portion of Federal public lands excluded from the winter season

Proposal WP12-58

If this proposal is adopted, the regulations would read that a State registration permit is required to harvest bull moose on Kanuti National Wildlife Refuge and BLM lands from Sept. 1–25 and Dec. 15–Apr. 15, except those areas within the Koyukuk River drainage upstream of, and including, the Henshaw Creek drainage and upstream of, and including, the Fish/Bonanza Creek drainage. Federally qualified subsistence users in the excluded area would be required to have a Federal registration permit to harvest moose, unless an agreement were to be made between State and Federal land managers to allow a State

Table 2. Summary of Federal registration permits issued to residents of Allakaket, Alatna, and Bettles/Evansville to harvest moose in Unit 24B between 2006 and 2010. Registration permit use and harvest information were from harvest reports returned and entered into the Federal Subsistence Permit System. The number of registration permits used was based on the number of harvest reports that specified an attempt to harvest moose and does not include harvest reports that were not returned as of May 25, 2011.

			Community								
			Allakaket			Alatna			Bettles/Evansville		
Permit	Year[a]	Season	Issued	Used	Harvest	Issued	Used	Harvest	Issued	Used	Harvest
FM2401	2006	Mar 1-5	20	8	0	4	1	0	1	1	0
	2007	Mar 1-5	13	6	0	-	-	-	-	-	-
	2008	Mar 27-31	6	4	1	-	-	-	-	-	-
	2009	Mar 27-31	5	3	0	2	1	0	1	1	0
FM2402	2006	Sept 26-Oct. 1	-	-	-	1	-	-	-	-	-
	2010[b]	Sept 26-Oct 1, Dec 15-Apr 15	14	9	0	1	-	-	1	-	-
FM2404	2010	Dec 15-Apr 15	8	6	0	-	-	-	-	-	-

[a] Reported as the regulatory year.
[b] Federal registration permit FM2402 covered the fall and winter seasons during 2010.

registration permit or to institute a joint State/Federal registration permit. A State registration permit is currently not valid on much of the Federal public land mentioned in the proposal because it is within the Federal Kanuti Controlled Use Area. Federal public lands in the Federal Kanuti Controlled Use Area are closed to the taking of moose except by Federally qualified subsistence users, the residents of Unit 24, Koyukuk, and Galena. However, if a joint State/Federal permit were allowed; then Federally qualified users could hunt on State and Federal lands with one permit. Currently, Federally qualified users have to get both a State and Federal permit if they want to hunt in the CUA. Examples of areas with closed Federal public lands that allow State registration permits include, but are not limited to, portions of Units 18 and 22A moose and Unit 23 muskox. The use of joint Federal/State registration permits includes, but is not limited to, a portion of the Unit 5A moose and Unit 25C remainder caribou seasons. The proposal would not affect the requirement of a Federal registration permit for the Sept. 26–Oct. 1 period as the State season does not cover this period.

The proposal would also add descriptive language for the hunt area excluded from the State registration permit for the Dec. 15–Apr. 15 season. The current area description is the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream and including the Bonanza Creek drainage. The proposed language would add the areas upstream and including the Fish/Bonanza Creek drainage to the hunt area description. This is an administrative change and no action by the Federal Subsistence Board is needed.

No effect on the moose population is expected if this proposal is adopted.

OSM CONCLUSION

Oppose Proposal WP12-57.

Support Proposal WP12-58 **with modification** to require one Federal registration permit for the fall (Aug. 25–Oct. 1) and winter (Dec. 15–Apr. 15) moose seasons on Kanuti National Wildlife Refuge and BLM lands in Unit 24B.

The modified regulation should read:

See **Map 1**, Section 1 for the area affected by the following regulation.

Unit 24B—that portion within the John River Drainage—1 moose.	*Aug. 1–Dec. 31*

See **Map 1**, Section 2 for the area affected by the following regulation.

Unit 24B—Kanuti National Wildlife Refuge and BLM lands—1 antlered bull ***by Federal registration permit****.* ~~*A Federal registration permit is required for the Sept. 26–Oct. 1 period.*~~	*Aug. 25–Oct. 1* *Dec. 15–Apr. 15 (until Jun. 30, 2014)*
~~*A Federal registration permit is required for the Dec. 15–Apr. 15 season for the Kanuti National Wildlife Refuge and BLM lands that are within the Koyukuk River drainage upstream of and including the Henshaw Creek drainage and upstream of and including the Bonanza Creek drainage.*~~	

Federal public lands in the Kanuti Controlled Use Area are closed to taking of moose, except by Federally qualified subsistence users of Unit 24, Koyukuk, and Galena hunting under these regulations.

See Map 1, Section 3 for the area affected by the following regulation.

Unit 24B remainder—1 antlered bull. A Federal registration permit is required for the Sept. 26 – Oct. 1 period.	*Aug. 25–Oct. 1*

Justification

Proposal WP12-57

While the alignment of State and Federal boundaries may reduce land status confusion for Federally qualified subsistence users and law enforcement, it would unnecessarily exclude the section of Federal public lands near Bettles and Evansville from the winter moose season (Dec. 15–Apr. 15). Excluding Federal public lands for harvesting moose by Bettles and Evansville residents would impose a restriction on their current winter subsistence opportunity. The winter moose seasons were initiated in Unit 24B to allow users additional opportunity to harvest moose if they were unsuccessful during the fall season. While few residents of Bettles and Evansville have participated in the winter moose season, those who do participate would be required to travel down the Koyukuk River for approximately 25 miles to reach the new boundary. There is no biological reason to exclude the area as the moose population can sustain the current light harvest levels.

Proposal WP12-58

The additional language requested by the proponent would not change registration permit requirements on Federal public lands within the Kanuti Controlled Use Area unless an agreement was made between Federal and State land managers to use a joint permit. Without an agreement, State registration permits are currently not valid on closed Federal public lands, and a Federal registration permit would still be required for Federally qualified subsistence users to harvest moose on these lands. The hunt area for the Federal Dec. 15–Apr. 15 moose season is not aligned with State regulations, which may affect an agreement between State and Federal land managers to allow a State registration permit or implementation of a joint State/Federal permit. However, a joint permit that includes only those lands downstream of and including Henshaw Creek may be possible.

The proposal modification would reduce the permitting requirements for Federally qualified subsistence users. One Federal registration permit would be created to harvest one bull moose on Kanuti NWR and BLM lands between Aug. 25–Oct. 1 or Dec. 15–Apr. 15. Users harvesting moose on State lands would require a State registration permit.

The additional language describing the hunt area requested in the proposal would clarify the hunt area. These changes would help Federally qualified subsistence users be better informed while hunting moose on Federal public lands in Unit 24B; however, such clarifying language may be included in the permit conditions as needed or as requested by the land manager. The modification deletes this language from the regulation.

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WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposals WP12-57. The boundary for the hunt areas would align with State boundaries.

Support Proposal WP12-58 **with modification** to require one Federal registration permit for the fall (Aug. 25–Oct. 1) and winter (Dec. 15–Apr. 15) moose seasons, as recommended in the OSM Conclusion. There is a need for a Federal permit to accommodate both fall and winter hunting opportunity; administrative simplification. See OSM Conclusion for modified regulation language.

INTERAGENCY STAFF COMMITTEE COMMENT

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 Board may want to consider supporting the proposal with modification to align the harvest limit regulations for ptarmigan in Unit 18 with the recent changes made by the Alaska Board of Game while leaving the harvest season dates the same. If the Board were to support this proposal with modification, which would be contrary to the Council's recommendation, it could do so based on the 3rd exception clause of section 805c of ANILCA (that the Council recommendation would "be detrimental to the satisfaction of subsistence needs").

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-57/58: GMU 24B Moose

WP12-57 proposed by the Alaska Department of Fish & Game (ADF&G), requests alignment of federal and state area boundaries for the winter moose season in Unit 24B within the drainages of the Koyukuk River, downstream from and including the Henshaw Creek Drainage.

WP12-58 proposed by the Kaunti Wildlife Refuge proposes a hunt area boundary under federal subsistence regulation that would be different from the state hunt area. The proponent also requests federal subsistence regulations indicate a state registration permit may be used by federally qualified subsistence users to hunt moose in the Kanuti Controlled Use Area of Units 24B.

Introduction: These proposals were drafted in an effort to resolve ongoing confusion in the area as discussions with state and federal managers have not reached a mutually acceptable solution to ongoing issues related to a patchwork of land ownership in portions of the drainages of the Koyukuk River near the communities of Bettles and Evansville.

Impact on Subsistence Users: WP12-57 would alleviate confusion for subsistence users where WP12-58 would create further confusion and enforcement issues.

Opportunity Provided by State:

Unit 24B all drainages of the Koyukuk River upstream from the Henshaw Creek drainage, excluding the North Fork of the Koyukuk River drainage.	*Resident: One bull*		*Sept 1–Sept 25*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side		*Sept 5–Sept 25*
Unit 24B remainder	*Resident: One bull*		*Sept 1–Sept 25*
	Resident: One antlered bull by permit, available at hunt.alaska.gov or in person in Hughes, Allakaket or Fairbanks beginning December 15	*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		*Sept 5–Sept 25*

Conservation Issues: ADF&G is unable to change the state hunt area due to previous overharvest issues and the close proximity to haul road accessibility of other state resident hunters.

Enforcement Issues: Although a dual permit has been suggested, enforcement personnel report a dual permit would complicate issues due to differing hunt regulations/qualifications that apply to state and federally qualified subsistence hunters and the ability to enforce hunt conditions under two sets of regulations.

Other Comments: The federal government is unable to pass a regulation to make the State provide a permit on state managed lands, for an area that is not open under state regulations (the area upstream of Henshaw Creek).

Adoption of WP12-58 would not address simplification of permitting as United States Fish and Wildlife Service (USFWS) would still issue permits. ADF&G believes that maintaining two permits for a portion of the unit is inconsistent and serves only to sustain user confusion.

Should hunt areas be aligned, a single state permit may be administered by ADF&G. ADF&G is unable to change the state hunt area due to previous overharvest issues and the close proximity to haul road accessibility of other State resident hunters.

It is argued by the proposers of WP12-58 that the hunt area above Henshaw Creek should be retained on the basis of one hunter. In 2006 and 2009, this single hunter reported on federal subsistence moose hunting permits he hunted on non-federal public lands under federal subsistence hunting regulations (see map attached). This type of reporting indicates the hunter was confused. This user reported illegal activity of hunting on non-federal public lands in areas which were not open to hunting under state regulations demonstrates the need to eliminate confusion, and demonstrates that no real loss of opportunity will be jeopardized by alignment of these hunt areas. The federal staff analysis reports that only one hunter from Bettles/Evansville has reported participating in the federal subsistence winter moose hunt twice and was not successful. Additionally, the December 15 through April 15 season is in no way a longstanding opportunity as this hunt was first introduced in 2010.

It should be noted that moose concentrations are higher in the Henshaw Creek drainage than the area hunted by the one individual reporting. The Henshaw Creek drainage is also closer to Bettles than the area hunted; therefore the Spindler personal communication is not accurate. Grayling creek is in fact 44 miles from Bettles, whereas Henshaw creek drainage is just 23 miles.

Last year, ADF&G offered a compromise concerning the winter hunt opportunity by expanding the winter season dates from 5 days to 120 days. The department also offered an additional compromise expanding the winter hunt area from less than 2,000 mi^2 to over 10,000 mi^2. Both of those compromises benefited more than 95% of the hunters. It is in the best interest of subsistence hunters, for the USFWS to compromise on this small area (<550 mi^2). Such a small compromise would achieve much in eliminating confusion for local hunters.

Recommendation: Support WP12-57 / Oppose WP12-58.

WP12-42 Executive Summary	
General Description	Proposal WP12-42 requests a reduction in the harvest limit and season for caribou in Unit 18. The proposal would reduce the allowable harvest limit from two to one caribou and reduce the season by approximately three months. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**Unit 18 — Caribou** *Unit 18 — ~~2~~* ***1*** *caribou~~; 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*~~ ***Aug. 1 – Sept. 30*** ***Dec. 20 – the last day of February***
OSM Preliminary Conclusion	**Oppose**
OSM Conclusion	**Support** Proposal WP12-42 **with modification** to maintain the current harvest limit, eliminate the March portion of the season, and limit the impact on the MCH (east of the Kuskokwim River). The modified regulation should read: ***Unit 18 — that portion to the east and south of the Kuskokwim River — 2 caribou; 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 February*** *Unit 18* ***remainder*** *— 2 caribou; however, no more than 1 bull may be taken and no more than 1 caribou may be taken Aug. 1 – Jan. 31.* *Aug. 1 – Mar. 15*
Bristol Bay Regional Council Recommendation	**Support**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP12-42 **with modification** to maintain the current harvest limit, eliminate the March portion of the season, and limit the impact on the MCH (east of the Kuskokwim River). *See the OSM Conclusion for the regulation language.*
Western Interior Regional Council Recommendation	**No action taken.**
Seward Peninsula Regional Council Recommendation	**Oppose**

continued on next page

WP12-42 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal. The ISC recognizes the conservation concerns for the Mulchatna caribou herd expressed by the Yukon-Kuskokwim Delta Regional Advisory Council and the Yukon Delta National Wildlife Refuge. Unless joint Federal and State actions are undertaken to address this issue, however, adoption of WP12-42 may not achieve the desired results, and would create Federal regulations which would be more restrictive and detrimental to Federally qualified subsistence users.
ADF&G Comments	**Support** Proposal WP12-42 **with modification**. The department recommends reducing the federal subsistence hunting season to the dates proposed and recommends retaining the annual bag limit of two caribou.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-42

ISSUES

Proposal WP12-42, submitted by the Yukon Delta National Wildlife Refuge, requests a reduction in the harvest limit and season for caribou in Unit 18. The proposal would reduce the allowable harvest limit from two to one caribou and reduce the season by approximately three months.

DISCUSSION

The proponent requests to reduce the season and harvest limit for caribou in Unit 18. This request is in response to the declining population of the Mulchatna Caribou Herd (MCH) over the last several years. Reduction of the harvest limit and season length could aid in the recovery of the local caribou population.

Note: The proponent original proposed the winter hunt ending date as February 29th. Since this date is only relevant during leap years, the Office of Subsistence Management changed this portion of the proposed regulation to read as "Dec. 20 – the last day of February."

Existing Federal Regulation

Unit 18 — Caribou

Unit 18 — 2 caribou; 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*

Proposed Federal Regulation

Unit 18 — Caribou

*Unit 18 — ~~2~~ **1** caribou~~; 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*~~ ***Aug. 1 – Sept. 30*** ***Dec. 20 – the last day of February***

Existing State Regulation

Unit 18 — Caribou

Residents — two caribou, no more than 1 bull may be taken, and only one caribou may be taken from Aug. 1 – Jan. 31	*Aug. 1 – Mar 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 62% US Fish and Wildlife Service managed lands and 2% Bureau of Land Management managed lands (**See 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 allowed hunters the opportunity to harvest surplus animals. 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 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 Aug. 1–Jan. 31. In 2007, the Federal Subsistence Board followed suit and adopted Proposal WP07-23 with modification to reduce the harvest limits in Unit 9B, 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 a large population decline. In March 2009, the Alaska Board of Game eliminated nonresident harvest on the MCH due to the harvestable surplus being lower than the amount necessary for subsistence.

In 2010, Proposal WP10-51 was submitted by the Bristol Bay Subsistence Regional Advisory Council. This proposal requested that the caribou season in Units 9A, 9B, 17B, a portion of 17C, 18, 19A, and 19B be Aug. 1 – Mar. 31, extending the existing season by 16 days. The Federal Subsistence Board supported the proposal with modification to make the season ending date March 15 for all units. In addition, Proposal WP10-60 was submitted by the Yukon Delta National Wildlife Refuge, requesting that the harvest limit for caribou in Unit 18 be reduced from three to two. The Federal Subsistence Board supported 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.

Biological Background

The ADF&G's management objectives for the MCH were to maintain a population of 100,000–150,000 with a minimum bull:cow ratio of 35:100 and to maximize opportunity to hunt caribou (Woolington 2007). However, at the Feb. 27 – Mar. 9, 2009 southcentral/southeast meeting in Anchorage, the Alaska Board of Game reduced the population objective to 30,000–80,000 caribou, citing that these numbers are more realistic for this herd (ADF&G 2009). The Alaska Board of Game also reduced harvest objectives from 6,000–15,000 to 2,400–8,000 during this meeting (ADF&G 2009). The latest photocensus provided a minimum estimate of 30,000 caribou, near the minimum population objective (**Table 1**) (Woolington 2009). Since 2001, bull:cow ratios have been estimated at less than 35 bulls:100 cows which is below the management objective for the herd (**Table 1**).

The MCH increased at an average annual rate of 17% between 1981 and 1996 and approximately 28% from 1992–1994. Overall herd size peaked in 1996, at approximately 200,000 animals with a peak bull:cow ratio of 42:100 (Woolington 2007). The dramatic population growth is attributed to mild winters, movements onto new unexploited range, low predation, and an estimated annual harvest of less than 5% of the population since the late 1970s (Woolington 2007). Since 1996, the population, bull:cow ratio, and calf:cow ratio have significantly declined (**Table 1**). Possible signs of stress in the MCH include an outbreak of hoof rot in 1998 and low calf:cow ratios in fall 1999 (Woolington 2001).

Table 1. Mulchatna Caribou Herd composition counts and population estimates, 1974-2011 (Woolington 2011).

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]

[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.

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 *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 2004/05, 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).

Habitat

There has been no assessment of habitat by ADF&G for the MCH. 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 was having 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 herds range are showing signs of heaving use with extensive trailing evident along major travel routes. Woolington (2007) 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 (Woolington 2007). Total reported MCH harvest was 2,171 in 2005, but had declined to 516 by 2008 (ADF&G 2009). The harvest of males was as high as 86% in 1991/92, but decreased to 48% of the reported harvest in 2005/06 (Woolington 2007).

Most of the harvest occurs in August and September (66% in 2004/05 and 47% in 2005/06) (Woolington 2007), with the majority of harvest occurring close to villages on State lands. Additionally, March also accounts for a relatively high amount of the harvest: 10% in 2004/05 increasing to 23% in 2005/06. Data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years (Woolington 2007).

Reported harvest during the other nine months has always been relatively low. Between 1991–2006, harvest in July accounted for less than 0.2% of the total annual harvest; October, November, December, January, and February accounted for less than 6%; and April accounted for less than 9% (Woolington 2007). It should be noted, however, that these data only account for the reported harvest and some harvest may be occurring that is unreported.

In Unit 18, harvest by both Federally and non-Federally qualified subsistence users has generally declined since 2003, when the reported harvest for the unit was at the highest (**Table 2)**.

Effects of Proposal

If adopted, this proposal would lower the harvest limit to one caribou and reduce the season by approximately three months for Federally qualified subsistence users hunting on Federal lands of Unit 18 under Federal subsistence regulations. These restrictions may help reduce the harvest and help stabilize the MCH population. If adopted, this proposal would result in a misalignment between State and Federal regulations. The proposed one caribou limit would be more restrictive than the States two caribou harvest

Table 2. Unit 18 reported caribou harvest, 2000-2009 (USFWS 2011).

Year	Federally qualified hunters	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	210	40	250
2009	192	27	219

limit and hunters could simply choose to hunt under State regulations, thereby limiting the effectiveness of this proposal. At this time, there is no companion State proposal before the Alaska Board of Game to align State and Federal regulations should this proposal pass.

OSM PRELIMINARY CONCLUSION

Oppose Proposal WP12-42.

Justification

This proposal would make the Federal harvest limit and season more restrictive than the State regulations. Even if this proposal is adopted by the Federal Subsistence Board, hunters will still be able to take caribou under State regulations on USFWS and BLM lands in Unit 18 and most local users would still be harvesting close to village communities that are primarily on State and private lands. Therefore, adoption of this proposal by the Federal Subsistence Board will not have the effect sought by the proponent of reducing the harvest. Without alignment with State regulations, the effectiveness of this proposal would be limited, and Federally qualified users would have less opportunity than non-Federally qualified users.

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP12-42 **with modification** to maintain the current harvest limit, eliminate the March portion of the season, and limit the impact on the MCH (east of the Kuskokwim River).

The modified regulation should read:

Unit 18 — that portion to the east and south of the Kuskokwim River — 2 caribou; 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 February***

Unit 18 ***remainder*** *— 2 caribou; however, no more than 1 bull may be taken and no more than 1 caribou may be taken Aug. 1 – Jan. 31.*	*Aug. 1 – Mar. 15*

Justification

Given the continued decline in the MCH, a reduction in season length is warranted. Since a relatively high amount of the harvest occurs during the month of March and because data indicates an increase in the proportion of caribou taken during late winter when compared to the harvest chronology for previous years, a shortening of the season would be a prudent first step in aiding in the recovery of the MCH. However, this proposal as written would make the Federal harvest limit and season more restrictive than the State regulations. Even if this proposal is adopted by the Federal Subsistence Board, hunters will still be able to take caribou under State regulations on USFWS and BLM lands in Unit 18 and most local users would still be harvesting close to village communities that are primarily on State and private lands. Therefore, adoption of this proposal by the Federal Subsistence Board will not have the effect sought by the proponent of reducing the harvest. Without alignment with State regulations, the effectiveness of this proposal would be limited, and Federally qualified users would have less opportunity than non-Federally qualified users.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP12-42. The restrictions in both the season and harvest limits are justified due to conservation concerns, even though the proposed regulation would make the harvest limit and season more restrictive for Federally qualified users than State users.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-42 **with modification** to maintain the current harvest limit, eliminate the March portion of the season, and limit the impact on the Mulchatna Caribou Herd (east of the Kuskokwim River). Subsistence hunters should have a real priority.

The modified regulation should read:

Unit 18 — that portion to the east and south of the Kuskokwim River - 2 caribou; 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 February***
Unit 18 ***remainder*** *— 2 caribou; however, no more than 1 bull may be taken and no more than 1 caribou may be taken Aug. 1 – Jan. 31.*	*Aug. 1 – Mar. 15*

Western Interior Subsistence Regional Advisory Council

No action taken on Proposals WP12-42.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP12-42. The effect of this proposal is too broad and applies to the whole unit and not to just the Mulchatna Caribou Herd. The Council wants to give deference to the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.

INTERAGENCY STAFF COMMITTEE COMMENT

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 ISC recognizes the conservation concerns for the Mulchatna caribou herd expressed by the Yukon-Kuskokwim Delta Regional Advisory Council and the Yukon Delta National Wildlife Refuge. Unless joint Federal and State actions are undertaken to address this issue, however, adoption of WP12-42 may not achieve the desired results, and would create Federal regulations which would be more restrictive and detrimental to Federally qualified subsistence users.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-42: This proposal changes the federal subsistence season and bag limit for the federal subsistence caribou hunt in Unit 18.

Introduction: This proposal seeks to reduce the federal subsistence caribou hunting season from August 1 through March 15 to August 1 through September 1 and December 20 through February 29. Additionally, the proposal requests reducing the annual bag limit of the federal subsistence caribou hunt from two to one.

Impacts on Subsistence Users: If adopted, the federal subsistence caribou hunting season in Unit 18 would be reduced by approximately 90 days and the federal subsistence caribou harvest limit would be reduced by 50% to one caribou per year.

Opportunity Provided by State: State regulations for caribou in Unit 18 follows:

> The season is August 1 through March 15 with a limit of two caribou, of which no more than 1 bull may be taken, and only one caribou may be taken from August 1 through January 31. This hunt is closed to non-residents.

Conservation Issues: Reduced harvest in the Mulchatna Caribou Herd is needed to promote herd growth. Limiting take of both bulls and cows is needed for herd growth. Limiting take to 1 caribou per year as a conservation measure could be an option. The proposed reduced season dates eliminate harvest September 2 through December 19 which prevents harvest on specific segments of the herd during fall migration period.

Enforcement Issues: This proposal would create enforcement issues as written. Uniform federal subsistence and state hunting bag limits would decrease the potential for enforcement problems across areas with mixed land ownership patterns. In Unit 18, the proposed federal subsistence bag limit would be different than the state bag limit, creating confusion among hunters.

Recommendation: Support with modification. The department recommends reducing the federal subsistence hunting season to the dates proposed and recommends retaining the annual bag limit of two caribou.

WP12-43 Executive Summary	
General Description	Proposal WP12-43 requests an extension of the season and an increased harvest limit for lynx under Federal hunting regulations in Unit 18. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**Unit 18 — Lynx Hunting** ~~*2*~~ ***5*** *lynx* ~~*Nov. 10–Mar. 31*~~ ***Aug. 10–Apr. 30*** **Unit 18 — Lynx Trapping** *No limit* *Nov. 10–Mar. 31*
OSM Conclusion	**Support**
Yukon-Kuskokwim Delta 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** based upon Board of Game action at the November 2011 meeting.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-43

ISSUES

Proposal WP12-43, submitted by the Yukon Delta National Wildlife Refuge, requests an extension of the season and an increased harvest limit for lynx under Federal hunting regulations in Unit 18.

DISCUSSION

The proponent states that in addition to being a furbearer, lynx are also a subsistence food resource. Additionally, there is a perception among Federally qualified subsistence users, who harvest a finite number of lynx for food, that they are second tier to commercial trappers who are allowed to harvest an unlimited number of lynx in a trapping season.

Existing Federal Regulation

Unit 18 — Lynx Hunting

2 lynx	*Nov. 10–Mar. 31*

Unit 18 — Lynx Trapping

No limit	*Nov. 10–Mar. 31*

Proposed Federal Regulation

Unit 18 — Lynx Hunting

*~~2~~ **5** lynx*	*~~Nov. 10–Mar. 31~~* ***Aug. 10–Apr. 30***

Unit 18 — Lynx Trapping

No limit	*Nov. 10–Mar. 31*

Current State Regulation

Unit 18 — Lynx Hunting

2 lynx	*Nov. 10–Mar. 31*

Unit 18 — Lynx Trapping

No limit	*Nov. 10–Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% FWS and 2% BLM managed lands (Unit Map 18).

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for lynx in Unit 18.

Regulatory History

In 1990, the Federal Subsistence Board adopted temporary subsistence regulations for lynx hunting and trapping that aligned with State regulations. Since inception, the Federal lynx hunting regulations in Unit 18 have consisted of a Nov. 10–Mar. 31 season with a harvest limit of two lynx.

Current Events Involving Species

The Alaska Board of Game rejected a similar proposal at its November 2011 meeting. State Proposal 17 requested a harvest limit increase from two to five lynx and a season extension from Nov. 10–Mar. 31 to Aug. 10–Apr. 30 under State hunting regulations. The proposal was rejected due to the potential increase in mortality of recently weaned kittens during August and September.

Biological Background

Lynx populations are cyclic throughout the northern portion of their range, with highs and lows occurring approximately every 8 to 11 years (Koehler and Aubry 1994, Quinn and Parker 1999). Population cycles are closely tied to fluctuations in snowshoe hare abundance. Lynx have a high population growth potential and when hare populations are high, lynx populations are associated with high kitten survival, increased reproductive rates for yearlings, and increased litter sizes (Koehler and Aubry 1994). Likewise, when hare numbers are low, these population parameters are low and lynx populations decline.

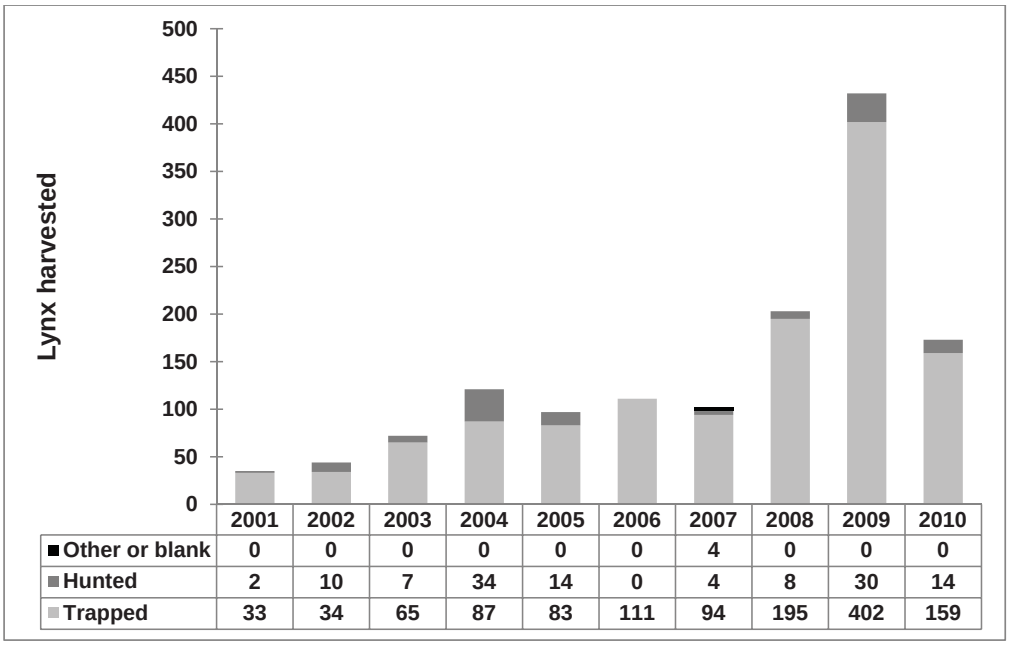
Lynx are associated with boreal forests and their distribution is tied to that of the snowshoe hare (Koehler and Aubry 1994). Most lynx habitat in Unit 18 is around the Kusilvak, Kilbuck, and Andreafsky mountains and along the Yukon and Kuskokwim rivers and larger tributaries (Perry 2007). When hare numbers are low, lynx may disperse and congregate in areas of hare activity (Koehler and Aubry 1994, Perry 2007).

Currently, there are no means of estimating the population size, but sealing records can provide an index of the relative abundance of lynx in Unit 18.

Harvest History

Harvest information for lynx in Unit 18 is based on sealing records, which should be treated as minimum harvest levels. Some user categories may be underrepresented in sealing records due to underreporting, including those that tan their own hides, harvest lynx for meat, opportunistically harvest lynx, and have limited access to fur sealers (Perry 2007).

The majority of lynx harvested in Unit 18 are under trapping regulations (**Figure 1**). Sealing records indicate that an average of 9% (range: 0% to 28%) of harvested lynx were taken by hunting methods (Perry 2011, pers. comm.). It should be noted that sealing records may not differentiate those lynx shot under trapping permits and hunting permits (Perry 2011, pers. comm.; Sundown 2011, pers. comm.). Most lynx taken under hunting regulations are likely opportunistically harvested, whereas those taken under trapping regulations are targeted (Sundown 2011, pers. comm.). Users hunting caribou are said to opportunistically harvest lynx and other furbearers (Perry 2007).



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Other or blank	0	0	0	0	0	0	4	0	0	0
Hunted	2	10	7	34	14	0	4	8	30	14
Trapped	33	34	65	87	83	111	94	195	402	159

Figure 1. Sealing records of lynx harvested in Unit 18 from 2001 to 2010 (Perry 2011, pers. comm.). Hunted lynx were categorized as being shot by users. Trapped lynx were categorized as being trapped or snared by users.

Overall harvest numbers and the proportion of age classes in the sealing records provide evidence for the position of the population within the cycle. In Unit 18, lynx were near their cyclic peak at the end of the 1997–2000 reporting period (Seavoy 2000) and declined to a low in 2001 (**Figure 1**). Sealing records increased after 2001 and the number of sealed kittens increased between 2003 and 2006 (Perry 2007). The proportion of kittens in the harvest increases as the population grows (Koehler and Aubry 1994). With declining lynx populations, sealing records were mostly, or exclusively, comprised of adults (Seavoy 2004).

The lynx harvest is affected by snow pack, as snowmachines are the primary means of transportation (Perry 2007). Snow levels that are conducive to travel usually disappear by April 15 (Sundown 2011, pers. comm.).

Effects of the Proposal

If the proposal were adopted, the lynx harvest limit and the season length would be changed under Federal hunting regulations. The harvest limit would increase from two to five lynx and the season would be extended from Nov. 10–Mar. 31 to Aug. 10–Apr. 30. Both regulation changes would provide additional opportunity for Federally qualified subsistence users to harvest lynx under Federal hunting regulations. Under hunting regulations, lynx are often harvested opportunistically and are used as a source of food (Perry 2007; Sundown 2011, pers. comm.).

The proposed harvest limit increase would likely have a minimal effect on the lynx population in Unit 18. The proportion of users who harvest lynx under hunting regulations is low compared to trapping regulations, which have an unlimited harvest limit. Lynx are said to be easily trapped (Quinn and Parker 1999), and trapping can be a significant source of mortality for lynx (Koehler and Aubry 1994, Quinn and Parker 1999). Lynx have been eliminated or temporally reduced in some areas of Alaska and Canada by intense trapping pressure (Koehler and Aubry 1994). Opportunistic harvest is less efficient due to the

elusive behavior of lynx and because users are usually targeting other species. For example, lynx are sometimes harvested opportunistically while users are caribou hunting (Perry 2007).

Lynx populations in the northern portions of the range, including the affected area, are limited by the abundance of their primary food source, the snowshoe hare (Koehler and Aubry 1994, Quinn and Parker 1999). While harvesting lynx affects the population by removing individuals, the effect does not appear to be as limiting as snowshoe hare abundance; especially the low level of harvest by opportunistic users (Sundown 2011, pers. comm.).

The proposed season extension on Federal public land would likely have a minimal impact on the lynx population in Unit 18. The opportunistic harvest of lynx may be limited by snow pack, which is typically absent in the affected area by April 15 (Sundown 2011, pers. comm.). Additional lynx may be harvested while Federally qualified subsistence users pursue other resources, such as caribou, but the impact will likely continue to be small compared to the trapping harvest.

OSM CONCLUSION

Support Proposal WP12-43.

Justification

The increased Federal harvest limit and extended season for lynx in Unit 18 should have a minimal effect on the population. The harvest under hunting regulations has been low and is often opportunistic. Trapping is a more targeted harvest, which has a greater potential to affect lynx populations. The lynx population has continued to support an unlimited harvest limit under State and Federal trapping regulations, and should be able to support a relatively small increase in harvest associated with the proposed changes.

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Sundown 2011. Subsistence Resource Specialist. Personal communication: phone. Yukon Delta National Wildlife Refuge. Bethel, AK.

YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-43. There are no conservation concerns in this case. Lynx are very good to eat.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-43: This proposal requests liberalizing the federal subsistence Unit 18 lynx hunting season and bag limit from November 10 through April 30 and a bag limit of 2 lynx to August 10 through April 30 with a bag limit of 5 lynx per year.

Introduction: The proponent requests the federal subsistence lynx hunting season be liberalized by opening the federal subsistence lynx hunting season 92 days earlier in Unit 18. Additionally the proponent requests raising the current federal subsistence hunting bag limit by 150%. The proponent indicates some federally qualified subsistence users feel they are second tier to commercial trappers due to regulatory restrictions.

Impact on Subsistence Users: If adopted, federally qualified subsistence users targeting lynx in Unit 18 may opportunistically harvest additional lynx with a longer season and higher annual bag limit. The proposed liberalizations will provide federally qualified subsistence users the option to opportunistically harvest additional lynx while in the field.

Opportunity Provided by State: In Unit 18, the state lynx hunting season is November 10 through March 31 with an annual bag limit of 2.

Conservation Issues: Are undetermined at this time as the vast majority of Lynx harvest is reported though trapping.

2000-2006 GMU 18 Lynx Harvests from 2007 ADF&G Furbearer management report.

2000-2001 = 84
01-02= 53
02-03=41
03-04 = 73
04-05 = 121
05-06 = 121

06/07 trapper furbearer harvest report from 18Z = 81 lynx
07/08 trapper furbearer harvest report from 18Z = 50 lynx
08/09 trapper furbearer harvest report from 18Z = 123 lynx trapped

Other Comments: The proponent indicates this proposal was submitted as proposal 17 to the Alaska Board of Game for the November 2011 meeting. The Alaska Board of Game opposed the proposal based upon concerns for lynx kits of the year. Additionally, the department has concerns with setting federal subsistence bag limits during times of peak population abundance cycles. Establishing federal subsistence bag limits during temporary times of peak abundance sets an artificially high federal subsistence priority.

ADF&G Comments on WP12-43
December 5, 2011, Page 1 of 2

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Recommendation: Oppose based upon Board of Game action at the November 2011 meeting.

WP12-47 Executive Summary	
General Description	Proposal WP12-47 requests the addition of a special provision to limit aircraft use for the moose season in a portion of Unit 18. *Submitted by Stanley Sheppard of the Mountain Village Working Group*
Proposed Regulation	See the analysis for the regulatory language.
OSM Conclusion	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support**
Western Interior Regional Council Recommendation	**No action taken.**
Seward Peninsula Regional Council Recommendation	**No action taken.**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-47

ISSUES

Proposal WP12-47, submitted by Stanley Sheppard of the Mountain Village Working Group, requests the addition of a special provision to limit aircraft use for the moose season in a portion of Unit 18.

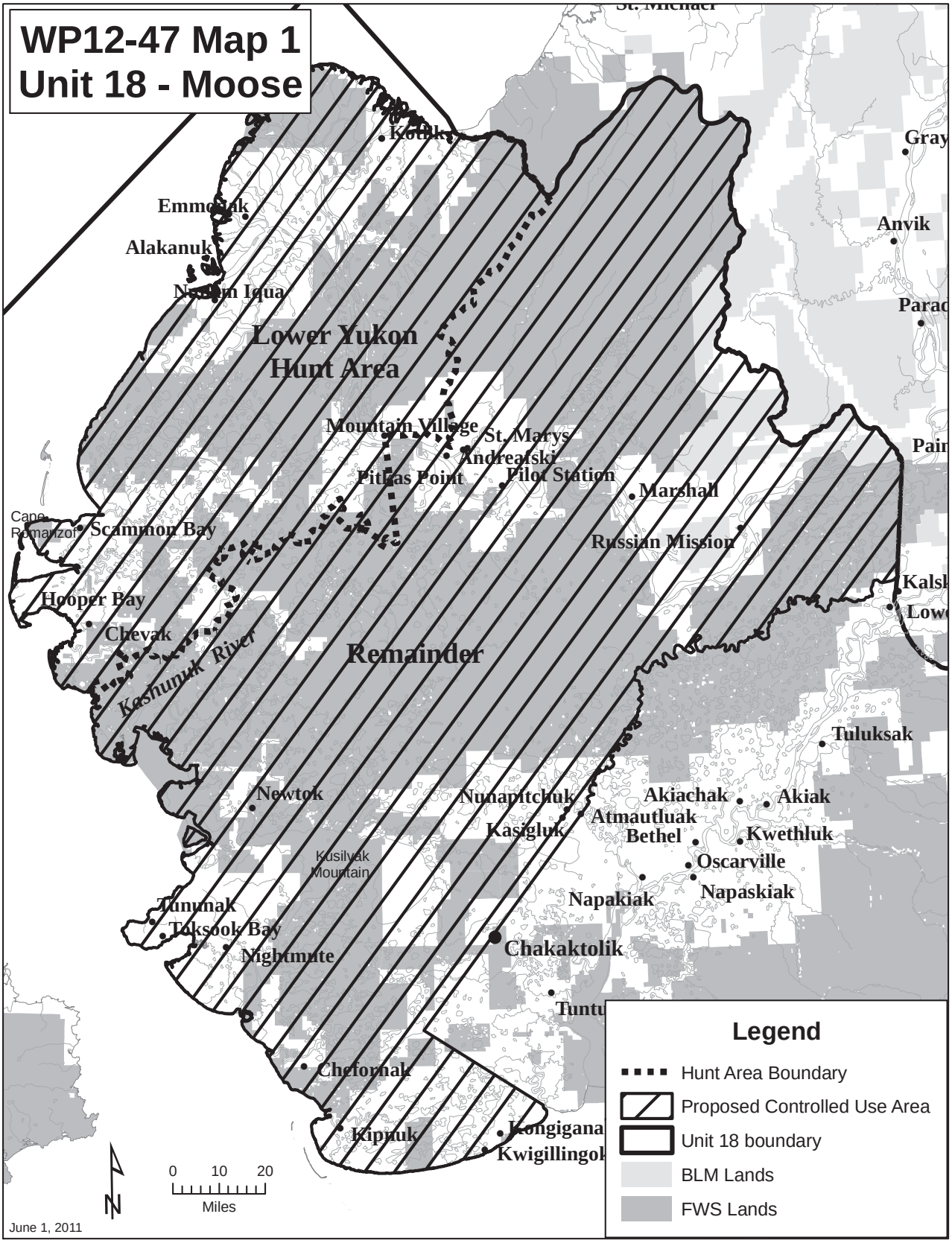
DISCUSSION

The proponent states there are concerns among Unit 18 residents regarding nonlocal users flying in to refuge lands to harvest moose. The proponent states there have been reports of nonlocal "fly-in" moose hunters claiming areas of Unit 18 for their exclusive use, and have asked local Asa'carsarmiut (Mountain Village) tribal members to leave hunting areas. The proposal requests a special provision to create a Unit 18 Federal Controlled Use Area to restrict the use of aircraft during moose seasons for users harvesting moose, including transportation of any moose hunter or moose part. The controlled use area would encompass the Lower Yukon and remainder areas of Unit 18 (**Map 1**). The controlled use area would not apply to transportation of a moose hunter or moose part by aircraft between publicly owned airports.

Existing Federal Regulations

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°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank 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 harvest of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.	
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—1 antlered bull.	*Aug. 10–Sept. 30*


WP12-47 Map 1
Unit 18 - Moose
Kotlik
Emmonak
Alakanuk
Nunam Iqua
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Russian Mission
Cape Romanzof
Scammon Bay
Hooper Bay
Chevak
Kashunuk River
Remainder
Newtok
Nunapitchuk
Kasigluk
Akiachak
Akiak
Atmautluak
Bethel
Kwethluk
Oscarville
Napaskiak
Napakiak
Kusilvak Mountain
Tununak
Toksook Bay
Nightmute
Chakaktolik
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Tuluksak
Anvik
Gray
Legend
Hunt Area Boundary
Proposed Controlled Use Area
Unit 18 boundary
BLM Lands
FWS Lands
0 10 20
Miles
June 1, 2011

1 moose—If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.	*Dec. 20–Feb. 28*
Unit 18—south of and including the Kanektok River drainages to the Goodnews River drainage.	*No open season*
Federal public lands area closed to the harvest of moose.	
Unit 18—Goodnews River drainage, and south to the Unit 18 boundary—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with BLM, ADF&G, and the Chair of the Yukon–Kuskokwim Delta Subsistence Regional Advisory Council.	*Aug. 25–Sept. 20*
Unit 18 remainder—1 antlered bull	*Aug. 10–Sept. 30* *Dec. 20–Jan. 10*

Proposed Federal Regulations

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°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line ½ mile south and east of, and paralleling a line along the southerly bank of the Johnson River to the confluence of the east bank of Crooked Creek, then continuing upriver to the outlet at Arhymot Lake, then following the south bank 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 harvest of moose except by residents of Tuntutuliak, Eek, Napakiak, Napaskiak, Kasigluk, Nunapitchuk, Atmautlauk, Oscarville, Bethel, Kwethluk, Akiachak, Akiak, Tuluksak, Lower Kalskag, and Kalskag.	
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—1 antlered bull.	*Aug. 10–Sept. 30*

1 moose—If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.	*Dec. 20–Feb. 28*
The Western Unit 18 Controlled Use Area is closed during moose hunting seasons to the use of aircraft for hunting moose, including transportation of any moose hunter or moose part. However, this does not apply to transportation of a moose hunter or moose part by aircraft between publicly owned airports in the controlled use area, or between a publicly owned airport within the area and points outside of the area. The controlled use area consists of that portion of Unit 18 west of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the west bank of the Johnson River and its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line 1/2 mile north and west 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.	
Unit 18—south of and including the Kanektok River drainages to the Goodnews River drainage.	*No open season*
Federal public lands area closed to the harvest of moose.	
Unit 18—Goodnews River drainage, and south to the Unit 18 boundary—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with BLM, ADF&G, and the Chair of the Yukon–Kuskokwim Delta Subsistence Regional Advisory Council.	*Aug. 25–Sept. 20*
Unit 18 remainder—1 antlered bull	*Aug. 10–Sept. 30* *Dec. 20–Jan. 10*

The Western Unit 18 Controlled Use Area is closed during moose hunting seasons to the use of aircraft for hunting moose, including transportation of any moose hunter or moose part. However, this does not apply to transportation of a moose hunter or moose part by aircraft between publicly owned airports in the controlled use area, or between a publicly owned airport within the area and points outside of the area. The controlled use area consists of that portion of Unit 18 west of a line running from the mouth of the Ishkowik River to the closest point of Dall Lake, then to the west bank of the Johnson River and its entrance into Nunavakanukakslak Lake (N 60°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line 1/2 mile north and west 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.

Existing State Regulations

Unit 18 Kuskokwim Area, east of a line from the mouth of the Ishkowik River to Dall Lake, then to the Johnson River at its entrance to Nunavakanukakslak Lake (N 60° 59.41' Lat; W 162° 22.14' Lon), then upstream 1/2 mile south of the south bank of the Johnson River to Crooked Creek, then upstream along the creek to Arhymot Lake to the Unit 18 boundary, and north of and including the Eek River drainage.	*Resident: One antlered bull by permit available in person at ADF&G in Bethel and villages within the hunt area from Aug. 1–Aug. 25. (Harvest quota to be announced).*	*RM615*	*Sept. 1–Sept. 10*
	Nonresident:		*No open season*
Unit 18 that portion south of the Eek River drainage and north of the Goodnews River drainage	*Resident: One antlered bull*		*Sept. 1–Sept. 30*
	Nonresident:		*No open season*
Unit 18 that portion south of and including the Goodnews River drainage	*Resident: One antlered bull by permit available in person in Goodnews Bay and Platinum Aug. 1–25. Season will be closed by emergency order when 10 bull are taken.*	*RM620*	*Sept. 1–Sept. 30*
	Nonresident:		*No open season*

Unit 18 Lower Yukon Area, that portion north and west of the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of a line from Chakaktolik to Mountain Village, excluding all Yukon River drainages upriver from Mountain Village.	*Resident: One antlered bull*	*Aug. 10–Sept. 30*
	Or	
	One moose	*Dec. 20–Feb. 28*
	Nonresident: One antlered bull	*Sept. 1–Sept. 30*
Unit 18 remainder	*Resident: One antlered bull*	*Aug. 10–Sept. .30*
	Or	
	One antlered bull	*Dec. 20–Jan. 10*
	Nonresident: One antlered bull	*Sept. 1–Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 62% FWS and 2% BLM managed lands (**Unit 18 Map**).

Customary and Traditional Use Determinations

Residents of Unit 18, Upper Kalskag, Aniak, and Chuathbaluk have a customary and traditional use determination for moose in Unit 18, that portion of the Yukon River drainage upstream of Russian Mission and that portion of the Kuskokwim River drainage upstream, but excluding the Tuluksak River drainage.

Residents of Unit 18, St. Michael, Stebbins, and Upper Kalskag have a customary and traditional use 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.

Residents of Unit 18 and Upper Kalskag have a customary and traditional use determination for harvesting moose in the remainder of Unit 18.

Regulatory History

Proposals WP05-11 and WP06-27 were submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council and also requested the establishment of a Federal Controlled Use Area for all moose seasons in the lower Yukon River drainage within Unit 18. Proposal WP05-11 was deferred by the Federal Subsistence Board (Board) in 2005 based on its limited jurisdiction to implement effective controlled use areas because of mixed land jurisdictions in the affected area (FSB 2006). The request was resubmitted as Proposal WP06-27 and a companion proposal to the Alaska Board of Game (State Proposal 9). The Board rejected WP06-27 in 2006 because there were no conservation concerns with the moose population and the Board's limited jurisdiction to implement effective controlled use areas. Likewise, the Alaska Board of Game rejected State Proposal 9 at its November 2005 meeting based on their conclusion that the current level of fly-in hunter impacts on the resource and affected users was insignificant.

The areas of Unit 18 covered by the proposed controlled use area (Lower Yukon Area and remainder) were closed to non-Federally qualified users from 1991 to 2007. The closure was important given low moose numbers at that time. Proposal WP06-30 requested the removal of the Federal closure for the Unit 18 remainder fall moose season (September 1–30). The biological information presented in the WP06-30 analysis supported removal of the closure for not only the Unit 18 remainder, but also that portion of Unit 18 downstream from Mountain Village (Lower Yukon Area). The Yukon-Kuskokwim Delta Subsistence Regional Advisory Council opposed the proposal because of local concerns. At its May 2006 meeting, the Board deferred action on the proposal for one year with a commitment to revisit the proposed regulation change in May 2007. The Board's intent for the deferral was to allow time for refuge staff to conduct information outreach on the status of the existing moose population in communities before making a decision. The Board's May 2006 deferral, along with the rapid growth and size of the lower Yukon River moose population, created disagreement over the appropriateness of the Federal closure. Because of local concerns of increased competition and hunting pressure that would follow after the elimination of the Federal closure, the Board received several proposals in October 2006 concerning the moose regulations for the affected area, including:

- Proposal WP07-27 requested an August 10–August 19 families-only moose season in Unit 18 remainder. The Board did not adopt the proposed change 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 August 20, instead of September 1. The Board adopted a modified recommendation of an August 10 season open date for the Yukon River drainage portion of Unit 18 and Unit 18 remainder at its May 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 January 20, instead of January 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 did not adopt the proposed regulatory change.

- Proposal WP07-31 requested an August 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, August 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 did not adopt 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 Yukon Delta National Wildlife Refuge 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.).

Special Action WSA06-04, submitted by the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council in the fall 2006, was approved by the Board in December 2006. The special action expanded the 2006/07 harvest limit from "one bull or one calf" to "one moose" and extended the winter season 10 days in the lower area of the Yukon River drainage in Unit 18 downstream from Mountain Village. Local wildlife managers and representatives of the Council testified at the October 2006 meeting that a combination of factors, including mild fall weather conditions, a late rut, low water levels, and high fuel prices, resulted in a harvest shortfall during the 2006 fall season. These changes, implemented through the special action, provided local users additional opportunity to harvest any moose from this rapidly expanding moose population during the December 20–January 20 season.

Proposal WP10-56, submitted by the Yukon Delta National Wildlife Refuge, requested an increase in the harvest limit in the lower Yukon area of Unit 18 from one to two moose per regulatory year. Under the proposed actions, Federally qualified subsistence users who harvested a bull moose in the fall season, would be allowed to harvest an additional moose during the winter season. Federally qualified subsistence users who did not harvest a moose during the fall season could harvest two moose during the winter season. In 2010, the Board adopted proposal WP10-56 with modification to increase the harvest limit to two moose during a regulatory year and increased the length of the Federal winter season from Dec. 20–Jan. 20 to Dec. 20–Feb. 28.

Current Events Involving Species

At the fall 2011 Yukon-Kuskokwim Delta Subsistence Regional Advisory Council meeting, Yukon Delta National Wildlife Refuge staff provided information regarding their active management of transporters. These measures are in place to help reduce conflict issues between transporter clients and subsistence moose hunters. Within the lower Yukon or Middle Yukon areas, the Refuge does not allow transporters to drop off moose hunters: 1) along waterways usually accessible by boat, 2) within 1 nautical mile of native allotments, and 3) within 3 nautical miles of other hunting camps. The only exception is that hunters can be dropped off on the North Fork of the Andreafsky River above Allen Creek. If hunters choose to float the North Fork of the Andreafsky River, they must pull out before Allen Creek. Transporters have been allowed to drop off float hunters on the Atchuelinguk River since this was a historic boat-guide use river.

Within the Andreafsky area, the Refuge limits the number of moose hunters that transporters can bring into the area. Transporters are allowed to bring in two hunting parties per drainage (north and east forks of the Andreafsky River and the Atchuelinguk River) for a total of six parties. A location cannot be used more than once per year and no more than five round trips can occur at that one location.

Biological Background

A general summary, based on analysis of existing survey results for the moose population along the Yukon River in Unit 18, is that the population is highly productive, continues to grow, and is capable of supporting an increased harvest. Moose populations have steadily increased among the Lowest Yukon, Andreafsky, and Paimiut survey areas since the early to mid-1990s (Perry 2008). The Lower Yukon survey area has seen a dramatic increase in moose numbers from zero in 1988 to 2,828 moose [3,320 when including a sightability correction factor (SCF) to the estimate] in 2008 (**Figure 1**). The density

of moose in the Lower Yukon area was estimated between 2.4 and 2.8 moose/mi^2 in 2008. Moose density estimates increased from 0.04 in 1995 to 0.26 moose/mi^2 in 2002 in the Andeafsky survey area (**Figure 1**). Moose density estimates increased from 0.64 in 1992 to 2.3 moose/mi2 in 2006 in the Paimiut survey area (**Figure 1**).

Yukon Delta National Wildlife Refuge biologists conducted moose composition counts along the Lower and Middle Yukon survey areas in 2010 (Rearden 2011, pers. comm.). The Middle Yukon survey area includes the Andreafsky and Paimiut survey areas mentioned above. The Lower Yukon composition survey was conducted on November 8, 2010 and a total of 845 moose were observed (**Table 1**). Bull:cow ratios were 30 bulls:100 cows and calf:cow ratios were 69 calves:100 cows. Of the observed cows, 55% had calves and 26% had twins. Moose numbers also increased in the Middle Yukon survey area. A total of 619 moose were observed during the Middle Yukon composition survey (**Table 1**). Bull:cow ratios were 42 bulls:100 cows and calf:cow ratios were 61 calves:100 cows. Of the observed cows, 47% had calves and 28% had twins. The calf:cow ratios on the Middle Yukon increased from 2002 (22 calves:100 cows) and 2005 (42 calves:100 cows). Bull:cow ratios for both of these survey areas are at or above management objectives. The calf:cow ratios are high for both survey areas suggesting that populations are still growing.

State Management Objectives for Unit 18 (Perry 2008) are as follows:

- Allow the lower Yukon River moose population to increase above its estimated size of 2500–3500 moose. 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 populations, with a minimum of 30 bulls:100 cows.
- Conduct seasonal sex and age composition surveys as weather allows.
- Conduct winter censuses and recruitment surveys in the established survey areas on a rotating basis.
- Conduct fall and/or winter trend counts to determine population trends.
- Conduct hunts consistent with population goals.
- Improve knowledge of and compliance with harvest reporting requirements and hunting regulations through education and incentives.
- Address user conflicts through education and hunter contacts.

Harvest History

The customary and traditional use determination for moose in Unit 18 encompasses about 26,000 people living in about 50 communities of which about 6,000 live in Bethel (ADLWD 2011). Culturally, residents of these communities are primarily Yup'ik Eskimos sharing a common language. It should be noted that many rural Alaska areas have low compliance with harvest ticket systems (Andersen and Alexander 1992), and western Alaska is no exception. The harvest report rate to ADF&G as compared to estimates from household harvest surveys during the same or similar years ranges from none to 97% (compare ADF&G 2011, FWS 2011), which means the residents of some communities do not report their moose hunting activities to ADF&G. Because of the potential for underreporting, conventional ADF&G harvest reporting systems do not always reflect the true level of harvest.

Airplanes are used to access moose hunting areas by Federally qualified subsistence users and non-Federally qualified users in Unit 18 (**Table 2**). Between 2007 and 2009, 3% to 7% of all users who returned harvest reports listed airplanes as their primary method of transportation. While the overall use of airplanes has been low compared to overall effort, non-Federally qualified users used airplanes as

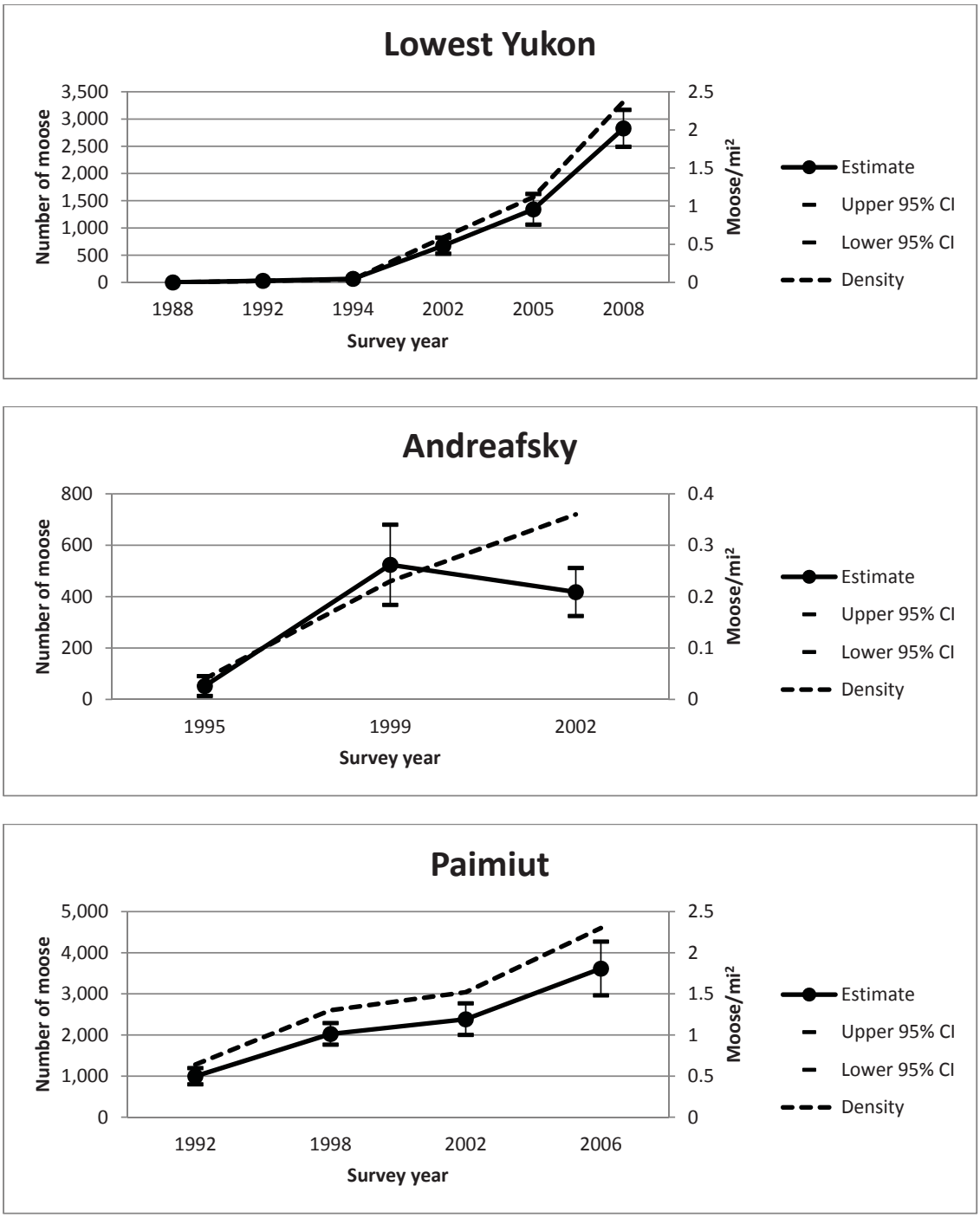


Figure 1. Moose population and density estimates for the Lowest Yukon, Andreafsky, and Paimut survey areas of Unit 18 between 1988 and 2006 (adapted from Table 1 in Perry 2008). Survey methods varied between minimum counts, the spatial method, and the Gasaway method (see Perry 2008).

Table 1. Sex and age composition data of moose populations in the Lower Yukon and Middle Yukon survey areas of Unit 18. Aerial surveys were flown in the fall of 2010.

		Survey area	
Class	**Subclass**	**Lower Yukon**	**Middle Yukon**
Cows	**Total**	**424**	**305**
Calves	Single	171	103
	Twins	61	40
	Triplets	0	1
	Total[a]	**293**	**186**
Bulls	Small	58	46
	Medium	58	51
	Large	12	31
	Total[a]	**128**	**128**
Adults	**Total**	**552**	**433**
All moose	**Total**	**845**	**619**

[a] Not all individuals could be positively placed into subclasses, but were counted their respective class totals.

transportation proportionately more than Federally qualified subsistence users. Non-Federally qualified users comprised 5% to 12% of the hunting effort in which residency was identified, but comprised 64% to 72% of airplane use. The overall harvest of moose by all users utilizing airplane transportation to hunting areas has been low (less than 4% of total harvest) in Unit 18 (**Table 3**). Both the use of airplanes and the number of moose harvested by those users utilizing airplanes dropped in the 2009/2010 regulatory year (**Table 2, Table 3**).

Moose harvest by nonresidents is minimal compared to that of residents in Unit 18. The number of moose harvested by Alaska residents (Federally qualified subsistence users and non-Federally qualified residents) has been steadily increasing in Unit 18 (**Figure 2**). Nonresident harvest has remained low throughout the unit, and the mean nonresident harvest was six moose between 1998 and 2009. In 2007, the closure to non-Federally qualified users was lifted in the Lower Yukon and remainder areas of Unit 18. For nonresidents, between 2007 and 2009, the mean harvest of moose increased slightly to 10 moose per year for all of Unit 18. During the same period, the mean resident harvest was 398 moose for all of Unit 18. The number of moose harvested by nonresidents using airplanes is likely very low. Between regulatory years 1998 and 2004, one moose was reportedly taken in the Lower Yukon area of Unit 18 by fly-in hunters from outside Alaska (FSB 2006).

Effects of the Proposal

If the proposal were adopted, the use of aircraft would be restricted for hunting moose, including transportation of any moose hunter or moose part, on Federal public lands within the Unit 18 Lower Yukon and remainder areas. The proposal would affect all nonlocal and local users who access Federal public lands by aircraft to harvest moose in this portion of Unit 18, including Federally qualified subsistence users who access traditional hunt areas in the lower Yukon River drainage with privately-

Table 2. Total moose hunting effort and effort in which airplanes were listed as the primary method of transportation by Federally qualified subsistence users and non-Federally qualified user in Unit 18, 2007–2009. Hunting effort data was based on Federal and State reporting systems (FWS 2011).

	Regulatory year					
	2007		2008		2009	
User status	**Number hunting**	**Number using airplanes**	**Number hunting**	**Number using airplanes**	**Number hunting**	**Number using airplanes**
Federally qualified	727	15	622	17	1,054	6
Non-Federally qualified	53	27	83	44	59	20
Unknown	47	0	133	0	38	4
Total	**827**	**42**	**838**	**61**	**1,151**	**30**

Table 3. Total moose harvest and harvest in which airplanes were the primary method of transportation by Federally qualified subsistence users and non-Federally qualified user in Unit 18, 2007–2009. Harvest data was based on Federal and State reporting systems (FWS 2011).

	Regulatory year					
	2007		2008		2009	
User status	**Total moose harvest**	**Moose harvest with airplane**	**Total moose harvest**	**Moose harvest with airplane**	**Total moose harvest**	**Moose harvest with airplane**
Federally qualified	405	9	320	5	538	2
Non-Federally qualified	19	9	37	15	29	4
Unknown	34	0	107	0	27	3
Total	**458**	**18**	**464**	**20**	**594**	**9**

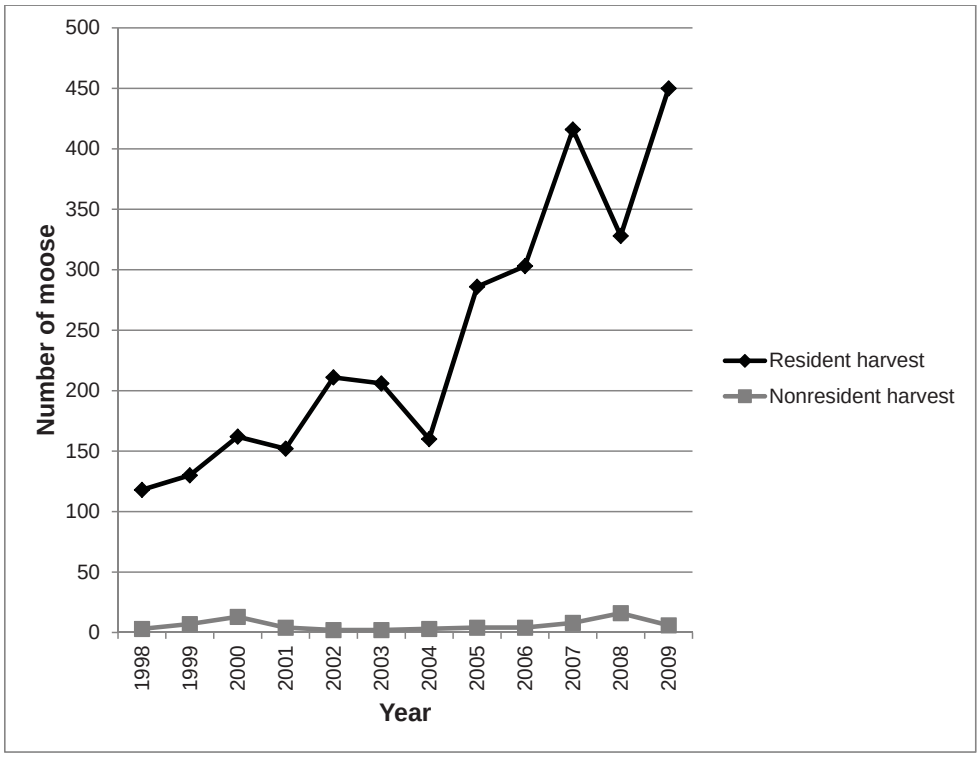


Figure 2. Total annual harvest of moose in Unit 18 by residents and nonresident using a State harvest ticket between 1998 and 2009. The Lower Yukon and remainder areas of Unit 18 were opened to non-Federally qualified users in 2007.

owned aircraft. Between 2007 and 2009, 6 to 17 Federally qualified subsistence users reported using airplanes as the primary method of transportation while hunting moose in Unit 18 (**Table 2**). Those subsistence users utilizing airplanes reportedly harvested 2 to 9 moose.

Local hunters have complained about non-local fly-in hunters interfering with their opportunities to harvest moose. Reports have consisted of non-local hunters flying in and excluding locals by claiming hunting areas (YKDSRAC 2011) and transporters dropping off hunters in close proximity to native allotments or established camps (YKDSRAC 2010). The proposed controlled use area would fail to adequately address the proponent's concerns about non-Federally qualified hunters flying in to harvest moose in Unit 18. The Federal Subsistence Board does not have the jurisdiction to restrict access methods on State and private lands, or to restrict spotting of moose from aircraft. Current State and Federal regulations already prohibit the assisting or taking of ungulates before 3:00 a.m. following the day in which airborne travel occurs, except for flights in regularly scheduled commercial aircraft.

The proposed controlled use area would likely have minimal impacts on the moose population in the Lower Yukon and remainder areas. Airplanes were reportedly used by less than 7% of all users during the 2007–2009 moose seasons in Unit 18 and these users accounted for less than 4% of the total moose harvest.

OSM CONCLUSION

Oppose Proposal WP12-47.

Justification

The Federal Subsistence Board does not have jurisdiction to restrict access methods on State and private lands, or to restrict spotting moose from aircraft. Because of the mixed land ownership and State jurisdiction on navigable waters within the affected area, the establishment of a Federal-only controlled use area would not effectively restrict aircraft access as requested by the proponent. Both Federal and State regulations currently prohibit taking moose the same day the hunter is airborne. In addition, Yukon Delta NWR staff manage transporter access on Refuge lands to help reduce conflicts between transporter clients and local users. If illegal use of aircraft for hunting moose in the area is occurring or if moose hunters are illegally displacing local tribal hunters, such incidents should be called to the attention of State and Federal law enforcement personnel.

There are no conservation concerns for the affected moose population that would require regulatory restrictions. Moose populations in these areas are highly productive, continue to expand, and can support increased harvest. In fact, Federal and State managers are concerned with the rate of increase for moose in the Lower Yukon area and are looking to reduce the population growth (Rearden 2011, pers. comm.).

Finally, although Federal subsistence management regulations parallel controlled use area restrictions established by the State, the Board has not established any Federal-only controlled use areas during its tenure. To be effective in areas of mixed jurisdiction, both State and Federal controlled use area provisions need to be in place.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-47. The lower Yukon people sacrificed to build the moose population in the area. Thirteen villages depend on moose in this area. Local people do not support moose spotting from an airplane and hunters being dropped-off with an airplane in the hunt area. When people fly into villages, local people could help them.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposal WP12-47**.** Defer to home region.

Seward Peninsula Subsistence Regional Advisory Council

No action taken on Proposal WP12-47**.**

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-47: This proposal requests eliminating air transport as a method of access used by non-federally qualified users in Western Unit 18 Controlled Use Area.

Introduction: The proponent requests the federal subsistence board eliminate aircraft use for transporting hunters or moose parts in a portion of Unit 18. The proposal seeks to provide additional opportunity for federally-qualified subsistence users in Unit 18 by eliminating competition from other hunters through eliminating the most effective form of transportation.

Impact on Subsistence Users: The proposed access method closure would eliminate the opportunity for non-federally-qualified users to hunt moose on federal public lands in Unit 18 that are presently open to hunting and currently accessed by aircraft. This closure would apply to friends and relatives of federally-qualified subsistence users eligible to participate in this hunt under state regulations and would concentrate hunting by non-local residents onto limited state and private lands. If adopted, non-federally qualified users would be restricted to "ORV and boat" access which may concentrate hunters near the waterways where "locals" traditionally hunt. If adopted, federally qualified subsistence users in Unit 18 may opportunistically harvest additional moose. Users will be burdened with differentiating unclear boundaries in the field.

Opportunity Provided by State: In the affected portion of Unit 18, the state moose hunting is allowed for residents of Alaska by registration permit RM 615 and is open September 1-September 10 with a bag limit of one antlered bull. Meat-on-the-bone salvage is required, therefore, meat taken prior to October 1 must remain on the bones of the front and hindquarters until removed from the field or processed for human consumption.

Conservation Issues: None to justify restricting non-federally qualified user access to federal public lands in the affected area in Unit 18. The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations. There are no conservation issues that justify. Moose are abundant in areas of Unit 18 currently open for hunting, thanks to the success of the moratoria. Information presented to the Federal Subsistence Board in 2007 indicated that the moose population in areas targeted in this proposal is highly productive and is continuing to grow. The moose population is so abundant in this portion of Unit 18 in 2010 the Federal Subsistence Board granted the most liberal bag limit known of two moose per federally qualified subsistence user per year.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not clearly marked and often difficult to locate on the ground.

Other Comments: The Federal Subsistence Board does not have the authority to manage or control methods of access for hunts on federal public lands in Alaska. Under its closure policy adopted in 2007, the Federal Subsistence Board "will not restrict the taking of fish and wildlife by users on federal public lands (other than national parks and park monuments) unless

necessary for conservation of healthy populations of fish and wildlife resources or to continue subsistence uses of those populations, or for public safety or administrative reasons, or 'pursuant to other applicable law'." None of these conditions apply to moose hunting on federal public lands open to moose hunting in Unit 18, and a closure to access by aircraft would be an unnecessary restriction on non-federally qualified subsistence users in violation of section 815 of ANILCA.

Recommendation: Oppose.

WP12-45/49 Executive Summary	
General Description	Proposal WP12-45 requests that for a portion of Unit 18, the start of the fall hunting season be moved from Aug. 10 to Sept. 1, and that the harvest limit be modified from one antlered bull to one moose, except that a cow with a calf may not be taken. *Submitted by Aloysius Unok of Kotlik* Proposal WP12-49 requests 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 Sept. 1 – 30. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**WP-45** **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 – ~~1 antlered bull~~* ***1 moose except a cow with calf may not be taken.*** — ***Sept. 1*** *~~Aug. 10~~ – Sept. 30* *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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.* — *Dec. 20 – Feb. 28*

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WP12-45/49 Executive Summary *(continued)*	
Proposed Regulation	**WP-49** **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 – ~~1 antlered bull~~* ***2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Sept. 1 – Sept. 30.*** — ~~*Aug. 10 – Sept. 30*~~ ***Aug. 1 – the last day of February*** ~~*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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.*~~ — ~~*Dec. 20 – Feb. 28*~~
OSM Preliminary Conclusion	**Take no action** on Proposal WP12-45. **Support** Proposal WP12-49.
OSM Conclusion	**Take no action** on Proposal WP12-45 **Support** Proposal WP12-49 **with modification** to allow for the harvest of an antlered bull starting on August 1 instead of September 1. The modified regulation should read:

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WP12-45/49 Executive Summary *(continued)*	
OSM Conclusion (Continued)	**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 – Sept. 30.*** — ***Aug. 1 – the last day of February*** ~~*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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.*~~ — ~~*Dec. 20 – Feb. 28*~~
Yukon-Kuskokwim Delta Regional Council Recommendation	**No action taken** on Proposal WP12-45. **Support** Proposal WP12-49.
Western Interior Regional Council Recommendation	**No action taken** on Proposals WP12-45/49**.**
Seward Peninsula Regional Council Recommendation	**No action taken** on Proposal WP12-45. **Support** Proposal WP12-49.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** Proposal WP12-45/49 **with modification.** The department recommends modification of the proposals to align with proposals the department submitted to the Alaska Board of Game.
Written Public Comments	**None**

DRAFT STAFF ANALYSIS
WP12-45/49

ISSUES

Proposal WP12-45, submitted by Aloysius Unok of Kotlik, requests that for a portion of Unit 18, the start of the fall hunting season be moved from Aug. 10 to Sept. 1, and that the harvest limit be modified from one antlered bull to one moose, except that a cow with a calf may not be taken.

Proposal WP12-49, submitted by the Yukon Delta National Wildlife Refuge, requests 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 Sept. 1 – 30.

DISCUSSION

The proponent for Proposal WP12-45 states that hunting opportunities for local users are limited in Unit 18 by the antlered bull restriction during the fall hunting season. The proponent states that hunters have to spend a long time in the field searching for a legal animal to harvest and by allowing a 1 moose harvest limit, there would be more harvest opportunities.

The proponent for Proposal WP12-49 states that the moose population of the lower Yukon has grown dramatically and the season and harvest limit for this portion of Unit 18 can be liberalized. This proposal would increase hunting opportunities for Federally qualified subsistence users by increasing the opportunity to harvest cows and harvest two moose during the fall. Reducing the number of cows may help slow the increase in the population, thereby reducing habitat damage that could lead to a population crash.

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 — 1 antlered bull	*Aug. 10 – Sept. 30*

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– 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.	*Dec. 20 – Feb. 28*

Proposed Federal Regulation

WP-45

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 — ***~~1 antlered bull~~1 moose except a cow with calf may not be taken.***	***Sept. 1*** *~~Aug. 10~~ – Sept. 30*
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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.	*Dec. 20 – Feb. 28*

WP-49

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 – ~~*1 antlered bull*~~***2 moose, only one of which may be antlered. Antlered bulls may only be harvested from Sept. 1 – Sept. 30.***	~~*Aug. 10 – Sept. 30*~~ ***Aug. 1 – the last day of February***
~~*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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.*~~	~~*Dec. 20 – Feb. 28*~~

Existing State Regulation

Unit 18 — Moose

Residents, one antlered bull	*Aug. 10 – Sept. 30*
OR	
One moose	*Dec. 20 – Feb. 28*
One antlered bull for nonresidents	*Sept. 1 – Sept. 30*

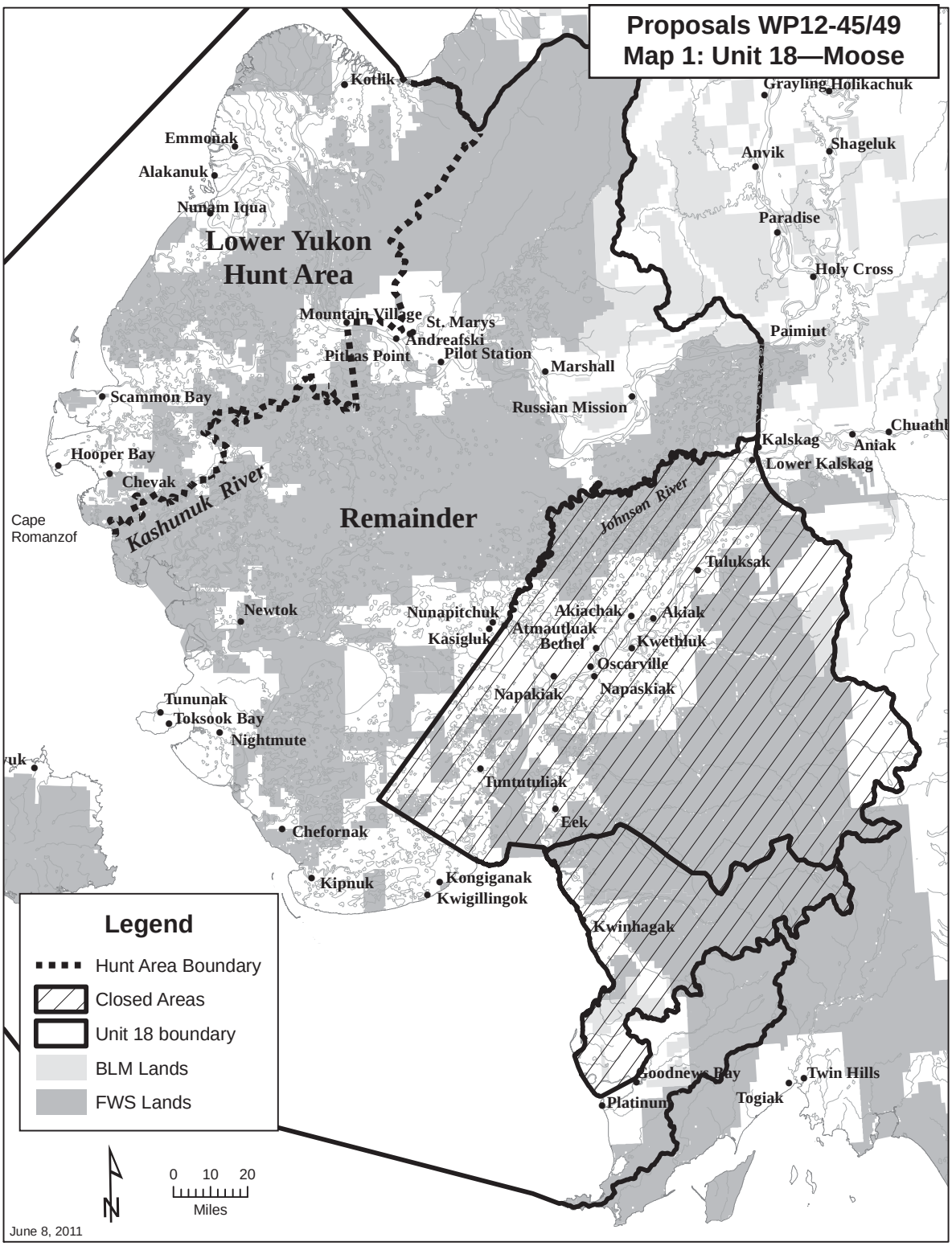
Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18 and consist of 62% 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 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


Proposals WP12-45/49
Map 1: Unit 18—Moose
Kotlik
Grayling
Holikachuk
Emmonak
Alakanuk
Nunam Iqua
Anvik
Shageluk
Paradise
Holy Cross
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Paimiut
Scammon Bay
Russian Mission
Kalskag
Aniak
Lower Kalskag
Hooper Bay
Chevak
Kashunuk River
Cape
Romanzof
Remainder
Johnson River
Tuluksak
Newtok
Nunapitchuk
Kasigluk
Akiachak
Akiak
Atmautluak
Bethel
Kwethluk
Oscarville
Napakiak
Napaskiak
Tununak
Toksook Bay
Nightmute
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Twin Hills
Togiak
Platinum
Legend
Hunt Area Boundary
Closed Areas
Unit 18 boundary
BLM Lands
FWS Lands
N
0 10 20
Miles
June 8, 2011

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 State Proposal 04 in response to the rapid growth of the lower Yukon moose population. Action taken on the proposal modified the State harvest limit by allowing the harvest of antlered bulls only and established a winter season for antlered bulls and calves. During its November 2007 meeting, the Alaska Board of Game lengthened the fall moose season for the lower Yukon and remainder areas of Unit 18 by 21 days and the winter season in the lower Yukon by 10 days through the adoption of State Proposal 06.

At its March 2009 meeting, the Alaska Board of Game adopted Proposal 228, which liberalized the State harvest limit from antlered bulls to any moose for the Dec. 20–Jan. 20 season in the lower Yukon area of Unit 18. The State believed that the affected moose population has increased to a size that can support the harvest of cows.

At its November 12, 2009 work session, the Federal Subsistence Board adopted Special Action WSA08-13, submitted by Scammon Bay Traditional Council, which requested the harvest limit in the lower Yukon area of Unit 18 be increased to two moose per regulatory year, with one allowed in the fall and one in the winter.

The Alaska Board of Game, at its November 13−16, 2009 meeting, adopted new regulations to extend the winter season from 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.

State Management Objectives for Unit 18 (Perry 2008) are as follows:

- Allow the lower Yukon River moose population to increase above its estimated size of 2500–3500 moose. 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 populations, with a minimum of 30 bulls:100 cows.
- Conduct seasonal sex and age composition surveys as weather allows.
- Conduct winter censuses and recruitment surveys in the established survey areas on a rotating basis.
- Conduct fall and/or winter trend counts to determine population trends.
- Conduct hunts consistent with population goals.
- Improve knowledge of and compliance with harvest reporting requirements and hunting regulations through education and incentives.
- Address user conflicts through education and hunter contacts.

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.

Current Events Involving the Species

At its November 2011 meeting, the Alaska Board of Game, voted to support Proposal 7A with modification to allow for the harvest of two moose, only once of which may be an antlered bull August 1-September 30, and two antlerless moose may be taken October 1- the last day of February. These changes closely mirror those proposed under WP12-49.

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. Based on the 2008 survey results, it appears that the affected population could support additional harvest with the current population size, density, and productivity (Doolittle 2009, pers. comm.). The most recent population composition data for lower Yukon moose shows 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.

Habitat

Moose browse surveys have not been conducted within the affected area, thus there are no habitat data. Browse surveys would facilitate analysis of the impacts this moose population is having on its habitat, which could provide some insight into the carrying capacity of the habitat and the nutritional quality of the standing browse.

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).

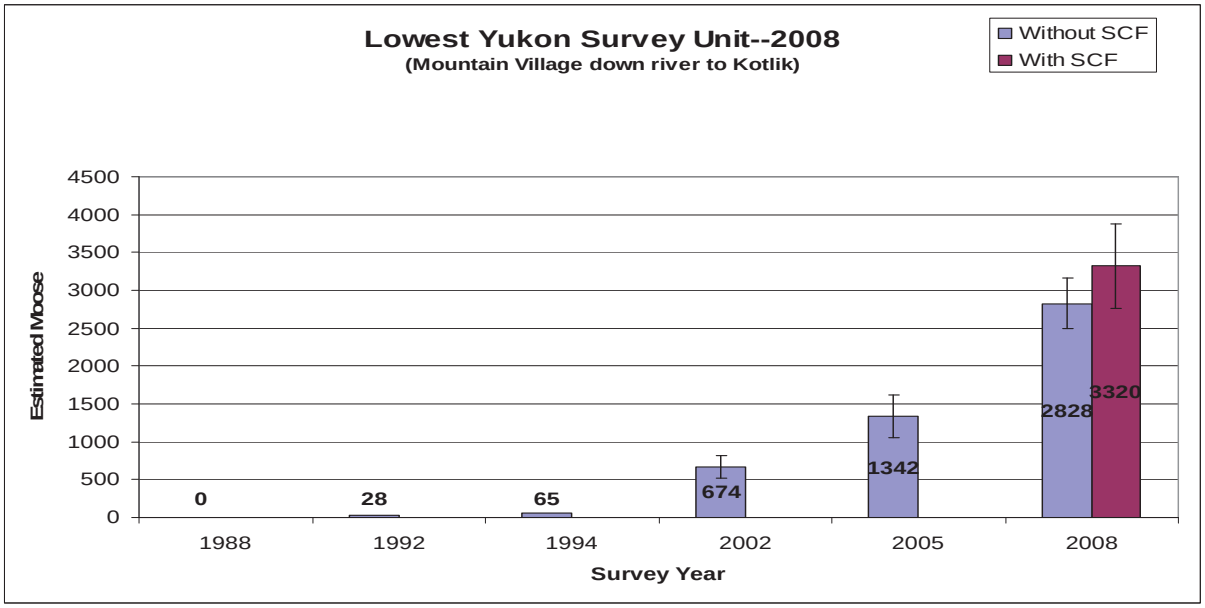


Figure 1. Moose population survey results from the lowest survey unit along the main stem of the Yukon River, 1988-2008 (UFWS 2008).

Harvest History

Reported harvest totals from the fall (2005-2007) and winter seasons (2005–2009) are provided in **Table 1**. There appears to have been an increase in hunter success for the fall and winter seasons since 2005. From 2007 through 2009, the average annual reported winter moose harvest was 29. Even with the "any-moose" harvest limit provided in the 2009 winter season, the total reported winter harvest remains lower than anticipated. It should be noted that harvest information is typically collected through harvest ticket or registration permit reports submitted by users, which may undercount harvest (cf. Andersen and Alexander 1992). However, the reported moose harvest does show an increasing trend. Overall harvest continues to be lower than expected in Unit 18 relative to the moose population.

Table 1. Total fall (ADF&G 2009) and winter (Perry 2011, pers. comm.) moose harvest reported by year for the lower Yukon area of Unit 18, 2005–2010.

Year	Reported fall moose harvest	Reported winter moose harvest
2005	97	14
2006	121	31
2007	162	29
2008	193	24
2009	178	51
2010	162	52
Total	913	201

Effects of Proposal

If adopted, Proposal WP12-45 would shorten the fall season by 21 days from Aug. 10 – Sept. 30 to Sept. 1 – Sept. 30, and would change the harvest limit for the fall season from one antlered bull to one moose during the fall season, excluding a cow moose with a calf in a portion of Unit 18. This action would reduce the amount of hunting time during the fall season for Federally qualified subsistence users. In

addition, changing the harvest limit to one moose would expand the segment of the moose population available for harvest. Allowing for harvest of cow moose could help slow the recruitment rate, thereby minimizing habitat degradation for the fast growing moose population on the lower Yukon.

If adopted, Proposal WP12-49 would lengthen the hunting season by approximately three months and modify the harvest limit to allow for the harvest of up to two moose during this time period, however, antlered bulls could only be taken from Sept. 1 to Sept. 30. This action would allow for increased subsistence harvest opportunities during the fall. This proposal would also help limit the growth of this quickly expanding moose population by reducing recruitment rates through a harvest at least partially directed at cows. This reduction may help prevent habitat degradation along the lower Yukon that could lead to a population crash if left unchecked.

OSM PRELIMINARY CONCLUSION

Take no action on Proposal WP12-45.

Support Proposal WP12-49.

Justification

The Federal Subsistence Board recently adopted Proposal WP10-56 to increase the harvest limit in the lower Yukon area of Unit 18 to two moose per regulatory year. Proposal WP12-49, if adopted, would provide additional opportunity for Federal subsistence users to harvest moose in the lower Yukon area of Unit 18 by lengthening the season and liberalizing harvest requirements from 1 antlered bull to 2 moose, except that antlered bulls could be taken only between Sept. 1 and Sept. 30. Moose densities along the lower Yukon are high and additional harvest should not have any negative impacts on the moose population. Proposal WP12-49 should help to reduce moose densities in this area, which would prevent or help to reduce negative impacts to habitat that could eventually lead to a crash in the population. The increased season length and hunting opportunities proposed in WP12-49 should meet the needs set forth by the proponent in WP12-45, as well as reducing the regulatory complexity between Federal and State lands in the area.

ANALYSIS ADDENDUM

OSM CONCLUSION

Take no action on Proposal WP12-45

Support Proposal WP12-49 **with modification** to allow for the harvest of an antlered bull starting on August 1 instead of September 1.

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 – Sept. 30.***	***Aug. 1 – the last day of February***
~~*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 – 1 moose. If 1 antlered bull is taken during the fall season in this area, 1 additional moose may be taken during the winter season. If no moose are taken in the fall season, 2 moose may be taken in the winter season. No more than 2 moose may be harvested in this area in a regulatory year. A Federal registration permit is required. The Yukon Delta NWR Manager may restrict the harvest in the winter season to only 1 antlered bull or only 1 moose per regulatory year after consultation with the ADF&G and the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council chair.*~~	~~*Dec. 20 – Feb. 28*~~

Justification

The Federal Subsistence Board recently adopted Proposal WP10-56 to increase the harvest limit in the lower Yukon area of Unit 18 to two moose per regulatory year. Proposal WP12-49, if adopted, would provide additional opportunity for Federal subsistence users to harvest moose in the lower Yukon area of Unit 18 by lengthening the season and liberalizing harvest requirements from 1 antlered bull to 2 moose, except that antlered bulls could be taken only between Aug. 1 and Sept. 30. Moose densities along the lower Yukon are high and additional harvest should not have any negative impacts on the moose population. Proposal WP12-49 should help to reduce moose densities in this area, which would prevent or help to reduce negative impacts to habitat that could eventually lead to a crash in the population. The increased season length and hunting opportunities proposed in WP12-49 should meet the needs set forth by the proponent in WP12-45, as well as reducing the regulatory complexity between Federal and State lands in the area. In addition, lengthening the season dates for harvest of antlered bulls from September 1 to August 1 will align Federal and State regulations, allowing for a less restrictive season for Federally qualified users. The proponent for WP12-49 supports these changes.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

No action taken on Proposal WP12-45.

Support Proposal WP12-49.

The lower Yukon moose population is growing very fast and there are not conservation concerns in this case. Moose are an important subsistence food.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposals WP12-45/49**.** Defer to home region.

Seward Peninsula Subsistence Regional Advisory Council

No action taken on Proposal WP12-45**.** The Council chose to defer to the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.

Support Proposal WP12-49. The increase in the health of the population justifies the additional harvest.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-45: This proposal requests eliminating the antlered bull moose harvest requirement in the Lower Yukon Area portion of Unit 18 The proposal also requests reducing the Lower Yukon Area portion of Unit 18 federal subsistence moose hunting season by delaying the season opening date.

Wildlife Proposal WP12-49: The proposal requests liberalizing the Lower Yukon Area portion of the Unit 18 federal subsistence moose hunting season. The proposal also requests changing the federal subsistence antlered bull moose harvest requirement dates.

Introduction: The proponent of WP12-45 requests authorizing the harvest of cow moose without calves in the fall season for that portion of Unit 18 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 (Lower Yukon Area). The proponent also requests reducing the federal subsistence moose hunting season in the identified area from August 10 through September 30 to September 1 through September 30.

The proponent of WP12-49 requests liberalizing the federal subsistence moose hunting season for that portion of Unit 18 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 (Lower Yukon Area). The proposal requests the current fall and winter federal subsistence moose hunting seasons be replaced with a single continuous season from August 1 through February 29. The proposal also requests changing the antlered bull moose harvest requirement dates from August 10 through September 30 and from December 20 through February 28 to the single time period of September 1 through September 30.

The proponent of WP12-49 indicates adoption of this proposal will result in lowering the moose densities in the Lower Yukon Area of Unit 18 by establishing one continuous season partially directed at cow moose.

Impact on Subsistence Users: If WP12-45 is adopted, federal subsistence users participating in the Lower Yukon Area portion of Unit 18 federal subsistence fall moose hunt will have greater opportunities to harvest a moose, with or without antlers, during the open season. Additionally, if this proposal is adopted, federal subsistence moose hunters would have a 21 day (41%) reduction of the season length.

If WP12-49 is adopted, federal subsistence users participating in the Lower Yukon Area portion of the Unit 18 federal subsistence fall moose hunt will have greater opportunities to harvest antlerless moose. The current fall season (antlered bulls only) is 51 days long and the winter season (any moose) is 70 days long (total 121 days). The proposed season length is 202 days (60% increase), of which antlered moose could be only harvested between September 1 and 30. If adopted, federal subsistence users would be restricted from harvesting antlered bulls between

August 10 and 31. If adopted, federal subsistence user opportunity to harvest cow and antlerless moose would significantly increase.

Opportunity Provided by State: In the Lower Yukon Area portion of Unit 18, the state fall moose hunting season is from August 10 through September 30 for residents of Alaska with a bag limit of one antlered bull. The nonresident state moose hunting season is September 1 through September 30 with a bag limit of one antlered bull. The state winter hunting season for the Lower Yukon Area portion of Unit 18 is from December 20 through February 28 with a bag limit of one moose. Meat-on-the-bone salvage is required prior to October 1, thus meat must remain on the bones of the front quarters and hindquarters until removed from the field or processed for human consumption. Residents may not harvest more than one moose per year between the fall and winter seasons.

Conservation Issues: The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations. Moose are abundant in areas of Unit 18 currently open for hunting, thanks to the success of the moratoria. Information presented to the Federal Subsistence Board in 2007 indicated that the moose population in areas targeted in this proposal is highly productive and is continuing to grow.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and are often difficult to locate on the ground.

Other Comments: The department submitted similar, if not more liberal, proposals to the Alaska Board of Game requesting liberalization of harvest regulations for portions of Unit 18. Proposals 7 and 8 submitted to the Alaska Board of Game request changes to the resident moose hunting season and bag limit. The proposed new season would run from August 1 through the last day of February. The proposals request a two moose bag limit, of which only one may be an antlered bull, and that no cow accompanied by a calf may be taken prior to October 1.

Recommendation: Support as modified: the department recommends modification of the proposals to align with the above proposals the department submitted to the Alaska Board of Game.

WP12-50 Executive Summary	
General Description	Proposal WP12-50 would allow moose to be taken from a motor-driven boat that is moving under power. The request addresses the remainder area of Unit 18 only. The remainder area of Unit 18 is defined in **Map 1**. *Submitted by the Association of Village Council Presidents*
Proposed Regulation	**Unit 18—Caribou and Moose** *§__.26 (n)(18) (iii)(C) You may take caribou from a boat moving under power in Unit 18;* *§__.26 (n)(18) (iii)(D) You may take moose from a boat moving under power in ~~that portion~~* ***the following portions*** *of Unit 18:* *(1) North and west of a line from the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village;* ***(2) And in the remainder area of Unit 18.***
OSM Conclusion	**Support**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support**
Western Interior Regional Council Recommendation	**No action taken**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal. The Board may want to consider adding to the Yukon-Kuskokwim Regional Advisory Council's recommendation to clarify that the boat under power "not be on step" for safety reasons.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-50

ISSUES

Proposal WP12-50, submitted by the Association of Village Council Presidents, would allow moose to be taken from a motor-driven boat that is moving under power. The request addresses the remainder area of Unit 18 only, as defined in Unit 18 moose hunting regulations. The remainder area of Unit 18 is defined in **Map 1**.

DISCUSSION

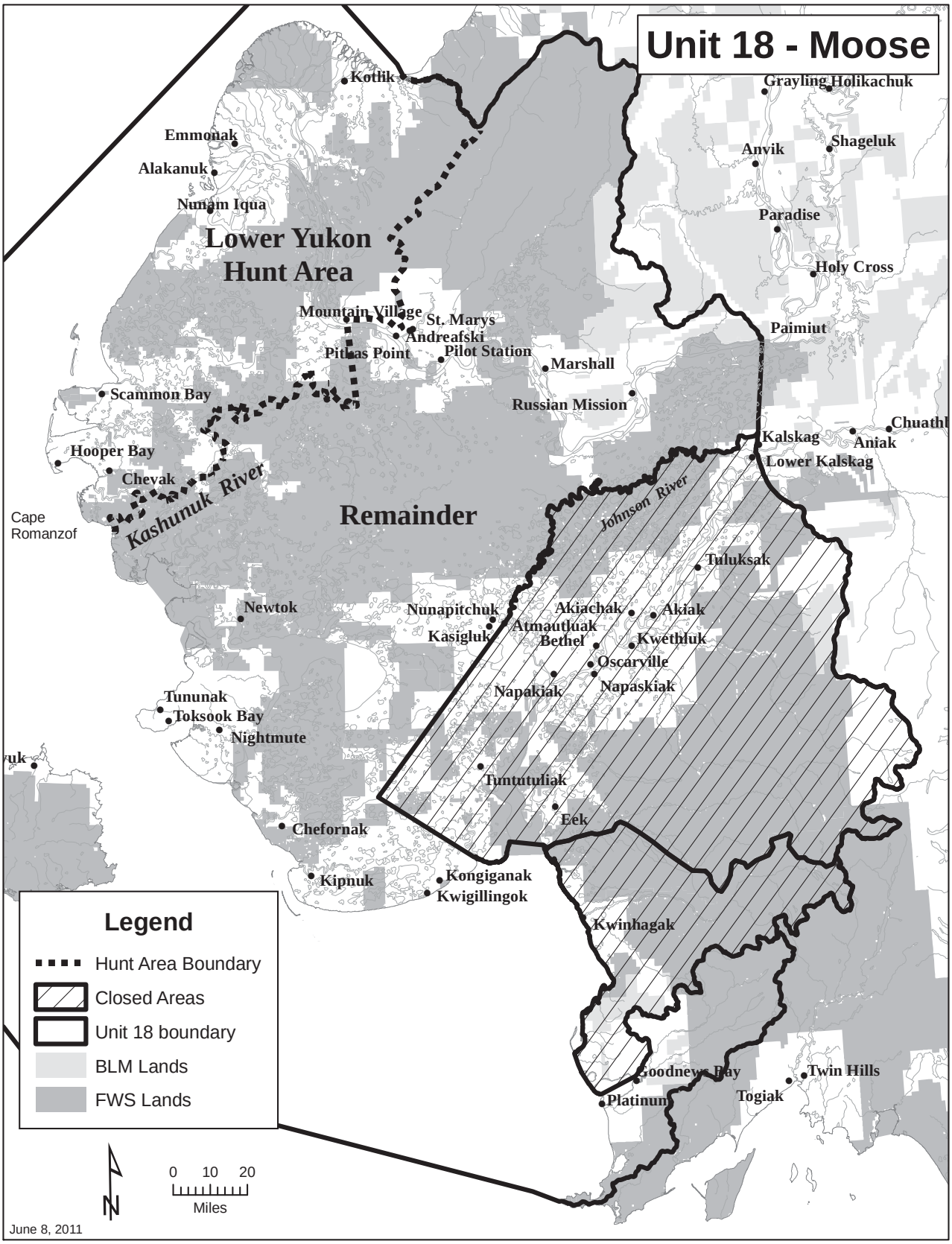
The proponent states that the proposed regulation change reflects the current method of harvesting moose in the region, and that the practice has been on-going since motorized boats became available in the area. At the September 2011 meeting of the Yukon Kuskokwim Delta Regional Advisory Council, the proponent described hearing concerns from residents of Unit 18 who feared being cited when using this prohibited method. Further, the method had been used since moose moved into parts of Units 18, 19, and 21E because people hunting to put food on the family table generally used the most efficient methods possible to harvest moose (YKDRAC 2011: 183–184). It is a common practice of subsistence users in the area to hunt moose from a motor-driven boat under slow power in the early morning and evening hours when animals frequent the river banks (Sundown 2011, pers. comm.). A slow speed is used to avoid scaring moose from river banks by keeping motor noise to a minimum. A motor-driven boat under slow power provides a relatively stable platform for shot placement. The proponent and Federal law enforcement have indicated that no accidents have been reported as a result of this activity.

While statewide Federal subsistence regulations do not allow the harvest of wildlife from a boat under power, exceptions are allowed under special provisions. For example, caribou may be taken from a boat moving under power in Units 18, 23, 25, and 26. Additionally, moose may be taken from a boat moving under power in a portion of Unit 18 (the lower Yukon River drainage below Mountain Village) and in Unit 25.

A similar proposal was submitted by George Smith to the Alaska Board of Game (Proposal 12); however, the proposed State regulation would apply only to moose hunting in the lower Yukon River drainage area of Unit 18 (an area defined below in §__.26 (n)(18) (iii)(D)), and would not apply in the remainder area of Unit 18 defined in **Map 1** (ADF&G 2011).

Existing Federal Regulation

> **Unit 18—Caribou and Moose**
>
> *§__.26 (n)(18) (iii)(C) You may take caribou from a boat moving under power in Unit 18;*
>
> *§__.26 (n)(18) (iii)(D) You may take moose from a boat moving under power in that portion of Unit 18, north and west of a line from the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village.*


Unit 18 - Moose
Kotlik
Grayling
Holikachuk
Emmonak
Alakanuk
Nunam Iqua
Anvik
Shageluk
Paradise
Holy Cross
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitkas Point
Pilot Station
Marshall
Paimiut
Scammon Bay
Russian Mission
Chuathl
Kalskag
Aniak
Lower Kalskag
Hooper Bay
Chevak
Kashunuk River
Cape
Romanzof
Remainder
Johnson River
Tuluksak
Newtok
Nunapitchuk
Akiachak
Akiak
Atmautluak
Kasigluk
Bethel
Kwethluk
Oscarville
Napaskiak
Napakiak
Tununak
Toksook Bay
Nightmute
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Twin Hills
Togiak
Platinum
Legend
Hunt Area Boundary
Closed Areas
Unit 18 boundary
BLM Lands
FWS Lands
0 10 20
Miles
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June 8, 2011

Proposed Federal Regulation

Unit 18—Caribou and Moose

§__.26 (n)(18) (iii)(C) You may take caribou from a boat moving under power in Unit 18;

§__.26 (n)(18) (iii)(D) You may take moose from a boat moving under power in ~~that portion~~ ***the following portions*** *of Unit 18:*

(1) *North and west of a line from the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village;*

(2) And in the remainder area of Unit 18*.*

* NOTE: The remainder area of Unit 18 (see **Map 1**) is described as that portion of Unit 18:

a) west 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°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line 1/2 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 west to the Unit 18 border; and

b) south and east of the north bank of the Kashanuk River from the mouth of the river upstream to the old village of Chakaktolik, east of a line from Chakaktolik to Mountain Village and including all Yukon River drainages upriver from Mountain Village.

Other Relevant Federal Regulations

Subsistence taking of wildlife

§__.26(b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;

(15) Taking swimming ungulates, bears, wolves, or wolverine.

Unit 23—Caribou

§__.26(n)(23)(iii)(A) You may take a caribou from a boat moving under power in Unit 23;

Unit 25—Caribou and Moose

§__.26(n)(25)(iii)(B) You may take caribou and moose from a boat moving under power in Unit 25.

Unit 26—Caribou

§__.26(n)(26)(iii)(A) You may take caribou from a boat moving under power in Unit 26.

Existing State Regulation

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, EXCEPT that a

(A) motor-driven boat may be used as follows:

(i) in Units 23 and 26 to take caribou;
(ii) notwithstanding any other provision in this section, in Unit 22 to position hunters to select individual wolves for harvest;
(iii) under the authority of a permit issued by the department.

Extent of Federal Public Land

Federal public lands comprise approximately 65% of the remainder area of Unit 18, approximately 90% of which is managed by the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service lands are located within the Yukon Delta National Wildlife Refuge. The other 10% of Federal public lands is managed by the Bureau of Land Management.

Customary and Traditional Use Determination

The customary and traditional use determinations for moose in Unit 18 include all residents of Unit 18 and Upper Kalskag. Additionally, residents of St. Michael, Stebbins, Aniak, and Chuathbaluk can hunt in portions of the remainder area of Unit 18 under Federal moose regulations.

Regulatory History

In 1991, the regulation for Unit 23 allowing the harvest of caribou from a boat under power, described above, was adopted at the inception of the Federal Subsistence Management Program from State regulations (72 FR 29314; June 26, 1991). In 1994, the Board adopted Proposal WP94-82 thereby allowing the harvest of caribou from a boat under power in Unit 26 (59 FR 29035; June 3, 1994). In 1995, the Board adopted Proposal WP95-52 allowing the harvest of caribou and moose from a boat under power in Unit 25 "to accommodate local customary and traditional use patterns" (60 FR 31545; June 15, 1995), as recommended by the Eastern Interior and Southcentral Subsistence Regional Advisory Councils (FSB 1995: 444–447). The Eastern Interior Council's recommendation stated that the proposal "supports subsistence needs and reflects current practices" (FWS 1995:343). In 2000, the Board adopted Proposal WP00-41 allowing the harvest of caribou from a boat under power in Unit 18 (65 FR 40760; June 30, 2000).

In 2010, the Board adopted Proposal WP10-59 with modification to allow the harvest of moose, in addition to caribou, from a boat under power in a portion of Unit 18 (the Yukon River drainage below

Mountain Village) (75 FR 37921; June 30, 2010). According to the proposal analysis, the modification removed the words "under low or idle power" from the proposal to eliminate potential confusion on the part of hunters and law enforcement concerning what exactly "under low or idle power" meant. Additionally, the proposal analysis noted that regulations existing at the time that also concerned hunting from a boat under power (in Units 18, 23, 25, and 26, mentioned above), did not contain the words "under low or idle power" either (FWS 2010: 630). The modification to the proposal would therefore make the language in the regulation consistent with existing regulations.

Based on its written recommendation to the Board, the Council also supported the modified proposal and stated:

> There have been no reported accidents caused by hunting from moving boats. Resources in the area can sustain the additional harvest of moose . . . . Some people do this as a practical activity while hunting. Keeping the boat under power while hunting in the area is important for safety (to avoid sweepers, rocks, etc.) (FWS 2010: 631).

Board members commented on the modified proposal by saying that: 1) the moose population in the area was healthy; 2) the proposed hunting method was already in use by Federal subsistence users; and 3) the proposed method was allowed in other management units for caribou and moose and resulted in hunters being more successful and safer. The distinction between State and Federally-managed lands was considered one that Federal subsistence users were already making in order to hunt under Federal wildlife regulations, which differed from State wildlife regulations in the area (FSB 2011: 253, 261). Additional testimony from Council chairs during Board deliberations noted that privately-owned, State-managed lands in the area were primarily village corporation lands, owned by local residents who were aware of the boundaries (FSB 2011:260).

Current Events Involving Species

At the September 2011 Yukon Kuskokwim Delta Regional Advisory Council meeting, a Council member said that, in general, hunters that traveled at high rates of speed in motorized boats did not shoot at wildlife, and therefore limiting the speed of the boat likely would not affect subsistence hunters. Another Council member said that he had shot wildlife from a moving boat in the past and in the future wished to do so legally (YKDRAC 2011:188).

Alaska Board of Game Proposal 12 would allow a moose to be taken from a boat moving under power in the lower Yukon River drainage area of Unit 18 (an area defined above at §__.26 (n)(18) (iii)(D)). The Board of Game opposed Proposal 12 at its meeting in Barrow November 11–14, 2011. The justification to oppose the proposal included concerns about wounding loss and hunter safety (Ardizzone 2011, pers. comm.).

Effects of the Proposal

If this proposal is adopted, a Federal subsistence user in a boat under power could take moose from Federal public lands in the remainder portion of Unit 18, and this common practice would be legal. There would be little effect on Federal subsistence users because the proposed regulation change would legalize what is a common practice. The harvest of a swimming moose would remain prohibited by §__.26(b)(15). Adoption of this proposal would result in differences between the State and Federal regulations in the remainder area of Unit 18. No effects on wildlife populations are anticipated, and no effects on other users are anticipated.

If this proposal is not adopted, law enforcement could cite Federal subsistence users for taking a moose from a boat under power from Federal public lands in the remainder area of Unit 18.

OSM CONCLUSION

Support Proposal WP12-50 **with modification** to clarify the description of the portion of Unit 18 in which **y**ou may take moose from a boat moving under power. The modification combines the descriptions of the lower Yukon River drainage area and the remainder area of Unit 18 defined in **Map 1**.

The modified regulation should read:

> **Unit 18—Caribou and Moose**
>
> *§__.26 (n)(18) (iii)(C) You may take caribou from a boat moving under power in Unit 18;*
>
> *§__.26 (n)(18) (iii)(D) You may take moose from a boat moving under power in that portion of Unit 18 ~~north and west of a line from the Kashunuk River including the north bank from the mouth of the river upstream to the old village of Chakaktolik, west of line from Chakaktolik to Mountain Village and excluding all Yukon River drainages upriver from Mountain Village;~~* ***west 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°59.41' Latitude; W 162°22.14' Longitude), continuing upriver along a line 1/2 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 west to the Unit 18 border.***

Justification

Adoption of this proposal would allow the current practice of Federal subsistence users in the remainder area to harvest moose from a motor-driven boat that is moving under power. Additionally, the practice is not anticipated to affect the moose population in the remainder area of Unit 18. Finally, the proposal uses regulatory language consistent with current regulations allowing this practice in Unit 18 and other management units.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-50. This is a historic standard practice. No accidents have been reported using this practice while hunting. People are trying to efficiently put food on the table. People wish to abide by the law while hunting.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposal WP12-50**.** Defer to home region.

INTERAGENCY STAFF COMMITTEE COMMENT

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 Board may want to consider adding to the Yukon-Kuskokwim Regional Advisory Council's recommendation to clarify that the boat under power "not be on step" for safety reasons.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-50: This proposal modifies federal subsistence methods and means of taking game to allow moose to be taken while under power in a boat being operated within a specified portion of Unit 18.

Introduction: This proposal was submitted to expand the recent Federal Subsistence Board's decision (WP10-59) authorizing the take of moose and caribou while under power in a boat by federally qualified subsistence users. Proposal WP10-59 liberalized legal methods and means for federal qualified subsistence users targeting moose and caribou in the Yukon River drainage below Mountain Village. Proposal 12-50 was submitted to expand the liberalization to the remaining moose hunting areas of Unit 18.

Current federal subsistence methods of take in Unit 18 outside of the Yukon River drainage below Mountain Village prohibit taking a moose while under power in a boat or while moose are swimming. Traditional methods of harvesting moose in all of Unit 18 have not included taking of moose and caribou while under power in a boat or pursuit and take of swimming game.

Impacts on Subsistence Users: Adoption of this proposal may increase federally qualified subsistence user success rates. Additionally, adoption of WP12-50 is not required to ensure continuation of subsistence uses by federally qualified subsistence users on federal public lands within the identified portion of Unit 18.

Opportunity Provided by State: State regulations prohibit the take of game from boats under power in 5 AAC 92.080 (4), as follows:

> **92.080. Unlawful method of taking game; exceptions.** The following methods of taking game are prohibited: … (4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased, except that a

State regulations prohibit the taking big game while swimming in 5 AAC 92.085 (7), as follows:

> **92.085. Unlawful method of taking big game; exceptions.** The following methods and means of taking big game are prohibited in addition to the prohibitions in 5 AAC 92.080:
>
> …(7) while a big game animal is swimming, except that a swimming caribou may be taken in Unit 23;

Conservation Issues: Moose population in portions of Unit 18 has increased dramatically in recent years. The State supports increased harvests of moose in the Lower Yukon Area because of concerns that the moose population densities are close to levels that will adversely affect habitat. In the remainder of Unit 18, the moose populations are more stable and additional harvest is not needed like it is in the Lower Yukon Area.

Enforcement Issues: Changing the federal subsistence method of take to include boats under power would contribute to enforcement issues related to take of big game while swimming and take of other game (e.g., waterfowl hunting). Adopting methods of take regulations that are divergent from the state hunting regulations will increase user confusion and increase enforcement problems across a vast area encompassing two dozen communities with mixed land ownership patterns.

Federal subsistence hunting regulations only apply on federal public lands; federal subsistence hunting regulations do not apply on nonfederal lands and waters (unlike federal subsistence fishing regulations). The boat accessible waters of Unit 18 cover thousands of square miles and encompass multiple moose populations of varying status. Much of the Kuskokwim River and most shorelines surrounding communities are not federal public lands and are not subject to federal subsistence wildlife regulations.

Other Comments: The Yukon Kuskokwim Delta Regional Advisory Council recommended modifying the proposal to allow hunting from a boat under power in all of Unit 18. The department opposes this modification. The Alaska Board of Game rejected parallel proposal 12 at the November 2011 meeting due to safety concerns and increased potential for wounding loss.

Recommendation: Oppose.

WP12-51 Executive Summary	
General Description	Proposal WP12-51 requests an extension of the season and an increased harvest limit for ptarmigan in Unit 18. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**Unit 18 — Ptarmigan** ~~*20 ptarmigan per day, 40 in possession*~~ ~~*Aug. 10 – May 30*~~ *No limit* ***Aug. 10 – Jun. 15***
OSM Conclusion	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal. The Board may want to consider supporting the proposal with modification to align the harvest limit regulations for ptarmigan in Unit 18 with the recent changes made by the Alaska Board of Game while leaving the harvest season dates the same. If the Board were to support this proposal with modification, which would be contrary to the Council's recommendation, it could do so based on the 3rd exception clause of section 805c of ANILCA (that the Council recommendation would "be detrimental to the satisfaction of subsistence needs").
ADF&G Comments	**Support** Proposal WP12-51 **with modification**. The department supports modifying this proposal to reflect the recent Alaska Board of Game decisions to advance the Unit 18 ptarmigan hunting season closing date to May 15 and to liberalize the bag and possession limits to 50 and 100 respectively.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-51

ISSUES

Proposal WP12-51, submitted by the Yukon Delta National Wildlife Refuge, requests an extension of the season and an increased harvest limit for ptarmigan in Unit 18.

DISCUSSION

The proponent states that ptarmigan migrate westward from interior portions of the Yukon-Kuskokwim Delta (Y-K Delta) as spring progresses, but the current season closes as ptarmigan arrive in coastal areas, thereby precluding Federally qualified subsistence users from harvesting ptarmigan. The proponent also states the daily harvest and possession limits restrict the total number of ptarmigan Federally qualified subsistence users can harvest.

Existing Federal Regulation

Unit 18 — Ptarmigan

20 ptarmigan per day, 40 in possession	*Aug. 10 – May 30*

Proposed Federal Regulation

Unit 18 — Ptarmigan

~~*20 ptarmigan per day, 40 in possession*~~	~~*Aug. 10 – May 30*~~
No limit	***Aug. 10 – Jun. 15***

Existing State Regulation

Unit 18 — Ptarmigan

20 per day, 40 in possession	*Aug. 10 – Apr. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% FWS and 2% BLM managed lands (**Unit Map 18**).

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for ptarmigan in Unit 18.

Regulatory History

In 1990, the Federal Subsistence Board (Board) adopted temporary subsistence regulations for ptarmigan that aligned with State regulations. The Federal regulations set the harvest limit for 20 ptarmigan per day with 40 ptarmigan in possession and a season from Aug. 10–Apr. 30.

WP93-47, submitted by the Paimiut Corporation, requested the ptarmigan season in Unit 18 be extended from Aug. 10–Apr. 30 to Aug. 10–May 30 to allow Federally qualified subsistence users more harvest opportunity in the spring. The Federal Subsistence Board adopted the proposal and the season extension went into effect on July 1, 1993.

Current Events Involving Species

A similar proposal was adopted with modification at the November 2011 Board of Game meeting. State Proposal 20 requested a harvest limit increase from 20 ptarmigan daily/40 in possession to 50 ptarmigan daily/100 in possession and a season extension from Aug. 10–Apr. 30 to Aug. 10–Jun. 15. The modified proposal included the 50 ptarmigan daily/100 in possession limit, but reduced the season extension to May 15 due to concerns about harvesting during the breeding season.

Biological Background

Population data are lacking for ptarmigan in Unit 18, but they are reportedly seasonally abundant throughout the unit in the fall and late spring (Perry 2011, pers. comm.). Ptarmigan abundance may fluctuate along with snowshoe hare populations, as predators use alternative food sources when hare abundance is low (Hannon et al. 1998).

Willow (*Lagopus lagopus*) and rock (*L. muta*) ptarmigan are found in Unit 18. Both species are grouped as "ptarmigan" under State and Federal regulations. Willow ptarmigan are considered locally migratory and typically move short distances from breeding to wintering areas (Hannon et al. 1998). Wintering areas include interior portions of Unit 18 where more willows occur (Sundown 2011, pers. comm.). Rock ptarmigan may remain within breeding areas or migrate (Montgomerie and Holder 2008). Both species may form large flocks during winter and migration periods (Hannon et al. 1998, Montgomerie and Holder 2008).

Ptarmigan begin arriving in coastal areas of the Y-K Delta around the third week of April or beginning of May, after wintering in more interior portions of Unit 18 (Sundown 2011, pers. comm.). Males of both species return to breeding areas approximately two weeks earlier than females (Hannon et al. 1998, Montgomerie and Holder 2008). Territories are established prior to the arrival of females.

Pairs are formed on the breeding grounds shortly after females arrive at breeding areas (late May–early June) (Montgomerie and Holder 2008, references therein). Both species of ptarmigan are monogamous, but male willow ptarmigan remain paired with females throughout the breeding season (Hannon et al. 1998). Nest initiation ranged from 27 May to 12 June in Canada for willow ptarmigan (Hannon et al. 1998). Ptarmigan have adapted to high nest predation and will often renest if clutches are lost; however, clutch sizes decrease in subsequent attempts (Hannon et al. 1998, Cotter 1999, Montgomerie and Holder 2008). The timing of nest predation may be important as female rock ptarmigan were much less likely to renest if clutches are lost during incubation rather than laying (Cotter 1999). Only one brood is raised each year by ptarmigan (Hannon et al. 1998; Montgomerie and Holder 2008).

Harvest History

The number of ptarmigan harvested in Unit 18 each year is variable, but the majority of the harvest takes place in the spring. Harvest estimates, based on household surveys between 1986 and 2001, averaged 15,901 (range 8,923 to 30,685) ptarmigan in Unit 18, and 90% of the harvest took place between April 8 and May 20 (Wentworth 2007) (**Table 1**). More recent surveys from 2002 to 2009 (excluding 2003 when no surveys were conducted) were similar with an average estimated harvest of 15,976 (range 4,667 to

Table 1. Estimated seasonal ptarmigan harvest by Federally qualified subsistence users on the Yukon-Kuskokwim Delta, Alaska, 1986 – 2001 (Wentworth 2007). Harvest estimates were based on household surveys among a random sample of villages. Seasons were classified as: spring (April 8–May 20), early summer (May 21–June 24), mid-summer (June 25–July 29), late summer (July 30–August 31), and fall (September 1–October 15).

	Harvest season					
Year	Spring	Early summer	Mid-summer	Late summer	Fall	Total
1986	6,771	1,579	174	60	339	8,923
1987	12,553	1,016	8	505	1,011	15,093
1988	-	-	-	-	-	-
1989	11,785	617	12	5	952	13,371
1990	11,222	98	11	350	898	12,579
1991	27,748	1,355	428	490	664	30,685
1992	14,929	359	37	85	238	15,648
1993	18,748	639	12	27	130	19,556
1994	8,176	685	4	92	501	9,458
1995	15,416	535	56	57	31	16,095
1996	13,198	1,310	0	150	136	14,794
1997	11,873	607	3	119	419	13,021
1998	14,840	601	27	142	635	16,245
1999	18,938	1,842	0	440	282	21,502
2000	14,335	490	0	6	124	14,955
2001[a]	16,165	212	84	36	97	16,594

[a] The household sampling method was changed in 2001 from a random sample to a activity stratification sample (Wentworth 2007).

22,946) ptarmigan (Wentworth 2007; Naves 2009, 2010, 2011) (**Table 2**). From 2002 to 2009, 91% of the annual harvest took place between April 1 and June 30 (**Table 2**). Note the season definitions are different between **Tables 1 and 2**.

The ptarmigan harvest was not equal among regions of Unit 18 from 2004 to 2009 (**Table 3**). On average, most of the annual ptarmigan harvest took place in the mid-coast and lower Kuskokwim areas (Naves 2009, 2010, 2011). Yearly harvest estimates were variable within regions, especially for the mid coast area where harvest estimates ranged from 1,099 to 10,754 ptarmigan during the spring harvest season. Portions

Table 2. Estimated seasonal ptarmigan harvest, with 95% confidence intervals, by Federally qualified subsistence users on the Yukon-Kuskokwim Delta, Alaska, 2002–2009 (Wentworth 2007; Naves 2009, 2010, 2011). Harvest estimates were based on household surveys among a random sample of villages. Seasons were classified as spring (April 1–June 30), summer (July 1–August 31), and fall (September 1–October 31).

Year	Harvest season			Total (95% CI)
	Spring (95% CI)	Summer (95% CI)	Fall (95% CI)	
2002	18,756[a]	159[a]	108[a]	19,023 (13,500–24,546)
2003[b]	-	-	-	-
2004	9,750 (8,385–11,115)	46 (0–109)	2,111 (1,351–2,871)	11,907 (10,389–13,424)
2005	16,162 (11,152–21,172)	110 (0–255)	611 (244–978)	16,883 (13,506–20,260)
2006	17,780 (15,113–20,447)	1,538 (600–2,476)	1,115 (401–1,829)	20,433 (18,005–22,861)
2007	5,291 (4,127–6,455)	104 (30–178)	-[c]	-[c]
2008	4,355 (2,700–6,010)	120 (0–292)	192 (15–369)	4,667 (3,006–6,327)
2009	20,033 (17,429–22,637)	1,474 (811–2,137)	1,440 (648–2,232)	22,946 (20,329–25,564)

[a] Confidence intervals not available.
[b] No surveys conducted in 2003.
[c] No fall surveys were conducted.

of the south coast and areas near Bethel were associated with relatively moderate mean harvest levels, although an estimated 6,010 ptarmigan were harvested near Bethel in 2005 (all during the spring season). Relatively, few ptarmigan were harvested in the north coast, lower Yukon, and central Kuskokwim areas (**Table 3**). Ptarmigan were primarily harvested during the spring season in most regions, but some relatively large harvests occurred during summer (1,482 ptarmigan harvested in the lower Kuskokwim area in 2006) and fall (1,782 ptarmigan harvested in the south coast in 2005; 1,356 ptarmigan harvested in the mid coast in 2009).

Current harvest estimates for ptarmigan in Unit 18 have a limited utility for assessing impacts of management decisions such as effects of season lengths or harvest limits. Harvest estimates from the Alaska Migratory Bird Subsistence Harvest Estimates household survey may have high levels of variation because of (1) annual changes in ptarmigan abundance, (2) hunter access (e.g., snow conditions), (3) annual variation in hunting effort due to the availability of other resources (e.g., salmon, caribou), (4) inappropriate sampling coverage, and (5) heterogeneity of harvest patterns within villages (Naves 2009). Snow cover that lasts later in the spring is more conducive for users to travel and more ptarmigan are likely harvested under these conditions (Perry 2011, pers. comm.). Ptarmigan are often harvested

Table 3. The range of ptarmigan harvest estimates among regions of the Unit 18 between 2004 and 2009. Harvest information was collected during household surveys for the Alaska Migratory Bird Subsistence Harvest Estimates surveys (Naves 2009, 2010, 2011). Harvest seasons were classified as spring (April 1–June 30), summer (July 1–August 31), and fall (September 1–October 31).

	Harvest season		
Region	**Spring**	**Summer**	**Fall**
South coast	132–2,625	0–514	0–1,782
Mid coast	1,099–10,754	0–41	0–1,356
North coast	0–610	0–16	0–107
Lower Yukon	0–519	0–41	0–173
Lower Kuskokwim	997–5,852	0–1,482	0–336
Central Kuskokwim[a]	0–0	0–0	0–0
Bethel[b]	0–6,010	0–0	0–0

[a] Central Kuskokwim region was not surveyed in 2005, 2008–2009.
[b] Bethel was not surveyed during the fall season in 2007.

opportunistically as they are encountered in Unit 18 (Sundown 2011, pers. comm.), so higher harvest levels may be associated with higher ptarmigan abundance or due to travel conditions. In addition, the harvest seasons defined in the survey were designed for migratory birds and do not align with the current Federal ptarmigan season in Unit 18 (Aug. 10 – May 30).

During house to house harvest surveys conducted in ten Unit 18 communities in the 1980s and 1990s, at least 48% of households in each community reported harvesting ptarmigan during a 12-month study period (ADF&G 2011) (**Table 4**). The range was a low of 48% in Kwethluk in 1986 to a high of 93% in

Table 4. Summary of household participation in harvest surveys, Unit 18 communities (ADF&G 2011).

Community	Study Year	Type of Sample	Total Identified Households	Surveyed Households	Percentage of Total	Estimated Human Population
Akiachak	1998	Census	118	81	69%	523
Alakanuk	1980	Nonrandom[a]	90	21	23%	596
Emmonak	1980	Nonrandom[a]	100	18	18%	450
Kotlik	1980	Nonrandom[a]	56	14	25%	376
Kwethluk	1986	Random	112	36	32%	514
Mountain Village	1980	Nonrandom[a]	96	16	17%	516
Nunam Iqua	1980	Nonrandom[a]	23	7	30%	138
Nunapitchuk	1983	Random	70	17	24%	457
Quinhagak	1982	Random	98	12	12%	474
Tununak	1986	Random	64	33	52%	328

[a] Households were selected to represent the range of ages and incomes in the community.

Kotlik in 1980. Estimated harvests ranged from a high of 5,450 ptarmigan in Akiachak in 1998 to a low of 578 ptarmigan in Nunam Iqua (formally Sheldon's Point) in 1980 (**Table 5**).

The villages in Unit 18 are situated in various environments affecting the ptarmigan season of harvest and harvesting methods. For example, coastal areas such as the area between Kwigillingok and Hooper Bay have sparse willow patches and ptarmigan migrate inland in winter to take advantage of more abundant food in large clusters of willow trees. Inland and along rivers, ptarmigan may be abundant during winter months. Coastal areas experience an influx of flocks of ptarmigan in spring as ptarmigan migrate to the coast to forage in newly-exposed tundra (Stickney 1983:137, 257).

Subsistence users distinguish between the two species of ptarmigan found in the area: willow ptarmigan *aqesgiq* (Yukon delta), *qangqiiq* (coastal and lower Kuskokwim areas), and rock ptarmigan *ellciayuli* (Andrews 1989:495, Andrews and Peterson 1983:22, Pete 1986:113). Residents of inland communities, such as Russian Mission, Kwethluk, Akiachak, and Tuluksak, harvest both subspecies throughout winter (Andrews and Peterson 1983, Coffing 1991, Coffing et al. 1998, Pete 1986). For residents of coastal communities, such as Kwigillingok, Hooper Bay, Nunam Iqua, Scammon Bay, and Alakanuk, willow ptarmigan are scarce near the villages for most of the winter (Stickney 1983, Fienup-Riodan 1986). Then in late winter or spring, willow ptarmigan flock up and large numbers return to coastal areas to forage in newly-exposed tundra. The timing of return is variable depending on snow cover and weather and is expected any time in late winter or spring.

Before 1930, .22-caliber rifles were not in common use in the Yukon Kuskokwim delta area. Residents herded molting, flightless migratory waterfowl and took them with specially-designed, pronged spears. Upland birds, such as ptarmigan, were harvested with snares, bow and arrow, and spears. Snares were set by older women and boys and girls. For the majority of villages, ptarmigan figured prominently in the spring as food stores were running low and animals such as ptarmigan and hares became available in large numbers. Of the smaller wildlife, ptarmigan were most likely to be dried. Ptarmigan were eaten fresh in soups or dried for later consumption. The birds were skinned and the breasts and wings removed and hung outside on horizontal poles where the meat dried. Once dried, the meat was eaten without further preparation and was a favorite food at summer fish camps.

Once seasonally nomadic, by about 1950 most people were living in permanent communities while visiting seasonal camps. Shotguns and .22-caliber rifles had become more common and the majority of ptarmigan were now harvested with these methods. Some people continue to snare ptarmigan. In the 1980s, based on research mentioned above, ptarmigan were sometimes preserved in freezers, but many continued to dry ptarmigan for later consumption.

Other Alternatives Considered

Two alternatives to the proposed regulatory changes were considered: (1) increase the harvest limit and (2) extend the season while retaining the current harvest limit. Both of the alternatives would provide Federally qualified subsistence users more harvest opportunity.

Increased harvest limit

The first alternative is to increase the harvest limit, but retain a daily and possession limit for ptarmigan in Unit 18. Federally qualified subsistence users are said to harvest ptarmigan opportunistically (Sundown 2011, pers. comm.), and the increase harvest limit would allow them to harvest more ptarmigan when groups of birds are encountered. Harvest limits of 30 ptarmigan daily/60 in possession, 40 ptarmigan daily/80 in possession, or 50 ptarmigan daily/100 in possession were considered.

Table 5. The use and harvest of ptarmigan based on household surveys, Unit 18 communities (ADF&G 2011).

		Percentage of Households					Ptarmigan Harvest				
Community	**Study Year**	**Using Ptarm (%)**	**Hunting Ptarm (%)**	**Harvesting Ptarm (%)**	**Giving Ptarm (%)**	**Receiving Ptarm (%)**	**Reported (Number)**	**Expanded to House-holds Not Surveyed (Number)**	**Lower Estimate (Number)**	**Higher Estimate (Number)**	**95% Confidence Interval (+/- %)**
Akiachak	1998	93	84	84	54	35	3741	5450	4825	6074	11
Alakanuk	1980			81			1078	4620			
Emmonak	1980			56			194	1078			
Kotlik	1980			93			384	1536			
Kwethluk	1986		55	48	35	25		3712			
Mountain Village	1980			81			451	2706			
Nunam Iqua	1980			86			176	578			
Nunapitchuk	1983			88			770	3171	1827	4515	42
Quinhagak	1982			58			226	1846	568	3124	69
Tununak	1986	97	82	82	30	33	994	1928	1434	2422	25

The majority of units have a Federal harvest limit of 20 ptarmigan per day, 40 ptarmigan in possession, but there are some exceptions. Units 22A and 22B have a Federal harvest limit of 40 ptarmigan per day, 80 in possession. Other units have more restrictive limits, including Units 14C (10 per day/ 20 in possession) and 15C (5 per day/10 in possession between Jan. 1 – Mar. 31). Under State regulations, all units are at or below a harvest limit of 20 ptarmigan per day/40 in possession, except for Units 23 and 26 (excluding portions of Unit 26B) which have harvest limits of 50 ptarmigan per day/100 in possession. However, estimated harvest levels in Unit 18 (**Tables 1 and 2**) are much higher than units with more liberal harvest limits. Annual harvest estimates were between 123 and 3,671 ptarmigan in Units 22A, 22B, 23, and 26 (**Table 6**).

Table 6. Estimated season ptarmigan harvest, with 95% confidence intervals, by Federally qualified subsistence users in Units 22, 23, and 26, 2004–2009. Harvest estimates were based on household surveys among a random sample of villages. Seasons were classified as spring (April 1–June 30), summer (July 1–August 31), and fall (September 1–October 31).

		Harvest season			
Unit	**Year**	**Spring (95% CI)**	**Summer (95% CI)**	**Fall (95% CI)**	**Total (95% CI)**
22[a]	2004	1,274 (752–1,796)	323 (162–485)	1,500 (720–2,280)	3,097 (2,112–4,083)
	2005	2,616 (1,360–3,872)	7 (0–18)	1,048 (555–1,541)	3,671 (2,293–5,048)
	2007	434 (217–651)	10 (0–25)	340 (184–496)	784 (517–1,050)
23[b]	2006	114 (39–189)	0 (0–0)	9 (0–22)	123 (51–194)
26[c]	2005	750 (518–983)	10 (3–17)	-	760 (524–996)
	2007	2,597 (1,818–3,376)	235 (0–486)	-	2,832 (1,968–3,697)
	2008	1,323 (807–1,839)	233 (61–405)	-	1,556 (1,006–2,106)
	2009	1,267 (849–1,685)	0 (0–0)	-	1,267 (847–1,687)

[a] Surveys included all three subregions of Unit 22(St. Lawrence-Diomede Island, Bering Strait Mainland Villages, and Nome).
[b] Surveys included the Northwest Arctic Villages subregion, but did not include the Kotzebue subregion.
[c] Surveys included both subregions of Unit 26 (North Slope Villages and Barrow).

Season extension

Extending the Federal ptarmigan season to June 15 would provide an additional 16 days of harvest opportunity for Federally qualified subsistence users. Outside of Unit 18, no other Federal ptarmigan regulations extend past May 15. State ptarmigan seasons do not extend beyond May 15 except for Units 23 and 26 (excluding Unit 26B), which extend to June 15. However, Units 23 and 26 have much lower

harvest than Unit 18 (**Tables 1, 2, and 6**). The season extension would coincide with the breeding season of ptarmigan which could have impacts on the population (see Effects of the Proposal).

Effects of the Proposal

If the proposal were adopted, the ptarmigan season in Unit 18 would be extended from Aug. 10–May 30 to Aug. 10–Jun. 15, which would provide Federally qualified subsistence users more harvest opportunity after ptarmigan have migrated back to breeding areas, especially those living in coastal areas of Unit 18. Ptarmigan begin arriving in coastal areas of the Y-K Delta around the third week of April or beginning of May (Sundown 2011, pers. comm.). However, the proposed regulatory changes would affect all areas of Unit 18, not just coastal areas.

The proposed Federal ptarmigan season extension would overlap with the breeding period, which could impact the ptarmigan population in Unit 18. Federally qualified subsistence users may experience greater harvest efficiencies due to the behavior of breeding ptarmigan. Male ptarmigan hold and defend territories while on the breeding grounds and are often very tolerant of humans during this period (Hannon et al. 1998). In addition, female ptarmigan may be directly or indirectly affected by harvest pressure during the breeding season. Females may be harvested during this period; however, female ptarmigan have a highly cryptic plumage and would be less conspicuous than males. Females may be disturbed by users and the nests of flushed females may be at a higher risk of nest predations (Weeden 1965). Nests may be abandoned if females are disturbed during the laying period (Hannon et al. 1998), but females may renest. However, females may not renest if clutches are lost during incubation (Cotter 1999).

The proposed harvest limit change would allow Federally qualified subsistence users to harvest an unlimited number of ptarmigan, rather than the current 20 daily and 40 in possession limits, throughout the Federal season. The ptarmigan population may be more susceptible to increased harvest levels during certain periods of the season. Harvest is more likely to be additive during or after periods of higher natural mortality. Sandercock et al. (2011) found higher natural mortality rates during fall (juvenile dispersal and male territoriality) and spring (increased predation from the onset of gyrfalcon breeding period). Increased harvest may occur when groups of ptarmigan are encountered, including during fall or spring movements, or as males establish and defend territories during the spring. The timing of harvest has been shown to have significant effects on populations. For example, Kokko and Lindstrom (1998) found populations could sustain much higher harvest rates during fall compared to spring.

It is difficult to predict how an unlimited harvest would affect the population dynamics of ptarmigan in Unit 18. Studies have shown variable responses to harvest across the ptarmigan's distribution. Ptarmigan have high reproductive potential and dispersal abilities (Hammond et al. 1998, Montgomerie and Holder 2008) and have been shown to sustain high harvest levels in some regions. High proportional harvests were thought to be sustainable in Sweden (50%; Aanes et al. 2002) and Alaska (40%, McGowan 1975). However, McGowan (1975) did not account for changes in the abundance of females, which may be a larger limiting factor for reproductive output. For example, in the Northwest Territories all resident female rock ptarmigan were paired, but there were excess numbers of males (Cotter 1999). Sandercock et al. (2011) found willow ptarmigan in Norway to be partially compensatory to harvest of less than 15% of the fall abundance, additive with harvest levels above 20%, and also found evidence of superadditive mortality with a 30% harvest level. Superadditive (or depensatory) mortality occurs when harvest rates can cause additional natural mortality (e.g., higher natural mortality with 30% harvest rate compared to 15% harvest rate) (Kokko 2001, Sandercock et al. 2011). The cyclic nature of some ptarmigan populations add complexity to harvest management, as effects can differ during cyclic highs and lows in abundance.

OSM CONCLUSION

Oppose Proposal WP12-51.

Justification

There is currently not enough information on the ptarmigan population in Unit 18 to support an unlimited harvest. In order to make an informed management decision regarding a sustainable harvest, managers should have some knowledge on whether harvest would be additive or compensatory (Pedersen et al. 2003, Sandercock et al. 2011). The ptarmigan population in Unit 18 may well be able to sustain a higher harvest level, especially as portions of the unit likely receive little harvest pressure and may be sources of immigration to harvested areas. However, it should not be assumed that the harvest would be compensated for and local populations would not be adversely affected. Total compensatory mortality is probably rare and the timing of harvest can be important (Kokko and Lindstrom 1998). Most of the ptarmigan harvest in Unit 18 takes place in the spring, which can have a much higher impact than fall harvest, regardless of additive or compensatory mortality (Kokko and Lindstrom 1998).

The proposed Federal ptarmigan season (Aug. 10–Jun. 15) would extend into the breeding season, which could have adverse effects on the ptarmigan population in Unit 18. Male ptarmigan set up and defend territories during this period and may be vulnerable to high harvest levels because of high tolerance to disturbance. In addition, female nesting is initiated during this time period and nesting may be interrupted. Female ptarmigan have adapted to high nest predation rates by having high rates of renesting. However, rock ptarmigan were found to have low rates of renesting once they began incubating. Additive harvest is more likely to occur when it overlaps or proceeds periods of high natural mortality. Previous research has found peaks in natural mortality during periods when ptarmigan were defending territories and participating in courtship displays (Sandercock et al. 2011).

Currently, there are no means to monitor the effects of the proposed harvest limit increase. Household harvest surveys are conducted, but these serve only as a limited index to the relative abundance of ptarmigan, and the harvest estimates do not adequately account for variation in ptarmigan abundance and harvest effort.

The two alternatives considered were not supported based on the same justifications as the original proposed regulatory changes, but an increased harvest limit (Alternative 1) would be preferable to the season extension (Alternative 2). The ptarmigan population may be able to support an increased harvest limit; however, there are no means of monitoring the effects of the regulatory change in Unit 18. If an increase harvest limit were to be supported, a smaller, incremental change, such as 30 ptarmigan daily/60 in possession, would be preferable to larger increases (more than 40 ptarmigan daily/80 in possession) due to potential overharvest in some areas of the unit. The season extension would be less favorable due to impacts associated with harvesting during the breeding season.

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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-51. Elders advises hunters not to take ptarmigan during the breeding season. Local hunters target ptarmigan until waterfowl migrates to the area. People will quit hunting ptarmigan voluntarily when the time comes. This regulatory change won't make any difference in the lower and middle Kuskokwim. Ptarmigan numbers are available along the coast on a latter season; maybe as late as June 15. This proposal would provide an extended opportunity for subsistence users. Some subsistence users really need ptarmigan for food; currently, fewer people are hunting ptarmigan these days than they did historically.

INTERAGENCY STAFF COMMITTEE COMMENT

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 Board may want to consider supporting the proposal with modification to align the harvest limit regulations for ptarmigan in Unit 18 with the recent changes made by the Alaska Board of Game while leaving the harvest season dates the same. If the Board were to support this proposal with modification, which would be contrary to the Council's recommendation, it could do so based on the 3rd exception clause of section 805c of ANILCA (that the Council recommendation would "be detrimental to the satisfaction of subsistence needs").

ADF&G Comments on WP12-51
December 5, 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsisetnce Board

Wildlife Proposal WP12-51: This proposal requests liberalizing the federal subsistence Unit 18 Ptarmigan hunting season from August 10 through May 30 to August 10 through June 15 and requests eliminating daily bag and possession limits.

Introduction: The proponent requests the federal subsistence Ptarmigan hunting season be liberalized by adding the first two weeks of June onto the end of the existing season and eliminating the current bag and possession limit of 20 per day with 40 on possession. The proponent indicates the timing of Ptarmigan arriving on the coastal part of the Yukon Kuskoquim delta is about when the hunting season closes and migration timing might not allow for legal federal subsistence harvest in that area. The proponent also indicates "set harvest goals" would prevent federally qualified subsistence users from cumulatively overharvesting the resources if the federal subsistence bag limit is liberalized to "no limit."

Impact on Subsistence Users: If adopted, federally qualified subsistence users targeting Ptarmigan near the coast in Unit 18 may harvest additional birds during the first two weeks of June. If adopted, federally qualified subsistence users Ptarmigan harvest and possession would be unlimited.

Opportunity Provided by State: In Unit 18, the state ptarmigan hunting season is August 10 through May 30 with a daily bag limit of 20 ptarmigan per day with a possession limit of 40.

Conservation Issues: A change to unlimited federal subsistence harvest of Ptarmigan in Unit 18 may lead to conservation concerns due to the lack of federal inseason management tools.

By mid-May, male ptarmigan are defending their territories and they become very tolerant of human presence and therefore vulnerable to hunting. Female ptarmigan typically begin nesting in May and chick rearing occurs in June and July. Late winter and spring hunting has been demonstrated in other populations of ptarmigan to be of concern due to additive effects of mortality on the population. Currently in Unit 18, no methods or studies are being used to index ptarmigan abundance, seasonal distribution patterns, or harvests as they relate to the proposed extended season.

Other Comments: The proponent indicates this proposal will also be submitted to the Alaska Board of Game. The department has concerns with removing both bag and possession limits and recommends an incremental approach to liberalizing the federal subsistence hunt if information can be provided which proves eliminating harvest limits is necessary for continuance of subsistence uses. Additionally, the department is unaware of any management tools used to determine if federally qualified subsistence users have exceeded "set harvest goals." The department opposes liberalizing the season closure date to June 15 requested in both the Board of Game proposal 20 and WP12-51. At the November 2011 meeting, the Board of Game approved changing the Unit 18 ptarmigan hunting season ending date to May 15 and liberalized the bag and possession limits to 50 birds per day and 100 birds in possession.

ADF&G Comments on WP12-51
December 5, 2011, Page 1 of 1

Recommendation: Support with modification. The department supports modifying this proposal to reflect the recent Alaska Board of Game decisions to advance the Unit 18 ptarmigan hunting season closing date to May 15 and to liberalize the bag and possession limits to 50 and 100 respectively.

WP12-53 Executive Summary	
General Description	Proposal WP12-53 would prohibit a hunter in Unit 18 from pursuing with a motorized vehicle a caribou, moose, or muskox (an ungulate) that is fleeing. *Submitted by the Yukon Delta National Wildlife Refuge*
Proposed Regulation	**General Provisions** *§__.4 Definitions* *Take or taking as used with respect to fish or wildlife, means to pursue, hunt, shoot, trap, net, capture, collect, kill, harm, or attempt to engage in any such conduct.* **Subsistence taking of wildlife** *§__.26 (b) Except for special provisions found at paragraphs (n) (1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:* *(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;* *(5) Using a motorized vehicle to drive, herd, or molest wildlife.* **Unit 18 (Special Provisions)** *§__.26 (n)(18)(iii)**(F) Y**ou may not pursue with a motorized vehicle an ungulate that is fleeing.*
OSM Conclusion	**Oppose**
Bristol Bay Regional Council Recommendation	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support** Proposal WP12-53 **with modification** to add wording that in Unit 18, a hunter "may not pursue ungulates that are at or near full gallop." The modified proposal would read: **Unit 18 (Special Provisions)** *§__.26 (n)(18)(iii)**(F) Y**ou may not pursue with a motorized vehicle an ungulate that is at or near a full gallop.*
Western Interior Regional Council Recommendation	**No action taken.**

continued on next page

WP12-53 Executive Summary *(continued)*	
Seward Peninsula Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-53

ISSUES

Proposal WP12-53, submitted by the Yukon Delta National Wildlife Refuge, would prohibit a hunter in Unit 18 from pursuing with a motorized vehicle a caribou or moose (an ungulate) that is fleeing.

DISCUSSION

The proponent states that law enforcement has found it necessary to cite more than one hunter during the 2010/2011 hunting season for pursuing caribou that were moving at full gallop (having all four hooves off the ground in one stride) (Sundown 2011, pers. comm.; Doolittle 2011, pers. comm.). The proponent states that adoption of this proposal would protect the declining Mulchatna caribou herd by reducing wounding of animals pursued by hunters at high rates of speed, which is biologically hard on a caribou herd, especially when animals are already weak near the end of the hunting season. The proponent's concern is not the hunter who repeatedly moves forward and stops while caribou trot off. The concern is hunters moving at high rates of speed pursuing caribou. At the September 2011 meeting of the Yukon-Kuskokwim Delta Regional Advisory Council, the proponent added that when hunters "pursue" at high rates of speed caribou that are fleeing, they are engaged in "taking," and taking caribou by hunters on motorized vehicles is prohibited, as described below. Under Federal regulations, when do hunters *approaching* caribou turn into hunters *pursuing* caribou? It is not clear. The proponent wishes to define "pursuit" as hunters following caribou that are at or near full gallop.

It should be noted that while the proponent's requested, unit-specific language is not in the State of Alaska codified regulations, similar language is in the State's booklet distributed to the public *"2010/2011 Alaska Hunting Regulations"*:

> "*You may not take game by pursuing with a vehicle an animal that is fleeing*" (ADF&G 2010:18).

The language above is there to clarify State regulations, described below (Bowen 2011, pers. comm.).

The proposal concerns caribou and moose in Unit 18; however, the focus of the analysis is caribou. The proponent states that caribou are more susceptible than moose to the detrimental effects of pursuing at high rates of speed. While caribou often flee rapidly when pursued, moose generally trot away when approached by a motorized vehicle.

Existing Federal Regulation

General Provisions

§__.4 Definitions

Take or taking as used with respect to fish or wildlife, means to pursue, hunt, shoot, trap, net, capture, collect, kill, harm, or attempt to engage in any such conduct.

Subsistence taking of wildlife

§__.26 (b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

Proposed Federal Regulation

General Provisions

§__.4 Definitions

Take or taking as used with respect to fish or wildlife, means to pursue, hunt, shoot, trap, net, capture, collect, kill, harm, or attempt to engage in any such conduct.

Subsistence taking of wildlife

§__.26 (b) Except for special provisions found at paragraphs (n)(1) through (26) of this section, the following methods and means of taking wildlife for subsistence uses are prohibited:

(4) Taking wildlife from a motorized land or air vehicle when that vehicle is in motion, or from a motor-driven boat when the boat's progress from the motor's power has not ceased;

(5) Using a motorized vehicle to drive, herd, or molest wildlife.

Unit 18 (Special Provisions)

*§__.26 (n)(18)(iii)**(F)** Y**ou may not pursue with a motorized vehicle an ungulate that is fleeing.***

Existing State Regulation

Sec. 16.05.940. Definitions.

(34) "take" means taking, pursuing, hunting, fishing, trapping, or in any manner disturbing, capturing, or killing or attempting to take, pursue, hunt, fish, trap, or in any manner capture or kill fish or game.

5 AAC 92.080. Unlawful methods of taking game; exceptions

The following methods of taking game are prohibited:

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and the progress from the motor's power has ceased . . . .

(5) except as otherwise specified, with the use of a motorized vehicle to harass game or for the purpose of driving, herding, or molesting game.

5 AAC 92.990. Definitions

(a) In addition to the definitions in AS 16.05.940 , in 5 AAC 84 – 5 AAC 92, unless the context requires otherwise,

(70) "harass" means to repeatedly approach an animal in a manner which results in the animal altering its behavior;

Extent of Federal Public Land

Federal public lands comprise 64% of Unit 18, of which 96% is managed by the Fish and Wildlife Service and 4% is managed by the Bureau of Land Management. The Fish and Wildlife Service lands are located within the Yukon Delta National Wildlife Refuge.

Customary and Traditional Use Determination

The customary and traditional use determination for caribou in Unit 18 is residents of Unit 18, Saint Michael, Stebbins, Togiak, Twin Hills, Upper Kalskag, and Manokotak.

The customary and traditional use determination for moose in Unit 18 is: in that portion of the Yukon River drainage upstream of Russian Mission and that portion of the Kuskokwim River drainage upstream of (but excluding) the Tuluksak River drainage—residents of Unit 18, Upper Kalskag, Aniak, and Chuathbaluk; in 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—residents of Unit 18, Saint Michael, Stebbins, and Upper Kalskag; and in the remainder area of Unit 18—residents of Unit 18 and Upper Kalskag.

There is no Federal subsistence priority for muskox in Unit 18.

Biological Background

Woolington (2009) noted that in western Alaska in the 1800s:

> Skoog (1968) hypothesized that the caribou population extended from Bristol Bay to Norton Sound, including the lower Yukon and Kuskokwim drainages as far inland as the Innoko River and the Taylor Mountains. This herd apparently reached peak numbers in the 1860s and began decline in the 1870s. By the 1880s, the large migrations of caribou across the Lower Kuskokwim and Yukon Rivers had ceased (Woolington 2009: 11).

Perry (2009) continues:

> By the early 1900s, there were few caribou in the lowlands of the Delta. From the 1920s to the 1930s, reindeer herds ranged throughout much of the area but declined sharply in the 1940s (Calista Professional Services and Orutsararmuit Native Council 1984). Since the decline of the reindeer herds, the abundant caribou habitat throughout Unit 18 was only lightly used until 1994, when large numbers of Mulchatna caribou herd animals began regular, seasonal use of the Kilbuck Mountains. In the more recent years, a large portion of the Mulchatna herd has spent most of the year in Unit 18 and harvest in Unit 18 has become a larger proportion of the overall harvest (Perry 2009: 99–100).

> Caribou from the Western Arctic herd, the largest herd in Alaska, occasionally venture into the northern part of Unit 18. Until this reporting period [2006], hunting regulations north of the Yukon River were liberal to allow hunters to take advantage of these infrequent hunting opportunities. However, now Mulchatna Herd caribou are as likely as Western Arctic Herd caribou to use the area north of the Yukon River, caribou management throughout Unit 18 is based on Mulchatna caribou herd considerations (Perry 2009: 99–100).

The minimum population estimates for the Mulchatna caribou herd increased from 18,599 in 1981 to 200,000 in 1996 and declined to a minimum of 30,000 by summer 2008. Distribution of the herd is widespread in areas of Units 9B, 17, 18, 19A, and 19B (Woolington 2009)

Populations of moose are increasing in many areas of Unit 18, and in the lower Yukon River drainage subsistence hunters may legally harvest up to two moose per year.

Harvest

Door to door household harvest surveys have been conducted with residents of some communities situated in Unit 18. The results regarding the harvest of caribou are located in **Table 1**.

Method and Means

In Unit 18, while methods and means described in the literature include intense interactions with single caribou and herds (Nelson 1983 [1899], Oswalt 1990), until the 1960s hunters were largely on sled and foot (Andersen et al. 2011). It was not until the wide use of snowmachines and airplanes did ADF&G find it necessary to exclude motorized vehicles as a legal method of taking caribou. There are two likely causes of hunters pursuing caribou on snowmachines: (1) numerous, recently-arrived residents of Bethel lacking the specialized skills necessary to harvest a caribou using methods commonly practiced who resort to pursuing fleeing caribou instead (Sundown 2011, pers. comm.); and (2) some experienced hunters lacking the resources to travel long distances to harvest caribou. Their harvest must occur when caribou are first sighted nearby, before hunting pressure causes the herd to move on. If unsuccessful, hunters may feel pressure to pursue fleeing caribou at high rates of speed or otherwise not harvest (Nick 2011, pers. comm.). At the September 2011 meeting of the Yukon-Kuskokwim Delta Regional Advisory Council, a Council member added that elders described traditional rules that did not allow pursuing wildlife until they were exhausted, unless they were wounded (YKDRAC 2011: 293).

Other Alternatives Considered

Staff considered adding definitions of drive, herd, and molest that clearly prohibit hunters from pursuing on a motorized vehicle wildlife that are fleeing. Neither Federal nor State regulations currently define drive, herd, and molest. However, the prohibition against driving, herding, and molesting currently in Federal regulations applies to all wildlife statewide, but the proponent was clear that this proposal is intended for ungulates in Unit 18 only.

Other Relevant Proposals

Proposal WP12-41 submitted by the Association of Village Council Presidents, would allow a hunter on snow machine in Unit 18 to position himself to harvest a caribou as long as a caribou was not shot from a moving snow machine. Adoption of Proposal WP12-41 would allow a hunter on a snow machine to pursue caribou as long as he did not drive, herd, or molest caribou. The two proposals, WP12-41 and WP12-53, were responding to the citations imposed on subsistence hunters mentioned in the discussion,

Table 1. Levels of participation in the harvest and use of caribou in selected communities (Sources: ADF&G 2011; Krauthoefer and Koster 2007; Weekley et al. 2011).

		Percentage of Households					Estimated Harvest Levels				
								95% Confidence Limit of Estimated Total Harvest		Per	
Community	Study Year	Using (%)	Attempting to harvest (%)	Harvesting (%)	Receiving (%)	Giving (%)	Estimated Harvest	Low	High	Household	capita
Lower Yukon Area											
Alakanuk	2009	5	0	0	5	0	**0**	0	0	0	0
Chevak	2009	2	3	3	19	8	**8**	3	23	0.05	0.01
Kotlik	2009	10	2	2	10	4	**2**	1	18	0.02	0
Marshall	2009	16	6	4	12	6	**6**	4	16	0.08	0.02
Mountain Village	2009	8	2	2	8	2	**9**	4	28	0.06	0.01
Nunam Iqua	2009	0	0	0	0	0	**0**	0	0	0	0
Russian Mission	2009	28	5	0	23	9	**0**	0	0	0	0
Saint Marys	2009	0	0	0	0	0	**0**	0	0	0	0
Scammon Bay	2009	13	0	0	13	11	**0**	0	0	0	0
Lower Kuskokwim Area											
Akiachak	1998	95	83	83	53	65	**374**	332	417	3.17	0.72
Kwethluk	1986		5	2	28	0	**3**	3	3	0.03	0.01
Nunapitchuk	1986	0	0	0	0	0	**0**	0	0	0	0
Middle Kuskokwim Area											
Lower Kalskag	2003	35	38	29	18	21	**47**	22	78	0.60	0.15
	2004	10	7	5	5	2	**7**	6	12	0.10	0.03
	2005	13	7	0	13	0	**0**	0	0	0	0
Upper Kalskag	2003	53	47	35	29	29	**42**	24	62	0.70	0.17
	2004	53	47	35	29	29	**4**	4	5	0.10	0.02
	2005	27	32	15	15	9	**16**	8	32	0.23	0.06

Note: In the Lower Yukon Area, harvest locations were not reported. In the Middle Kuskokwim Area, the only Unit 18 caribou harvest was 15 caribou harvested in 2003-2004 by Lower Kalskag, and other caribou were harvested in Units 19A, 19B. Kwethluk harvest occured primarily up the Kwethluk River in Units 17 and 18, and Akiakchak harvests occured primarily up the Kisaralik River in Unit 18

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above. After submitting the two proposals, the proponents talked, and the Yukon Delta National Wildlife Refuge agreed that its intent in Proposal WP12-53 was to define "fleeing" to mean "at or near full gallop" (Andrew 2011, pers. comm.; Sundown 2011, pers. comm.). After communicating with the refuge and the Office of Subsistence Management, the Association of Village Council Presidents withdrew Proposal WP12-41, and instead supported revising the language in Proposal WP12-53:

> *§__.26 (n)(18)(iii)**(F) You may not pursue with a motorized vehicle an ungulate that is at or near full gallop.***

The Association of Village Council Presidents, or AVCP, is the Native non-profit corporation representing residents of the Yukon-Kuskokwim delta region.

Effects of the Proposal

If this proposal is adopted, there would be no effect on Federal subsistence users. The prohibition against pursuing ungulates that are fleeing is encompassed in Federal wildlife regulations (§__.26(b)(4) and (5)). No effects on other users or conservation of moose and caribou are anticipated.

If this proposal is not adopted, no effects on Federal subsistence users, other users, or moose and caribou are anticipated.

OSM CONCLUSION

Oppose Proposal WP12-53.

Justification

The intent of the proponent is to make explicit that using a motorized vehicle to pursue moose and caribou that are at or near full gallop is prohibited. Federal regulations prohibit hunters on motorized vehicles from taking moose and caribou (see above §__.26 (b)(4)). Further, Federal regulations prohibit using a motorized vehicle to drive, herd, or molest wildlife (see above §__.26 (b)(5)). Therefore, Federal enforcement officers have the authority to cite a hunter who is pursuing with a motorized vehicle a moose or a caribou that is fleeing at or near full gallop.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Oppose Proposal **WP12-53**. Use of motorized vehicles is already prohibited in existing regulations and can be addressed by additional explanatory language in the Federal regulation booklet. It is a public education issue and does not require additional regulations.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-53 **with modification** to add wording that in Unit 18, a hunter "may not pursue ungulates that are at or near full gallop."

The modified proposal would read:

> **Unit 18 (Special Provisions)**
>
> *§__.26 (n)(18)(iii)**(F)** Y**ou may not pursue with a motorized vehicle an ungulate that is at or near a full gallop.***

This proposal is being directed toward caribou hunting. Subsistence hunters are trying to get food to feed their families. "...At or near full gallop" was the original wording agreed to by the Association of Village Council Presidents (AVCP) and the Yukon Delta National Wildlife Refuge. State regulations require a mandatory court appearance, a fine and criminal charges; the desire is to have something less strict for subsistence users. Desire is to have a bailable offense under Federal subsistence regulations. AVCP pulled proposal WP12-41 and agreed with the US Fish and Wildlife Service, Yukon Delta National Wildlife Refuge to support this proposal with the understanding that the regulatory wording would say "...at or near full gallop." AVCP and USFWS-Yukon Delta NWR staff did not intend to mirror the Alaska Department of Fish and Game regulations in this case. The analysis needs to describe the USFWS-Yukon Delta NWR and AVCP agreement in this case. The Council specifically requested that Office of Subsistence Management support their proposed wording.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposal WP12-53**.** Defer to home region.

Seward Peninsula Subsistence Regional Advisory Council

Oppose Proposal WP12-53. This regulation would prevent hunters from pursuing wounded animals via motorized vehicles and the Council did not agree with this.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-53: This proposal requests the federal subsistence hunting regulations be changed to clearly define how a snowmachine may be used to pursue ungulates in the Unit 18 federal subsistence hunts.

Introduction: The proponent requests the Federal Subsistence Board further define the use of motorized snowmachines in the Unit 18 federal subsistence hunts targeting ungulates to better position federally qualified subsistence users for harvesting. The proponent indicates adoption of this proposal will strengthen the existing regulations protecting ungulates. The proponent also indicates this proposal was submitted in response to federally qualified subsistence users illegally pursuing game on snowmachines.

Impact on Subsistence Users: Adoption of this proposal would have an unknown impact as documentation is not available to indicate federally qualified subsistence users hunting caribou are illegally using snowmachines to pursue ungulates in Unit 18. Federally qualified subsistence users are currently prohibited from pursuing ungulates with snowmachines through state regulations.

Opportunity Provided by State: State methods and means prohibit use of snowmachine to position caribou hunters in Unit 18.

General state methods and means regulations addressing off road vehicles:

5AAC 92.004. Policy for off-road vehicle use for hunting and transporting game.

> (a) Off-road vehicles are a legitimate method of transporting hunters and game in the state, subject to requirements of federal, state, and local landowners. If the Board of Game, through its public process, finds that off-road vehicle use attributed to hunting activities in a specific area has resulted or is likely to result in one or more of the following conditions, it will, in its discretion, take action to avoid or minimize the conditions:
>
> (1) soil erosion or compaction, or vegetative changes, significantly affecting important wildlife habitat, including wildlife food sources such as fish and fish streams, or wildlife distribution or abundance;
>
> (2) harvest of a population, sex, or age class significantly affecting condition, abundance, or trophy size relative to area management goals;
>
> (3) wildlife disturbance significantly affecting reproductive success, abundance, or condition; movement patterns, distribution, or behavior; or avoidance of important habitats such as mineral licks, birthing sites, wintering habitat, or fish spawning, incubation, and rearing sites, and other wildlife feeding sites and food sources;

(4) chronic conflicts with other user groups leading to a decline in the quality of the outdoor experience.

(b) The provisions of (a) of this section do not prevent the board from taking other action that it considers necessary or advisable to adopt or modify off-road vehicle regulations that might affect hunting or the transportation of hunters, hunting gear, or game.

(c) In this section, "off-road vehicle" includes four-wheel drive trucks and automobiles, motorcycles, three- to eight-wheeled all-terrain recreation and utility vehicles, vehicles with two tracks, air-cushioned vehicles, and airboats operated outside of a navigable waterway.

5AAC 92.080 Unlawful methods of taking game; exceptions. The following methods of taking game are prohibited:

(4) unless otherwise provided in this chapter, from a motor-driven boat or a motorized land vehicle, unless the motor has been completely shut off and progress from the motor's power has ceased, except that a,,,

(4)(B)(i.): in Units 22 and 23, a snowmachine may be used to position a hunter to select an individual caribou for harvest, and caribou may be shot from a stationary snowmachine.

General state salvage of game regulations:

92.220 Salvage of game meat, furs, and hides.

(i.) A Person who has wounded game shall make every reasonable effort to retrieve and salvage that game.

Enforcement Issues: "At or near full gallop" may prove difficult to determine leaving enforcement of this measure to subjective and inconsistent determinations. Differences in federal and state regulations resulting from adoption of this proposal create enforcement difficulties in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

The proponent clearly stated to the Yukon Kuskokwim Regional Advisory Council the intent of the proposal is to develop regulatory language which would reduce the citable violation of chasing a caribou on a snowmachine from a misdemeanor to a bailable offense. Establishing a regulation which changes a violation citation from a misdemeanor to a bailable offense will eliminate the requirement of a mandatory court appearance, potential forfeiture of animal and equipment, court reparations and fines, and potential of imprisonment.

Other Comments: Harassment of game, or herding of game with a motorized vehicle including a snow machine is currently illegal. Recovery of an animal that has been wounded by a hunter is required under salvage of game state regulations. If adopted as modified, federally qualified

users who are cited for pursuing an animal at or near a full gallop on a snowmachine will be required to pay a fine through the mail.

Recommendation: Oppose.

WP10-45/46/47/48/49/50/52 Executive Summary	
General Description	Proposals WP10-45, 46, 47, 48, 49, 50 and 52, were submitted by the Bristol Bay Subsistence Regional Advisory Council. All of the proposals were deferred by the Federal Subsistence Board during its May 2010 meeting pending the outcome of the Unit 9 Moose Working Group process. The proposed regulations below are based on the outcome of the Unit 9 Moose Working Group, the outcome of the Alaska Board of Game meeting addressing a similar proposal, and the recommendation of the Bristol Bay Regional Advisory Council. The original proposals can be found in **Appendix A.**
Proposed Regulation	**Units 9—Moose** *Unit 9A — 1 bull* ***by State registration permit*** — *Sept. 1–Sept. 15* *Unit 9B—1 bull* ***by State registration permit*** — *Aug. 20–Sept. 15* *Dec. 1–Jan. 15* *Unit 9C—that portion draining into the Naknek River from the north—1 bull* ***by State registration permit*** — *Sept. 1–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31* *Unit 9C—that portion draining into the Naknek River from the south—1 bull.* — *Aug. 20–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31* *A ~~by Federal registration permit only~~* ***State registration permit is required during the Aug. 20 – Sept. 20 season***. ***Or*** ***A Federal registration permit is required during the Dec. 1 – Dec. 31 season.*** *Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.* *Unit 9C remainder—1 bull* ***by State registration permit*** — *Sept. 1–Sept. ~~15~~* ***20*** *Dec. 15–Jan. 15* *Unit 9D — 1 bull by Federal registration permit.* — *Dec. 15–Jan. 20* *Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.*

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WP10-45/46/47/48/49/50/52 Executive Summary *(continued)*		
Proposed Regulation (Continued)	*Unit 9E — 1 bull **by State registration permit**; however only antlered bulls may be taken Dec. 1–Jan. 31*	*Sept. 1–Sept. ~~20~~ **25*** *Dec. 1–Jan. 31*
OSM Conclusion	**Oppose** Proposals WP10-46, 47, 48, 49, 50 and 52. **Support** Proposal WP10-45 **with modification** to require a State registration permit to harvest moose in Unit 9 and to add an additional 5 days to the fall seasons in Units 9C and 9E. The modified regulations should read: **Units 9—Moose** *Unit 9A — 1 bull **by State registration permit*** *Unit 9B—1 bull **by State registration permit*** *Unit 9C—that portion draining into the Naknek River from the north—1 bull **by State registration permit*** *Unit 9C—that portion draining into the Naknek River from the south—1 bull.* *A ~~by Federal registration permit only~~ **State registration permit is required during the Aug. 20 – Sept. 20 season**.* ***Or*** ***A Federal registration permit is required during the Dec. 1 – Dec. 31 season.*** *Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.* *Unit 9C remainder—1 bull **by State registration permit*** *Unit 9D — 1 bull by Federal registration permit.* *Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.*	*Sept. 1–Sept. 15* *Aug. 20–Sept. 15* *Dec. 1–Jan. 15* *Sept. 1–Sept. ~~15~~ **20*** *Dec. 1–Dec. 31* *Aug. 20–Sept. ~~15~~ **20*** *Dec. 1–Dec. 31* *Sept. 1–Sept. ~~15~~ **20*** *Dec. 15–Jan. 15* *Dec. 15–Jan. 20*

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WP10-45/46/47/48/49/50/52 Executive Summary *(continued)*		
OSM Conclusion (Continued)	*Unit 9E — 1 bull **by State registration permit**; however only antlered bulls may be taken Dec. 15–Jan. 31*	*Sept. 1–Sept. ~~20~~ **25** Dec. 15–Jan. 31*
Bristol Bay Regional Council Recommendation	**No action taken** on proposals WP10-46, 47, 48, 49, 50 and 52. **Support** Proposal WP10-45 **with modification** to require a State registration permit to harvest moose in Unit 9 and to add an additional 5 days to the fall seasons in Units 9B, 9C and 9E. The modified regulations should read: **Units 9—Moose** *Unit 9A — 1 bull **by State registration permit*** *Unit 9B—1 bull **by State registration permit*** *Unit 9C—that portion draining into the Naknek River from the north—1 bull **by State registration permit*** *Unit 9C—that portion draining into the Naknek River from the south—1 bull* *A ~~by Federal registration permit only~~ **State registration permit is required during the Aug. 20 – Sept. 20 season**.* *Or* ***A Federal registration permit is required during the Dec. 1 – Dec. 31 season.*** *Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.* *Unit 9C remainder—1 bull **by State registration permit*** *Unit 9D — 1 bull by Federal registration permit.* *Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.*	*Sept. 1–Sept. 15* *Sept. 1–Sept. ~~15~~ **20** Dec. 1–Jan. 15* *Sept. 1–Sept. ~~15~~ **20** Dec. 1–Dec. 31* *Aug. 20–Sept. ~~15~~ **20** Dec. 1–Dec. 31* *Sept. 1–Sept. ~~15~~ **20** Dec. 15–Jan. 15* *Dec. 15–Jan. 20*

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WP10-45/46/47/48/49/50/52 Executive Summary *(continued)*	
Bristol Bay Regional Council Recommendation (Continued)	*Unit 9E — 1 bull **by State registration permit**; however only antlered bulls may be taken Dec. 15–Jan. 31* *Sept. 1–Sept. ~~20~~ **25** Dec. 15–Jan. 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	**Support** the Unit 9 Moose Working Group proposal decisions which converted moose hunting in Unit 9 to a registration permit hunt system. **Do not adopt** proposals that would restrict access by non-federally qualified users and authorizing federal moose hunts in Unit 9 to be conducted by federally qualified subsistence users who have acquired a state registration permit.
Written Public Comments	**1 Support** Proposal WP10-45 **with Modification**

STAFF ANALYSIS
WP10-45/46/47/48/49/50/52 (DEFERRED)

ISSUES

Proposals WP10-45, 46, 47, 48, 49, 50 and 52, were submitted by the Bristol Bay Subsistence Regional Advisory Council. WP10-45 requested a change to the moose season dates in a portion of Unit 9. Proposals WP10-46, WP10-49 and WP10-50 requested that portions of Unit 9 be closed for the taking of moose by non-Federally qualified subsistence users. Proposals WP10-47, WP10-48 and WP10-52 requested that non-Federally qualified users hunting moose in portions of Unit 9 be restricted from harvesting moose within a two mile wide buffer on either side of waterways within Federal public lands. All of the proposals were deferred by the Federal Subsistence Board (Board) during its May 2010 meeting pending the outcome of the Unit 9 Moose Working Group process.

The Working Group subsequently met and developed recommendations for consideration by both the Board and the Alaska Board of Game. Based on these recommendations, as well as actions taken by the Alaska Board of Game at its March 2011 meeting, and a recommendation by the Bristol Bay Subsistence Regional Advisory Council (Council) that its original proposals be opposed and substituted with a proposal to align with recent changes to State regulation, it is requested that a State registration permit be required for moose hunting in Unit 9 and the seasons in Units 9C and 9E be extended 5 days.

DISCUSSION

Council members and area residents have repeatedly expressed concerns about the moose population in Units 9B and 9C, and the adverse effects of competition with nonresidents and non-Federally qualified residents. The Council has submitted numerous proposals to both the Board and the Alaska Board of Game to minimize user conflicts; however, both Boards have struggled with determining the appropriate course of action to address the issues.

In 2008, the Board deferred proposals WP08-30 (which became WP10-45 the following wildlife cycle) and WP08-31(which became WP10-46) based on a recommendation from the State of Alaska to form a working group to look for alternative management strategies to address the issues raised by the Council.

A working group was established and developed Proposal 14 (State proposal) which was submitted to and adopted by the Alaska Board of Game at its March 2011 meeting. The proposal requested the establishment of a registration permit hunt for moose in Unit 9. At the same meeting, the Alaska Board of Game also adopted Proposal 17 (State proposal) which was submitted by the Alaska Department of Fish and Game (ADF&G), requesting the hunting seasons in Units 9C and 9E be extended by five days due to declining participation in moose hunts where there is additional harvestable surplus.

Existing Federal Regulations

Unit 9—Moose

Unit 9A — 1 bull	*Sept. 1–Sept. 15*
Unit 9B—1 bull	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*

Unit 9C—that portion draining into the Naknek River from the north—1 bull	*Sept. 1–Sept. 15* *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull by Federal registration permit only.	*Aug. 20–Sept. 15* *Dec. 1–Dec. 31*
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull	*Sept. 1–Sept. 15* *Dec. 15–Jan. 15*
Unit 9D – 1 bull by Federal registration permit.	*Dec. 15–Jan. 20*
Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.	
Unit 9E – 1 bull; however only antlered bulls may be taken	*Sept. 1–Sept. 20*
Dec. 1–Jan. 31	*Dec. 1–Jan. 31*

Proposed Federal Regulations

The proposed regulations that follow are based on the outcome of the Unit 9 Moose Working Group, the outcome of the Alaska Board of Game meeting addressing a similar proposal, and the recommendation of the Bristol Bay Regional Advisory Council. Therefore, the proposed regulations differ from the original proposals. The original proposals can be found in **Appendix A**.

Units 9—Moose

Unit 9A — 1 bull ***by State registration permit***	*Sept. 1–Sept. 15*
Unit 9B—1 bull ***by State registration permit***	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*
Unit 9C—that portion draining into the Naknek River from the north—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull.	*Aug. 20–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*

A ~~by Federal registration permit only~~ ***State registration permit is required during the Aug. 20 – Sept. 20 season***.

Or

A Federal registration permit is required during the Dec. 1 – Dec. 31 season.

Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 15–Jan. 15*
Unit 9D — 1 bull by Federal registration permit.	*Dec. 15–Jan. 20*
Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.	
Unit 9E — 1 bull ***by State registration permit****; however only antlered bulls may be taken Dec. 1–Jan. 31*	*Sept. 1–Sept. ~~20~~* ***25*** *Dec. 1–Jan. 31*

Existing State Regulations

Moose		
Unit 9A		
Resident: One bull by permit available online and in person in King Salmon beginning Aug. 17	*RM271*	*Sept. 1–Sept. 15*
Nonresident : One bull by permit available online and in person in King Salmon beginning Aug. 17	*RM281*	*Sept. 5–Sept. 15*
Unit 9B		
Resident: One bull by permit beginning Aug. 17	*RM272*	*Sept. 1–Sept. 15*
OR		
One antlered bull by permit beginning Dec. 1	*RM272*	*Dec. 15–Jan. 15*
Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit available in person in King Salmon beginning Aug. 17	*RM282*	*Sept. 5–Sept. 15*
9C—that portion draining into the Naknek River		
Resident : One bull by permit in person in King Salmon beginning Aug. 17	*RM272*	*Sept. 1–Sept. 20*
OR		
One antlered bull by permit in person in King Salmon beginning Nov. 16	*RM272*	*Dec. 1–Dec. 31*
One bull with 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit in person in King Salmon beginning Aug. 17	*RM282*	*Sept. 5–Sept. 20*
9C—remainder		
Resident: One bull by permit available in person in King Salmon beginning Aug. 17	*RM272*	*Sept. 1–Sept. 20*
OR		

One antlered bull by permit available in person in King Salmon beginning Dec. 1	*RM272*	*Dec. 15–Jan. 15*
Nonresident: 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 King Salmon beginning Aug. 17	*RM282*	*Sept. 5–Sept. 20*
Unit 9D		
Resident: One antlered bull by permit available online and in person in King Salmon beginning Dec. 1	*RM271*	*Dec. 15–Jan. 20*
Nonresident:		*No open season*
Unit 9E		
Resident: One bull with spike-fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit available online and in person in King Salmon beginning Sept. 1	*RM271*	*Sept. 10–Sept. 25*
OR		
One antlered bull by permit available online and in person in King Salmon beginning Nov. 16	*RM271*	*Dec. 1–Jan. 20*
Nonresident: One bull with 50-inch antlers or antlers with 3 or more brow tines on at least one side by permit available online and in person in King Salmon beginning Sept. 1	*RM281*	*Sept. 10–Sept. 25*

Extent of Federal Public Lands

Federal public lands comprise approximately 32% of Unit 9A and consist of portions of Lake Clark National Park and Preserve (**Unit 9 Map**). .

Federal public lands comprise approximately 27% of Unit 9B and consist of portions of Lake Clark National Park and Preserve (23%) and isolated tracts of Bureau of Land Management lands (4%).

Federal public lands comprise approximately 84% of Unit 9C and consist of Katmai National Park (70%), Katmai National Preserve (8%), Becharof National Wildlife Refuge (3%), Bureau of Land Management (3%), and Alagnak Wild River (<1%). The Katmai National Park manages the Alagnak Wild River and subsistence hunting is not authorized in Katmai National Park.

Federal public lands comprise approximately 20% of Unit 9D and consist of Alaska Peninsula and Izembek National Wildlife Refuges.

Federal public lands comprise approximately 50% of Unit 9E and consist of Becharof and Alaska Peninsula National Wildlife Refuges (45%) and Aniakchak National Monument and Preserve (5%).

Customary and Traditional Use Determinations

Residents of Units 9A, 9B, 9C, and 9E have a positive customary and traditional use determination for moose in Units 9A, 9B, 9C, and 9E.

Regulatory History

In 1991, the Board adopted Proposal WP91-23 with modification to change the fall moose season from Sept. 5–20 to Sept. 1–15 in Unit 9B. The Board then expanded the fall season from Sept. 1–15 to Aug. 20– Sept. 15 by adopting WP94-38 with modification in 1994. In 1999 the Board adopted Proposal WP99-35 with modification to extend the winter season from Dec. 1–31 to Dec. 1–Jan. 15.

The Board adopted Proposal WP95-30 with modification to extend the fall season from Sept.1–Sept 15 to Aug. 20–Sept. 15 for Unit 9C—that portion draining into the Naknek River from the south.

In 2006, the Council submitted Proposal WP07-25, requesting a two-mile buffer, to close Federal public lands to non-Federally qualified subsistence users, on both sides of specified rivers and creeks in Units 9 and 17A, with the intent that it would help moose populations remain stable or increase. The proponent pointed out that too many moose were being harvested by hunters using boats. After further consideration of certain impracticalities, Proposal WP07-25 was opposed by the Council and ultimately by the Board, which noted that the closure would not be consistent with some aspects of ANILCA because the moose population was not of conservation concern.

In March 2007, the Alaska Board of Game considered Proposals 110 and 112 submitted by the Council to reduce competition between local and non-local hunters and between local and non-resident hunters in Units 9B and 9C. The Alaska Board of Game rejected both proposals.

In 2008, Proposals WP08-30 and WP08-31, addressing moose in Units 9B and 9C, were submitted to the Board by the Council. Proposal WP08-30 requested a shorter moose season in Unit 9B while WP08-31 requested a closure of Federal public lands to non-Federally qualified users in Units 9B and 9C. Both proposals were related as the Council's support of WP08-30 was contingent on adoption of WP08-31. After extensive discussion and input from the State of Alaska and the Regional Council Chair, the proposals were deferred by the Board so a working group could be formed to identify other management options that would address conflicts in the units.

Working group

Based on the direction given by the Board, the Office of Subsistence Management provided funding for and worked in cooperation with the ADF&G to initiate a Unit 9 moose working group. The working group was established to better understand the conflicts in the region and to develop management strategies and recommendations for Unit 9 moose. However, due to the timing of the bi-annual wildlife cycle and the timing of the working group meeting, the Council submitted a number of proposals (WP 10-47, 48, 49, 50, 52) to try to address user conflicts in Unit 9. In May 2010 the Board considered those proposals as well as proposals WP10-45 (deferred WP08-30) and WP10-46 (deferred WP08-31) (**Appendix A**). The Board deferred all of these proposals, consistent with the recommendations of the Council until the Unit 9 working group could finish its work.

The working group discussed a number of management strategies and came to consensus on three recommendations:

1. Submit proposals to the Alaska Board of Game and the Federal Subsistence Board to create a registration permit for all of the moose hunts in Unit 9

2. Conduct educational outreach directed at local moose hunters; and

3. Offer educational trapping seminars in the Unit 9 villages.

To address the need for more data and better exchange of information between locals and the ADF&G, the working group proposed creating a registration permit hunt for moose throughout Unit 9. The requirements of this hunt would increase information available to wildlife managers about the moose hunt through hunt report cards. In addition, such a hunt would increase exchange of information between biologists and moose hunters during the permit distribution process. This hunt would also allow managers to redistribute hunting pressure to help eliminate user conflict. To this end, the working group submitted Proposal 14 to the Board of Game for consideration. At its March 2011 meeting the Board of Game considered and adopted the proposal. The Board of Game also adopted Proposal 17 which extended the moose season by five days in Units 9C and 9E.

The desire of the working group for educational outreach towards hunters and trappers was addressed in two ways. A newsletter describing moose biology was developed and will be disseminated to Unit 9 villages in summer 2011. In addition, three wolf trapping clinics were held in three communities: Naknek, Port Heiden, and Nondalton. The clinics were well-attended and were reportedly met with enthusiasm.

Biological Background

Since the early 20th century, moose on the Alaska Peninsula gradually expanded their range southwestward. This expansion was accompanied by a dramatic population increase until the 1960s, when the population peaked and then began to decline. Biologists believe that range damage from over-browsing lead to the decline (Butler 2008). Even after a series of hunting restrictions and improvements in range conditions, the moose population in some subunits, such as 9E, had declined as much as 60% from the peak moose population in the 1960s. Brown bear predation on neonatal moose was thought to be the primary limiting factor of moose in Unit 9 (Butler 2008). Analysis of the ADF&G fall sex and age composition surveys indicate the moose population in most of Unit 9 remained relatively stable from 1980–2008 (Butler 2008).

The ADF&G population objectives for moose in Unit 9 are to: 1) maintain existing densities in areas with moderate (0.5–1.5 moose/square mile) or high (1.5–2.5 moose/square mile) densities; 2) increase low-density populations (where habitat conditions are not limiting) to 0.5 moose/square mile; and 3) maintain sex ratios of at least 25 bulls:100 cows in medium-to-high density populations and at least 40 bulls:100 cows in low-density areas (Butler 2004 and 2008). Overall, management objectives for bull:cow ratios and population are being maintained in Units 9B (low density area), 9C (moderate density area) and 9E (moderate density area) (Butler 2009, pers. comm.) (**Table 1**). The last bull:cow ratio estimate for 9B was 40 bulls:100 cows in 2007 (Butler 2008); for 9C was 47 bulls:100 cows in 2008 (Butler 2009, pers. comm.) and for 9E was 62 bulls:100 cows in 2010 (Riley 2011a).

Table 1 presents moose data for a composite of trend areas and is representative of the subunits. It should be noted that the averages indicated in **Table 1** are derived from variable population density estimates.

The current moose populations in Unit 9 are considered stable albeit at low density (Butler 2008). Moose population estimates by subunits are: Unit 9A, about 300 moose; Unit 9B, approximately 2000 moose; Unit 9C outside of Katmai National Park, approximately 800 moose; Unit 9D approximately 600, and Unit 9E approximately 2,500 (Butler 2008).

Since 1984, population trend counts in Unit 9B have also been conducted by the National Park Service in various portions of Lake Clark National Park and Preserve. In some cases, differing methodologies used and data collected at different times of year meant survey results were too variable to measure statistically

Table 1. Units 9B, 9C and 9E Moose densities and composition ratios (Butler 2007, 2009 pers. comm., Riley 2011b pers. comm.)

Unit 9A Moose – no composition or density data available

Unit 9B Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.56	45	22
1990's Average	0.52	55	15
2000's Average	0.46[a]	34	11
2007 Composition	-	40	2

[a]Average Density based on 2005 data only. Insufficient to assess trend

Unit 9C Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	1.01	37	23
1990's Average	0.87	52	19
2000's Average	0.71[a]	44	21
2007 Composition	-	40	27
2008 Composition	-	47	13
2009 Composition[b]	-	35	16
2010 Composition[b]	-	33	24

[a]Average Density based on 2005 data only. Insufficient to assess trend
[b]Only 1 trend count area covered data not comparable to previous years

Unit 9C Moose – Alagnak River drainage

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.96	34	25
1990's Average	0.86	36	18
2000's Average	0.83	37	11
2007 Composition	-	40	27

Unit 9D Moose – no composition or density data available

Unit 9E Moose

Year	Density per mi^2	Bulls:100 Cow	Calves:100 Cow
1980's Average	0.62	17	45
1990's Average	0.64	18	52
2000's Average	0.62	15	52
2010 Composition	-	62	23

significant changes in population trends (Mangipane and Putera 2007.). Nonetheless, the bull: cow ratios have been consistently high, ranging from 39–69 bulls:100 cows between 1992–2007 for the area of the Park and Preserve within Unit 9B south of Lake Clark. Calf:cow ratios have ranged from 9–20 calves:100 cows between 1992–2007 (Mangipane and Putera 2007).

In the past decade, local residents have regularly expressed difficulty in harvesting sufficient moose; a situation they attribute to a decreasing moose population. According to the area biologist, the erratic calf:cow ratios within Unit 9 (Butler 2008) may lead to the perception that the population is declining. Between 1998 to 2007, the cow:calf ratios in Unit 9B ranged as low as 2 calves:100 cows in 1999 to as high as 26 calves:100 cows in 2003 (Butler 2006 and 2008). In Unit 9C, the ratio was as low as 5 calves: 100 cows in 2003 and as high as 20 calves:100 cows in 2007 (Butler 2006 and 2008). This erratic data can make trend analyses difficult to interpret.

Table 2 Reported moose hunter residency and success in Unit 9, 2000-2009 (ADF&G 2009, Butler 2007).

	Successful Hunters					Unsuccessful Hunters				
Year	**Local Resident**	**Nonlocal Resident**	**Nonresident**	**Unknown**	**Total**	**Local Resident**	**Nonlocal Resident**	**Nonresident**	**Unknown**	**Total[a]**
2000	37	29	113	1	180	110	71	105	2	288
2001	33	51	89	2	175	100	93	67	0	260
2002	39	39	100	1	179	79	111	84	5	279
2003	41	32	102	2	177	88	92	91	2	273
2004	34	29	95	3	161	94	80	82	2	258
2005	43	32	84	1	160	87	73	92	3	255
2006	28	24	73	0	125	118	67	84	0	269
2007	34	32	81	1	148	131	44	85	1	261
2008	33	18	54	3	108	139	47	77	0	263
2009	21	29	61	6	117	118	38	39	2	197
Mean	34.3	31.5	85.2		153	106.4	71.6	80.6		260.3

[a] **Includes unknown residency.**

Harvest History

Reported moose harvest (2000–2009) for Unit 9 can be found in **Table 2**. Local resident harvest (Alaskans that live in Unit 9) has ranged from 21 to 43 animals, nonlocal resident harvest (all other Alaskans) has ranged from 18 to 51 animals and nonresident harvest has ranged from 54 to 113 animals. The total reported moose harvest has ranged from 108 to 180 animals per year.

Since 2000, the majority (about 89%) of the reported moose harvest has occurred in September and aircraft continue to be the most common method of transportation with boats as the second most common transport mode (Butler 2008). Nonresidents typically had a higher success rate than residents as most flew out to hunt, and many employed guides.

Current Events

In March 2011, the Board of Game considered and adopted Proposal 14, which was submitted by the Unit 9 working group. The proposal requested the establishment of registrations permit hunts for moose in Unit 9. At this meeting the Board of Game also adopted Proposal 17 which extended the moose hunting season five days in subunits 9C and 9E. Based on the actions of the Board of Game, the Council supported aligning, to the maximum extent possible, Federal regulations for moose hunting in Unit 9 with the changes made in State regulation (BBSRAC 2011).

Effects of the Proposal

If adopted, this proposal would increase information available to wildlife managers about moose hunting in Unit 9 through hunt report cards. In addition the issuance of registration permits would increase exchange of information between biologists and moose hunters during the permit distribution process. A registration permit system would allow wildlife managers to collect more reliable harvest data, educate hunters on the importance of reporting, and inform the public about the importance of harvesting only bulls in areas that have low moose densities. Registration hunts could also be managed by specific areas and harvest quotas could be set in heavily hunted areas, allowing wildlife managers to redistribute hunting pressure to help eliminate user conflict.

If adopted this proposal would also add an additional 5 days to the moose hunting seasons in Units 9C and 9E. Lengthening the season would provide additional opportunity for Federally qualified subsistence users to harvest a moose and would align Federal regulations with recent changes made in State regulations. Although this season extension may allow a few additional moose to be harvested the impact to moose population as a whole should be minimal as there is additional harvestable surplus in subunits 9C and 9E.

OSM CONCLUSION

Oppose Proposals WP10-46, 47, 48, 49, 50 and 52.

Support Proposal WP10-45 **with modification** to require a State registration permit to harvest moose in Unit 9 and to add an additional 5 days to the fall seasons in Units 9C and 9E.

The modified regulations should read:

Units 9—Moose	
Unit 9A — 1 bull ***by State registration permit***	*Sept. 1–Sept. 15*
Unit 9B—1 bull ***by State registration permit***	*Aug. 20–Sept. 15* *Dec. 1–Jan. 15*
Unit 9C—that portion draining into the Naknek River from the north—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull.	*Aug. 20–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*
A ~~by Federal registration permit only~~ ***State registration permit is required during the Aug. 20 – Sept. 20 season****.* ***Or*** ***A Federal registration permit is required during the Dec. 1 – Dec. 31 season.***	
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 15–Jan. 15*
Unit 9D — 1 bull by Federal registration permit.	*Dec. 15–Jan. 20*
Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.	
Unit 9E — 1 bull ***by State registration permit****; however only antlered bulls may be taken Dec. 15–Jan. 31*	*Sept. 1–Sept. ~~20~~* ***25*** *Dec. 15–Jan. 31*

Justification

These changes would be consistent with the recommendation of the Unit 9 moose working group, the Bristol Bay Regional Advisory Council and would align with recent changes made by the Alaska Board of Game to the State Unit 9 moose hunting regulations. The use of registration permits would allow better data collection and allow managers to shift hunter pressure to help alleviate user conflict. The fall Federal moose hunting seasons in Units 9B, 9E and that portion of 9C draining into the Naknek River from the south already start on Aug 20, twelve days prior to the State moose hunting season in those areas, allowing Federally qualified subsistence users the opportunity to hunt moose without competition from individuals hunting under State regulations. Extending the fall moose season in Units 9C and 9E would provide additional opportunity for subsistence users to harvest a moose in area where the moose population can withstand additional harvest pressure.

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APPENDIX A

WP10-45 (WP08-30)(Deferred)

Organization: Bristol Bay Regional Advisory Council
Address: 1011 East Tudor Road, Anchorage, AK 99503
Phone: 907-786-3888

1: What Regulation do you wish to change?
Unit 9B – Moose

Unit 9B – 1 bull	Aug. 20-Sept.15 Dec. 1-Jan.15

2: How would the new regulation read?
Unit 9B – Moose

Unit 9B – 1 bull	Sept. 1-Sept.15 Dec. 15-Jan.15

3: Why should this regulation change be made?
Bristol Bay Council members and area residents have expressed concerns about the decline of the moose population in Unit 9B.

4: What impact will this change have on wildlife populations?
A shorter season will likely reduce the number of moose harvested and may help slow the decline of the moose population in this area.

5: How will this change affect subsistence uses?
Subsistence users will still have the opportunity to harvest moose in Unit 9B, but the Fall season would be shortened by 11 days, and the winter season would be shortened by 14 days.

6: How will this change affect other uses, such as sport/recreational and commercial?
No affect to other users.

WP10-46 (WP08-31) (Deferred)

Organization: Bristol Bay Regional Advisory Council
Address: 1011 East Tudor Road, Anchorage, AK 99503
Phone: 907-786-3888

1: What Regulation do you wish to change? Units 9B, 9C – Moose

Unit 9B – 1 Bull Aug. 20-Sept. 15
Dec. 1-Jan. 15

Unit 9C – that portion draining into the Naknek River from the north – 1 bull
Sept. 1-Sept. 15
Dec. 1-Dec. 31

2: How would the new regulation read?
Units 9B, 9C – Moose

Unit 9B—1 bull. Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.
Aug. 20–Sept. 15
Dec. 1–Jan. 15

Unit 9C, that portion draining into the Naknek River from the north—1 bull. Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.
Sept. 1–Sept. 15
Dec. 1–Dec. 31

Unit 9C, that portion draining into the Naknek River from the south—1 bull by Federal registration permit only. Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.
Aug. 20-Sept. 15
Dec. 1-Dec. 31

Unit 9C remainder—1 bull. Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.
Sept. 1–Sept. 15
Dec. 15–Jan. 15

3: Why should this regulation change be made?
Bristol Bay Council members and area residents have expressed concerns about the decline of the moose population in Units 9B and 9C.

4: What impact will this change have on wildlife populations?
A closure of Federal public lands to non-Federally qualified subsistence users will likely reduce the number of moose harvested and may help slow the decline of the moose population in this area.

5: How will this change affect subsistence uses?

Subsistence users will still have the same opportunity to harvest moose in Units 9B and 9C.

6: How will this change affect other uses, such as sport/recreational and commercial?
In Units 9B and 9C, that portion draining into the Naknek River from the north, Federal public lands would be closed to the taking of moose for non-Federally qualified subsistence users.

WP10-47 (Deferred)

Organization: Bristol Bay Regional Advisory Council
Address: 1011 East Tudor Road, Anchorage, AK 99503
Phone: 907-786-3888

1: What Regulation do you wish to change?
Unit 9C-Moose

Unit 9C, that portion draining into the Naknek River from north – 1 bull
Sept. 1- Sept 15
Dec. 1-Dec 31

Unit 9C, that portion draining into the Naknek River from the south – 1 bull by Federally registration permit only.
Aug. 20-Sept. 15
Dec. 1-Dec. 31

Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C and 9E hunting under these regulations.

Unit 9C remainder-1 bull
Sept.1-Sept.15
Dec. 15-Jan. 15

2: How would the new regulation read?
Unit 9C-Moose

Unit 9C, that portion draining into the Naknek River from the north – 1 bull
Sept. 1-Sept. 15
Dec. 1-Dec. 31

Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands

Unit 9C, that portion draining into the Naknek River from the south – 1 bull by Federal registration permit only.
Aug. 20-Sept. 15
Dec. 1-Dec.31
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E hunting under these regulations.

Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.

Unit 9C remainder – 1 bull
Sept. 1-Sept. 15
Dec. 15-Jan. 15

Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.

3: Why should this regulation change be made?
A 2-mile buffer on both sides of these drainages would help moose populations remain stable and the population may even increase. Too many moose are harvested on either side of the drainage by hunters using boats.

4: What impact will this change have on wildlife populations?
It will help the moose populations stabilize or the populations may increase because fewer moose may not be harvested within 2 miles on either side of these streams.

5: How will this change affect subsistence uses?
It wouldn't; residents of Units 9A, 9B, 9C and 9E and Unit 17 would still have the opportunity to hunt moose.

6: How will this change affect other uses, such as sport/recreational and commercial?
Non-Federally subsistence could not harvest moose within 2 miles of a stream but past the 2-mile buffer they could.

WP10-48 (Deferred)

Organization: Bristol Bay Regional Advisory Council
Address: 1011 East Tudor Road, Anchorage, AK 99503
Phone: 907-786-3888

1: What Regulation do you wish to change?
Unit 9B Moose

Unit 9B-1 bull

Aug. 20-Sept. 15
Dec. 1-Jan. 15

2. How should the new regulation read?

Unit 9B Moose

Unit 9B-1 bull

Aug. 20-Sept. 15
Dec. 1-Jan. 15
Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.

3: Why should this regulation change be made?
A 2-mile buffer on both sides of these drainages would help moose populations remain stable and the population may even increase. Too many moose are harvested on either side of the drainage by hunters using boats.

4: What impact will this change have on wildlife populations?
It will help the moose populations stabilize or the populations may increase because fewer moose may not be harvested within 2 miles on either side of these streams.

5: How will this change affect subsistence uses?
It wouldn't; residents of Units 9A, 9B, 9C and 9E and Unit 17 would still have the opportunity to hunt moose.

6: How will this change affect other uses, such as sport/recreational and commercial?
Non-Federally subsistence could not harvest moose within 2 miles of a stream but past the 2-mile buffer they could.

WP10-49/50 (Deferred)

Submitted by: Gerald Kosbruk
Organization: Native Village of Perryville
Phone: (907) 853-2203
E-mail: nvproads@hotmail.com

1: What Regulation do you wish to change?

Moose	Unit 9E-1 bull;	Aug. 20-Sept 20
	However, only one antlered	Dec. 1-Jan 31
	bull may be taken Dec. 1 – Jan. 31	

2: How would the new regulation read?

Moose	Unit 9E-1 bull;	Aug. 20-Sept 20
	However, only one antlered	Dec. 1-Jan 31
	bull may be taken Dec. 1 – Jan. 31	

Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Unit 9E hunting under these regulations.

3: Why should this regulation change be made?
Low moose population in Unit 9E is increasingly getting difficult in meeting subsistence needs for the rural residents of Unit 9E. In addition, competition from sport hunters and transporters are also increasing, competing with rural resident subsistence hunters. And, during low seasonal precipitation, low water level makes it difficult to access the moose habitat on river and stream corridors.

4: What impact will this change have on wildlife populations?
None.

5: How will this change affect subsistence uses?
The closure of sport harvest on Federal public lands will increase the opportunity for subsistence users hunting moose in Units 9E.

6: How will this change affect other uses, such as sport/recreational and commercial?
These changes will close sport hunting opportunities for guided hunters seeking trophy animals.

Submitted by: Della Kalmakoff, Village Administrator
Organization: Chignik Lake Traditional Council
Phone: (907) 845-2212

1: What regulation do you wish to change?

Moose	Unit 9E-1 bull;	Aug. 20-Sept 20
	However, only one antlered	Dec. 1-Jan 31
	bull may be taken Dec. 1 – Jan. 31	

2: How should the new regulation read?

Moose	Unit 9E-1 bull;	Aug. 20-Sept 20

However, only one antlered bull may be taken Dec. 1 – Jan. 31	Dec. 1-Jan 31

Federal public lands are closed for the hunting of moose, except by rural Alaska residents of Unit 9E hunting under these regulations.

3: Why should this regulation change be made?
Low moose population in Unit 9E is increasingly getting difficult in meeting subsistence needs for the rural residents of Unit 9E. In addition, competition from sport hunters and transporters are also increasing, competing with rural resident subsistence hunters. And, during low seasonal precipitation, low water level makes it difficult to access the moose habitat on river and stream corridors.

4: What impact will this change have on wildlife populations?
None.

5: How will this change affect subsistence uses?
The closure of sport harvest on Federal public lands will increase the opportunity for subsistence users hunting moose in Units 9E.

6: How will this change affect other uses, i.e., sport/recreational and commercial?
These changes will close sport hunting opportunities for guided hunters seeking trophy animals.

WP10-52 (Deferred)

Organization: Bristol Bay Regional Advisory Council
Address: 1011 East Tudor Road, Anchorage, AK 99503
Phone: 907-786-3888

1: What Regulation do you wish to change?
Unit 9E-1 bull; however, only antlered bulls may be taken Dec. 1-Jan. 31

Aug. 20-Sept. 20
Dec. 1- Jan. 31

2: How would the new regulation read?
Unit 9E-Moose

Unit 9E-1 bull; however, only antlered bulls may be taken Dec. 1-Jan. 31

Aug. 20-Sept. 20
Dec. 1- Jan. 31

Non-Federally qualified subsistence users may not harvest a moose 2 miles on either side of waterways within Federal lands.

3: Why should this regulation change be made?
A 2-mile buffer on both sides of these drainages would help moose populations remain stable and the population may even increase. Too many moose are harvested on either side of the drainage by hunters using boats.

4: What impact will this change have on wildlife populations?
It will help the moose populations stabilize or the populations may increase because fewer moose may not be harvested within 2 miles on either side of these streams.

5: How will this change affect subsistence uses?
It wouldn't; residents of Units 9A, 9B, 9C and 9E and Unit 17 would still have the opportunity to hunt moose.

6: How will this change affect other uses, such as sport/recreational and commercial?
Non-Federally subsistence could not harvest moose within 2 miles of a stream but past the 2-mile buffer they could.

BRISTOL BAY SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

No action taken on proposals WP10-46, 47, 48, 49, 50 and 52. . The Bristol Bay Subsistence Regional Advisory Council took no action on these proposals based on action taken on WP10-45.

Support Proposal WP10-45 **with modification** to require a State registration permit to harvest moose in Unit 9 and to add an additional 5 days to the fall seasons in Units 9B, 9C and 9E. This proposal is consistent with Unit 9 Moose Working Group recommendations and would align Federal and State regulations. Use of permits would provide useful management information, and extending the season would provide additional hunting opportunities in areas where moose populations can sustain additional harvest.

The modified regulation should read:

Units 9—Moose

Unit 9A — 1 bull ***by State registration permit***	*Sept. 1–Sept. 15*
Unit 9B—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 1–Jan. 15*
Unit 9C—that portion draining into the Naknek River from the north—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*
Unit 9C—that portion draining into the Naknek River from the south—1 bull	*Aug. 20–Sept. ~~15~~* ***20*** *Dec. 1–Dec. 31*
A ~~by Federal registration permit only~~ ***State registration permit is required during the Aug. 20 – Sept. 20 season****.*	
Or	
A Federal registration permit is required during the Dec. 1 – Dec. 31 season.	
Federal public lands are closed during Dec. for the hunting of moose, except by rural Alaska residents of Units 9A, 9B, 9C, and 9E, hunting under these regulations.	
Unit 9C remainder—1 bull ***by State registration permit***	*Sept. 1–Sept. ~~15~~* ***20*** *Dec. 15–Jan. 15*
Unit 9D — 1 bull by Federal registration permit.	*Dec. 15–Jan. 20*
Federal public lands will be closed to the harvest of moose when a total of 10 bulls have been harvested between State and Federal hunts.	
Unit 9E — 1 bull ***by State registration permit****; however only antlered bulls may be taken Dec. ~~15~~–Jan. 31*	*Sept. 1–Sept. ~~20~~* ***25*** *Dec. ~~15~~–Jan. 31*

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposals WP10-45, 46, 47, 48, 49, 50, and 52 (Moose proposals for 9B, 9C, and 9E):

WP10-45 Deferred 08-30 (Unit 9B moose season): This proposal reduces fall and winter moose-hunting seasons for federally qualified subsistence users in Unit 9B.

WP10-46 Deferred 08-31 (Moose Hunting Closure in Units 9B &9C): Close federal public lands to hunting of moose by non-federally qualified subsistence users in Units 9B and 9C. This proposal was deferred by the Federal Subsistence Board from the spring 2008 meeting.

WP10-47 and WP10-52 (Units 9C&E– 2-mile Waterway Corridor Closure): These combined proposals request closure of all federal public lands within a two mile buffer on either side of waterways to hunting of moose by non-federally qualified subsistence users in Units 9C and 9E.

Wildlife Proposal WP10-48 (Unit 9B – 2-mile Waterway Corridor Closure): This proposal would close a two mile buffer within all waterways, to moose hunting by non-federally qualified users in Unit 9B.

Wildlife Proposals WP10-49 and WP10-50 (Unit 9E – close to non-federally qualified): These combined identical proposals request closure of moose hunting on federal public lands in Unit 9E to non-federally qualified users.

Introduction: The Bristol Bay Regional Advisory Council (BB RAC) submitted proposals WP10-45, 46, 47, 48, and 52. Gerald Kosbruk of the Native Village of Perryville submitted proposal WP10-49 and Della Kalmakoff of the Chignik Lake Traditional Council submitted proposal WP10-50. All proposals request different restrictions be place on moose hunting in portions of Unit 9. WP10-45 requests restrictions on the federal subsistence hunting season while the remaining proposals request restrictions be placed on non-federally qualified users.

The Federal Subsistence Board deferred WP10-45 and 46 to allow time for the formation of a Unit 9 Moose Working Group. The Unit 9 Moose Working Group was tasked to analyze and discuss available information and provide recommendations and guidance for both the BB RAC and the Federal Subsistence Board.

The Unit 9 Moose Working Group met in the winter of 2010, and consensus points reached were represented by proposal #14, which the Unit 9 Moose Working Group submitted to the Alaska Board of Game (BOG). The Federal Subsistence Board's directives to the Unit 9 Moose Working Group were fulfilled by this action. The BOG adopted the intent of the Unit 9 Moose Working Group's proposal to convert all of Unit 9 moose hunts into registration hunts and added State recommended season date liberalizations to provide for additional opportunity through adoption of state sponsored proposal #17. The BB RAC, Alaska Department of Fish and Game (ADF&G), and the Office of Subsistence Management assisted the Unit 9 Moose Working Group to successfully complete the assigned tasks.

Impact on Subsistence Users: Adoption of the Unit 9 moose work group based proposal #14 by the BOG and implementation of consensus point items that did not require regulatory changes should improve hunting opportunity for federally qualified subsistence users in Unit 9B, C and E. The solutions developed by the Unit 9 Moose Working Group include, but are not limited to: increased cooperation between state and federal governments; improved data collection; development of a state registration permit for moose hunting; increased communication and information sharing between local residents, hunt managers, and non-federally qualified users; and development of predator control plans for Unit 9. A summary of all the consensus point items developed by the Unit 9 Moose Working Group can be obtained from participating agency staff (ADF&G, Fish and Wildlife Service, Bureau of Land Management, or National Parks Service).

Many consensus points did not require regulatory changes. Converting Unit 9 moose hunts to a registration permit system did require adoption of the registration permit hunt structure by the BOG. Adoption of the registration permit hunt structure created a tool for managers to address many of the concerns expressed by members of the Unit 9 Moose Working Group workgroup.

This registration permit hunt structure offers many advantages over the former harvest ticket system. Registration hunts offer the ability to increase communication between hunters and hunt managers by facilitating information distribution to hunters applying for permits in person at local ADF&G and village council offices. The state harvest ticket system that in prior years allows hunters to hunt moose in Unit 9 after acquiring a harvest ticket from any license vendor in the state is relatively anonymous. Registration permits also offer increased ability to identify moose hunters in Unit 9, assisting managers in obtaining more accurate harvest information. These hunts can also be tailored to address local needs and issues.

In short, the flexibility of the registration permit hunt structure offers many opportunities to reduce user tension in Unit 9 and greatly improves harvest data gathering to better assist management of the resource.

Opportunity Provided by State: State Units 9B, C, and E moose hunting regulations effective July 1, 2011 follows:

Unit 9B – Residents are allowed one bull by registration permit September 1 through September 15 or one antlered bull by registration permit December 15 through January 15. Non-resident hunters are allowed one bull with 50-inch antlers or 4 or more brow tines on one side by registration permit September 5 through September 15.

Unit 9C, that portion draining into the Naknek River – Residents are allowed one bull by registration permit September 1 through September 20 or one antlered bull by registration permit December 1 through December 31. Non-resident hunters are allowed one bull with 50-inch antlers or 3 or more brow tines on one side by registration permit September 5 through September 20.

Unit 9C Remainder – Residents are allowed one bull by registration permit September 1 through September 20 or one antlered bull by registration permit December 15 through January 15. Non-resident hunters are allowed one bull with 50-inch antlers or 3 or more brow tines on one side by registration permit September 5 through September 20.

Unit 9E – Residents may take one bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on one side by registration permit September 10 through 25 or one antlered bull by registration permit December 1 through January 20. Non-resident hunters may take one bull with 50-inch anglers or antlers with 3 or more brow tines on one side by registration permit September 10 through September 25.

Conservation Issues: There are currently no conservation issues identified for moose in Unit 9B, C or E. Moose populations continue to persist at low densities throughout much of the Unit and are not limited by the reported human harvests, although hunting activities conducted outside of the authorized seasons and cow harvests are suspected to impact moose populations in some areas. In spite of this bull:cow ratios remain above management objectives and hunter success rates are higher than most other areas of the state.

Enforcement Issues: Recent adoption by the BOG of state moose hunting regulations in Unit 9B, C and E will significantly reduce user confusion by aligning both federal subsistence and state hunting regulations.

Recommendation: **Support** the Unit 9 Moose Working Group proposal decisions which converted moose hunting in Unit 9 to a registration permit hunt system. Do not adopt proposals that would restrict access by non-federally qualified users and authorizing federal moose hunts in Unit 9 to be conducted by federally qualified subsistence users who have acquired a state registration permit.

WRITTEN PUBLIC COMMENTS

Support Proposal WP10-45 **with Modification.** The commission has commented previously on proposals WP10-45, 46, 47 and 48 and was informed that the Bristol Bay RAC will be considering a modification to 10-45 that reflects actions taken by the Alaska Board of Game at their March 2011 meeting. The commission supports the proposed modification to WP10-45, which would align Federal and State permit requirements by requiring a state registration permit to harvest moose in Unit 9 and extend the end date of the 9C fall moose hunting season by five days from September 15 to September 20. No action was taken on proposals WP10-46, 47 and 48.

WP12-37 Executive Summary	
General Description	Proposal WP12-37 requests a harvest season be established in Unit 9D from Aug. 1–March 15 with a harvest limit of 1 bull caribou. Quotas and any needed closures would be announced by the Federal in-season manager after consultation with the Alaska Department of Fish and Game (ADF&G). *Submitted by Kodiak Aleutians Regional Advisory Council*
Proposed Regulation	***1 bull caribou by Federal registration permit only. Quotas and any needed closures will be announced by the Izembek Refuge Manager after consultation with ADF&G.*** ~~*No Federal Open Season*~~ ***Aug. 1 – March 15*** *__.26(n)(9)(iii) (F) For Unit 9D, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than four harvest limits in his/her possession at any one time;*
OSM Conclusion	**Support** Proposal WP12-37 **with modification** to split the season dates to the last pre-closure season which allows recovery time after the rut. The modified regulation should read: **Units 9D — Caribou** ***1 bull caribou by Federal registration permit only. Quotas and any needed closures will be announced by the Izembek Refuge Manager after consultation with ADF&G.*** ~~*No Federal Open Season*~~ ***Aug. 1 – Sept. 30 Nov. 15 – Mar. 31***
Kodiak/Aleutians Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.

continued on next page

WP12-37 Executive Summary *(continued)*	
ADF&G Comments	**Support** Proposal WP12-37 **with modification**. The department recommends adopting this proposal with modifications. Season dates should be limited to the fall (Aug 10 to Sept 20) and should not include dates associated with rutting behavior (Sept. 20 to Nov. 10) or high rates of wounding loss and cow harvest (Nov. 1 to March 31). Winter hunts will be recommended when the herd has recovered sufficiently to accommodate high harvest rates and cow harvests. The department also recommends a clear statement that the Alaska Department of Fish and Game will be consulted on hunt openings, closings, and harvest quotas. Additionally it should be acknowledged during discussions of this proposal that the intent is to create a hunt structure to issue permits in the future, but that no permits will be issued until the herd is above the recommended thresholds laid out in the 2008 operational plan. The status of the herd and its ability to sustain harvest remain in question at this time, and further action by the state to reduce predation rates may be needed if human harvest is authorized. Coordination between state and federal managers is important at all stages of population growth, but it is critically important when herd size is small and harvest is questionable.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-37

ISSUES

Proposal WP12-37, submitted by Kodiak Aleutians Regional Advisory Council, requests a harvest season be established in Unit 9D from Aug. 1–March 15 with a harvest limit of 1 bull caribou. Quotas and any needed closures would be announced by the Federal in-season manager after consultation with the Alaska Department of Fish and Game (ADF&G).

DISCUSSION

The proponent believes that the Southern Alaska Peninsula Caribou Herd (SAPCH) may have a small harvestable surplus that should be made available for harvest to Federally qualified subsistence users. The proponent states only bulls would be available for harvest and the hunt would only be allowed if there were sufficient animals to harvest. The proponent feels adoption of this proposal would have little effect on the overall health of the caribou population.

Existing Federal Regulation

Units 9D — Caribou

Federal public lands are closed to the taking of caribou.	*No Federal Open Season*
__.26(n)(9)(iii) (F) For Unit 9D, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than four harvest limits in his/her possession at any one time;	

Proposed Federal Regulation

Units 9D — Caribou

1 bull caribou by Federal registration permit only. Quotas and any needed closures will be announced by the Izembek Refuge Manager after consultation with ADF&G.	~~*No Federal Open Season*~~ ***Aug. 1 – March 15***
__.26(n)(9)(iii) (F) For Unit 9D, a Federally qualified subsistence user (recipient) may designate another Federally qualified subsistence user to take caribou on his or her behalf unless the recipient is a member of a community operating under a community harvest system. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients but may have no more than four harvest limits in his/her possession at any one time;	

Existing State Regulation

Units 9D — Caribou	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 40% of Unit 9D, all of which are part of Izembek or Alaska Peninsula National Wildlife Refuges (See Unit 9 Map).

Customary and Traditional Use Determinations

All residents of Unit 9D, False Pass, and Akutan have a positive customary and traditional use determination for caribou in Unit 9D.

Regulatory History

The SAPCH population began to decline during the early 1980s. In 1990, as the population decline continued, State and Federal resource managers agreed that all caribou harvesting should cease when the population fell below 2,500 animals. The threshold level of 2,500 animals included caribou inhabiting both Unit 9D and Unit 10 (Unimak Island). ADF&G now recognizes the SAPCH on the Alaska Peninsula and the Unimak Caribou Herd (UCH) on Unimak Island as two separate herds (Butler 2005a, 2005b; Sellers 2003a, 2003b).

To stem the caribou decline in Unit 9D, Federal public lands were closed to caribou hunting by non-Federally qualified subsistence users in 1991. The Alaska Board of Game closed the State hunt by emergency order in 1993. The Federal Subsistence Board closed Federal public lands in Unit 9D and Unit 10 (Unimak Island) to all caribou hunting in 1993 by Special Action S93-01, and subsequently adopted Proposal 28 in 1994 into closing the Federal caribou season.

In 1996, Proposal 28 requested opening a Unit 9D caribou season for King Cove residents only, but the Federal Subsistence Board deferred it until the next year. Special Action SA96-03, submitted by the Aleutians East Borough, requested opening a caribou season in Units 9D and 10. In their request, local residents noted the disruption of traditional hunting patterns by closures since 1993, and requested limited harvest opportunities. Ultimately, the Federal Subsistence Board rejected the request on September 27, 1996, due to concerns that any harvest of the herd at that time would exacerbate the conditions of low population levels, productivity, and recruitment of the SAPCH, and would not be consistent with sound management principles, nor with the recovery of the herd to a healthy condition.

Based on caribou surveys conducted in 1997, there were enough bulls in the herd to allow a subsistence harvest to resume on Federal public lands in Unit 9D and Unit 10 (Unimak Island). The harvest was opened through Special Action SA97-01. This decision provided an Aug. 10–Mar. 31 hunt for Unit 10 (Unimak Island) and a Nov. 10 – Mar. 31 hunt for Unit 9D. Approval of Special Action SA97-13 extended the 1997 season through April 30 in Unit 9D. Special Action SA98-05 authorized a Federal subsistence hunt in Unit 9D and Unit 10 from Aug. 1–Mar. 31 during the 1998/99 regulatory year.

The Alaska Board of Game reopened the Unit 9D State caribou season in 1999; that allowed hunting by Alaska residents and nonresidents. Area residents were concerned about the influx of nonlocal hunters in the vicinity of the Cold Bay area road system, especially during the waterfowl season. Noting these concerns, Special Action SA99-02, submitted by the False Pass Tribal Council, requested that Federal public lands be closed in Unit 9D and Unit 10 to the taking of caribou by non-Federally qualified

subsistence users. The Federal Subsistence Board rejected this request, pointing out that this was a user conflict issue, and not a conservation issue, since the biological data indicated the caribou herd could support the harvest at that time.

In 2000, Proposal WP00-29, submitted by the Kodiak/Aleutians Subsistence Regional Advisory Council (Council), requested the Unit 9D and Unit 10 (Unimak Island) hunt in the annual regulations. That proposal was modified and adopted by the Federal Subsistence Board to provide a split season (Aug. 1 – Sept. 25 and Nov. 15 – Mar. 31).

In 2002, Proposal WP02-21, submitted by the Council and adopted by the Federal Subsistence Board, extended the fall season by five days for Unit 9D and Unit 10 (Unimak Island) from September 25 to September 30.

Special Action WSA03-08, submitted by the Council and approved by the Office of Subsistence Management via delegated authority, increased the harvest limit from one to two caribou for Unit 9D during the fall season of Aug. 1–Sept. 30, 2003. Special Action WSA03-10, approved by the Federal Subsistence Board, requested that the increased harvest limit of two caribou in Unit 9D also be allowed during the Nov. 15, 2003–Mar. 31, 2004 season. The justification noted the increased caribou population allowed for these increased harvest limits for Federally qualified subsistence users.

In 2004, Proposal WP04-40 was adopted into regulation, increasing the harvest limit to two caribou in Unit 9D for the dates designated in the 2003 Special Actions (FWS 2004). This change allowed Federally qualified subsistence users the opportunity to harvest two caribou throughout the fall and winter seasons.

At the September 2005 meeting of the Kodiak/Aleutians Subsistence Regional Advisory Council (KARAC), members expressed concerns about the SAPCH population decline and harvests by nonresident hunters (KARAC 2005). Council members requested the State to initiate restrictions for nonresident seasons as they felt the subsistence hunts were in jeopardy. In addition, Council members wanted guides to be limited to a certain number of hunters. Discussions focused on the preference of nonlocal hunters for bulls, whereas subsistence users stated a preference for cows and young bulls.

In 2006, Proposal WP06-20 adopted into regulation a two bull harvest limit (instead of two caribou) under Federal subsistence management regulations (FWS 2006). The change allowed the continued harvest of the SAPCH and eliminated the cow hunt, at a time when the population was continuing to decline, yet the bull:cow ratio was still within State management objectives.

Recognizing the continued decline of the SAPCH, the Alaska Board of Game restricted the harvest to bulls only and closed the nonresident season during their March 2007 meeting (ADF&G 2007a). The Board of Game also converted the general season resident hunt to a registration hunt, with a one bull harvest limit. This State regulation for Unit 9D caribou became effective July 1, 2007. Based on July 2007 caribou counts as well as past population declines, poor recruitment, and low bull:cow ratios, ADF&G issued Emergency Order No. 02-02-07 on July 17, 2007 to close resident hunting in Unit 9D for caribou (Butler 2007a). No State registration permits were issued for the 2007/08 regulatory year.

On July 30, 2007, the Office of Subsistence Management, via delegated authority, approved Special Action request WSA07-03 to close the fall season from Aug. 1–Sept. 30 to the taking of caribou in Unit 9D. The intent of this Special Action request was to eliminate additional mortality of this caribou herd caused by human harvest. On November 14, 2007, the Federal Subsistence Board approved Special Action WSA07-04 to close the winter season from Nov. 15–Mar. 31. Both Federal and State regulatory

managers concurred that the SAPCH decline posed a potentially significant conservation concern that warranted these actions.

In 2008, the Federal Subsistence Board adopted WP 08-26 which closed Federal public lands and the caribou season in Unit 9D due to population trend and composition counts for the SAPCH indicating the caribou herd had been in a period of decline for the past several years. Based on a carefully monitored population, using radio telemetry data, the changing age structure of the SAPCH population supported the conclusion that herd productivity was continuing to decline. The July 2007 recruitment survey indicated that no calves were expected to survive and the number of bulls in the population was decreasing.

Management Direction

A cooperative management plan, the Southern Alaska Peninsula Caribou Herd Operational Plan was adopted by ADF&G and FWS in March 2008 (ADF&G and FWS 2008). The previous plan, adopted in April 1994, needed revision to reflect the separation of the SAPCH and the Unimak Caribou Herd (ADF&G and FWS 1994). The draft plan identifies threshold levels for carrying out management objectives, and assists local wildlife managers in making timely recommendations for seasons and harvest limits.

The following are the primary population and management objectives outlined in the 2008 Southern Alaska Peninsula Caribou Herd Operational Plan:

- Sustain a total population of 3,000–4,000 animals.
- Maintain a minimum fall bull:cow ratio of 35:100. There will be no harvest when the bull:cow ratio falls below 20 bulls:100 cows for 3 consecutive years.
- Discontinue harvest when the herd is below 750 animals and the herd is in a period of decline based on 3 independent population estimates.

Biological Background

The SAPCH population began its decline during the early 1980s and continued into the 1990s. The population in Unit 9D rebounded by 2002, to approximately 4,100 caribou. However, the herd declined again in 2004 with the population declining to approximately 1,872 caribou (**Table 1**). In February 2005, an aerial survey of the SAPCH resulted in a count of 1,651 caribou, reflecting similar results to the previous year (Siekaniec 2005, pers. comm.). A January 2006 aerial survey resulted in a count of 1,770 caribou (Sowl 2007).

Caribou herd composition surveys were conducted on October 26, 2005 by State and Refuge biologists (**Table 1**). The 2005 bull:cow ratio observed (30 bulls:100 cows) was within the State management objective of 20 to 40 bulls:100 cows, but was lower than the bull:cow ratio observed in the previous two years (Butler 2005a). During the fall of 2005, the calf:cow ratio (6 calves:100 cows) was the lowest it had been over the previous four years. Calf recruitment was not sufficient to offset adult mortality. Under normal circumstances in a caribou population, approximately 25 calves per 100 cows are necessary to offset adult mortality (Valkenburg et al. 1996).

Refuge biologists observed 770 caribou in Unit 9D in November 2006 (Sowl 2006, pers. comm.). Composition counts completed by ADF&G in October 2006 (Butler 2006) showed a calf:cow ratio of 1 calf:100 cows, which is the lowest recorded to date. The series of low calf:cow ratios observed indicated

Table 1. Southern Alaska Peninsula Caribou Herd – Summary Statistics (FWS 2011).

Year	Population Count	Fall Bulls/ 100 Cow	Fall Calves/ 100 Cow	Fall Composition Sample Size	Summer Post-Calving Count
2004	1872	36	7	966	*
2005	1651	30	6	1040	*
2006	770	16	1	713	*
2007	*	15	1	431	600
2008	*	10	39	570	700
2009	*	21	43	679	800**
2010	*	28	47	532	*
2011	790	***	***	***	***

*Data not collected.
**Count conducted by USFWS and ADF&G.
***Data not yet available.
NOTE: FWS population counts are normally conducted fall through early spring; Alaska Department of Fish and Game (ADF&G) fall composition ratios are taken from an October survey.

that the population decline was still occurring, resulting in an age structure that was skewed towards older age classes. In addition, the bull:cow ratio in the fall 2006 counts dropped to 16 bulls:100 cows; 47% lower than the ratio observed in 2005 (**Table 1**).

During July 2007, a post-calving count of the SAPCH was conducted by ADF&G (Butler 2007a). The post-calving population count resulted in a minimum population estimate of 600 caribou. Only four calves were observed during the population survey (0.8% calves). Calf survival to four weeks of age was estimated to be <1%. Those observations indicated that early calf survival was limiting recruitment.

Again, in October 2007, ADF&G conducted a composition count of the SAPCH (Butler 2007d). The calf:cow ratio of 0.5 calf:100 cows was the lowest recorded to date. Based on 2006 and 2007 counts, there were no calves recruited into the population to offset adult mortality during those years. The 15 bulls:100 cows observed in 2007 showed a decreasing sex ratio that was below management objectives. Increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible bulls with depleted energy reserves following the rut (Dau 2004, Miller and Gunn 2003). Bull caribou die at a higher rate than cows due to greater energy demands during early winter rutting activities which greatly reduce their body reserves (Russell et al. 1993, Miller and Gunn 2003).

During the calving season in spring of 2008, intensive predator management began by culling 28 wolves on SAPCH calving grounds (ADF&G 2010). Calf survival showed a marked increased in October 2008 to 39% and continued to increase to 47% in 2010. Bull:cow ratios also increased from 10 bulls:100 cows in 2008 to 28 bulls:100 cows in 2010 (Butler 2010).

In 2009 and 2010, the bull:cow ratios were 21:100 and 28:100 which are above the minimum 20 bulls:100 cows stipulated in the SAPCH Operational Plan. The caribou population has been approximately 800 animals for both 2009 and 2010 which was an increase from the 2008 post-calving count of 700 caribou. If the 2011 post-calving count and bull:cow ratio are similar or greater than the past two years, the management objectives will have been met (3 consecutive years above 750 and bull:cow ratio is above 20 bulls:100 cows). Once the management objectives have been met, a limited harvest for Federally qualified subsistence users could be opened.

Harvest History

Historically, caribou are the most important land mammal used for subsistence in the lower Alaska Peninsula communities. Most of the reported subsistence harvest in Unit 9D occurred along the Cold Bay road system during November and December when the herd is in the vicinity of Cold Bay.

Harvest of the SAPCH was fairly high from 1980–1986. For example, in 1983, the reported harvest in Unit 9D was 262 caribou (ADF&G 2007b). Beginning in 1986, restrictive regulations reduced harvests as the population declined. By 1993, the SAPCH and UCH dropped below 2,500 and hunting was closed. Based on surveys conducted in 1997, a surplus of bulls allowed a subsistence caribou harvest on Federal public lands in Unit 9D by special action.

Harvest regulations were reestablished for Unit 9D in 2000. **Table 2** lists the total reported caribou harvest (1999–2006) for Federally qualified subsistence users and State hunters in Unit 9D.

Table 2. Unit 9D Reported Caribou Harvest 1999-2006, Southern Alaska Peninsula Caribou Herd (ADF&G 2007*b,* FWS 2007).

Year	Federal Registration Permits				State Harvest Tickets			Total Reported Harvest
	Permits Issued	Bulls Harvested	Cows Harvested		Permits issued	Bulls Harvested	Cows Harvested	
1999	0	0	0		70	46	7, 1 unk	**54**
2000	21	14	0		67	49	2, 2 unk	**67**
2001	11	7	0		69	45	4	**56**
2002	14	10	1		85	52	5, 2 unk	**70**
2003	28	5	1		64	43	1, 1 unk	**51**
2004	30	5	2		92	63	6, 1 unk	**77**
2005	101	23	1		63	36	2	**62**
2006	113	29	0		65	27	2	**58**

Current Events Involving Species

During the Alaska Board of Game meeting in March 2011, Proposal 8 requested a resident registration permit hunt be established for bulls within Unit 9D. The proposal was not adopted since the SAPCH operational plan management objective states that harvest will be discontinued when the herd is below 750 animals and the herd is in a period of decline based on 3 independent population estimates and the probability that any allowed harvest by State users would be a Tier II hunt due to the Amount Needed for Subsistence being 100-150 animals. However, during the KARAC winter meeting in 2011, area biologist Lem Butler stated that the SAPCH was “coming back pretty strong…” and that “we’d be able to propose a hunt in the near future…” once the thresholds in the management plan were achieved (KARAC 2011).

Effects of the Proposal

If this proposal is adopted, it would establish a caribou season in Unit 9D, from August 1 – March 31 with a 1 bull harvest limit. The season would be 8 months long and Federally qualified subsistence users would have an opportunity to harvest a small number of bull caribou. Additionally if this is adopted it would allow the Izembek NWR Manager to determine and announce harvest quotas and any needed closures

after consultation with ADF&G, which will give regulatory flexibility to change the allowable harvest with fluctuations of caribou population and to close the hunt based on conservation concerns or once the quota has been met.

OSM CONCLUSION

Support Proposal WP12-37 **with modification** to split the season dates to the last pre-closure season which allows recovery time after the rut.

The modified regulation should read:

Units 9D — Caribou

1 bull caribou by Federal registration permit only. Quotas and any needed closures will be announced by the Izembek Refuge Manager after consultation with ADF&G.	~~*No Federal Open Season*~~ ***Aug. 1 – Sept. 30*** ***Nov. 15 – Mar. 31***

Justification

Calf survival has shown a marked increase from 2008 until the present. The recruitment of calves into the SAPCH has reversed the negative population trend. Bull:cow ratios have also increased from 10 bulls:100 cows in 2008 to 28 bulls:100 cows in 2010. If the 2011 post-calving count and bull:cow ratio are similar or are greater than the past two years, the management objectives will have been met (3 consecutive years above 750 and bull:cow ratio is above 20 bulls:100 cows). The Izembek NWR manager has proposed a season from Aug. 1 – Sept. 30 and Dec. 1 – Mar. 31 to allow for more recovery time after the rut. There has been debate on whether harvest of caribou directly after the rut is important to subsistence users. As outlined in the SAPCH Operational Plan, when the thresholds to allow a harvest have been met and a small harvestable surplus may exist for Federally qualified subsistence users within Unit 9D to harvest 1 bull caribou by Federal registration permit only. The Izembek NWR Manager will determine and announce harvest quotas and any needed closures after consultation with ADF&G which will give regulatory flexibility to change the allowable harvest with fluctuations of caribou population and to close the hunt based on conservation concerns or once the quota has been met.

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KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-37. This proposal establishes a season and harvest limit for caribou in Unit 9D that will allow the inseason manager, after consulting with ADF&G, to allow a harvest when biological thresholds are met. This proposal is needed since two of the three thresholds (bull:cow, cow:calf ratios; 1000 animal herd size) have already been reached, and the third may be reached in the near future.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-37: Reopen Unit 9D federal subsistence caribou hunt if the herd is rebounding.

Introduction: This proposal requests re-establishing a federal subsistence caribou hunt in Unit 9D. All caribou hunting in Unit 9D are currently closed due to conservation concerns. This proposal was submitted as a regulatory process place holder in expectation that the Unit 9D caribou herd will rebuild to a point that harvestable surplus will become available by the time the Federal Subsistence Board meets to discuss this proposal.

Impact on Subsistence Users: If adopted, federally qualified subsistence hunters will be allowed to harvest caribou in Unit 9D at a level that still needs to be determined. Currently, all hunting has been closed in the area due to extremely low caribou population levels, bull:cow ratios, and calf recruitment.

Opportunity Provided by State: State regulations currently prohibit hunting caribou in Unit 9. This hunt was closed by emergency order in 2007 due to low population levels.

Conservation Issues: The Unit 9D caribou population declined rapidly after reaching a peak in 2002. This decline was associated with very poor calf recruitment, which in turn reduced the bull:cow ratio. According to guidelines established in the 2008 Southern Alaska Peninsula Caribou Herd Operational Plan, there is to be no hunting of this herd when the population size is less than 1,000 caribou and the bull ratio is below 20 bulls:100 cows. The plan also recommends that the bag limit be limited to only bulls until the herd reaches a population size of 2,000. Recent actions by the State to reduce wolf predation stopped the decline and initiated the recovery of the herd. This rebuilding effort is expected to provide a small harvestable surplus in the near future when the herd exceeds the threshold of 1,000 caribou and the bull:cow ratio nears the management objective. This proposal was submitted to establish the permit hunt structure that will eventually be used to offer federal subsistence opportunity once the population has rebounded enough to provide harvest. If the herd has rebuilt to meet operational plan goals, it is unlikely a limited harvest would have any negative impact on the herd. However caribou hunts during the rut are not recommended because they are disruptive to the herd and the meat from harvested bulls is of poor quality. Hunts during winter months (November to March) result in high rates of wounding loss and cow harvest. The impact of the harvests must to be evaluated with these facts in mind.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal will create enforcement problems in areas with mixed land ownership. Hunters, as well as state and federal administrators, may have difficulty distinguishing between state and federal lands in Unit 9D.

Other Comments: The department will continue to evaluate the herd relative to the population threshold established in the Southern Alaska Peninsula Caribou Herd Operational Plan. Population counts during the last 2 years (2010 and 2011) were not conducted due to poor weather conditions that have persisted in the area during the last 2 summers. Attempts to enumerate the herd and evaluate the population's status will be repeated during herd aggregations during fall rut and post-calving. At that time, state managers will determine if the herd meets the required population level, bull:cow and calf:cow ratios.

Recommendation: Support with modification. The department recommends adopting this proposal with modifications. Season dates should be limited to the fall (Aug 10 to Sept 20) and should not include dates associated with rutting behavior (Sept. 20 to Nov. 10) or high rates of wounding loss and cow harvest (Nov. 1 to March 31). Winter hunts will be recommended when the herd has recovered sufficiently to accommodate high harvest rates and cow harvests.

The department also recommends a clear statement that the Alaska Department of Fish and Game will be consulted on hunt openings, closings, and harvest quotas. Additionally it should be acknowledged during discussions of this proposal that the intent is to create a hunt structure to issue permits in the future, but that no permits will be issued until the herd is above the recommended thresholds laid out in the 2008 operational plan. The status of the herd and its ability to sustain harvest remain in question at this time, and further action by the state to reduce predation rates may be needed if human harvest is authorized. Coordination between state and federal managers is important at all stages of population growth, but it is critically important when herd size is small and harvest is questionable.

WP12-38 Executive Summary	
General Description	Proposal WP12-38 seeks to extend the Unit 10, wolf hunting and trapping seasons and increase the wolf hunting harvest limit. *Submitted by the Kodiak Aleutians Regional Advisory Council*
Proposed Regulation	**Unit 10 — Wolf Hunting** *~~5~~* ***10*** *Wolves/**day*** *Aug. 10–~~April~~* ***June*** *30* **Unit 10—Wolf Trapping** ***Unit 10*** *No limit* *Nov. 10–~~Mar. 31~~* ***June 30***
OSM Conclusion	**Oppose**
Kodiak/Aleutians Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-38

ISSUES

Proposal WP12-38, submitted by the Kodiak Aleutians Regional Advisory Council (Council), seeks to extend the Unit 10, wolf hunting and trapping seasons and increase the wolf hunting harvest limit.

DISCUSSION

Proposal WP12-38 requests that the wolf hunting and trapping seasons for Unit 10 be extended through June 30 and that the harvest limit for wolf hunting be increased from 5 per year to 10 per day. These changes would align State and Federal regulations and will provide additional subsistence hunting and trapping opportunities.

Existing Federal Regulations

Unit 10 — Wolf Hunting

5 Wolves	*Aug. 10–April 30*

Units 10 — Wolf Trapping

No limit	*Nov. 10–Mar. 31*

Proposed Federal Regulations

Unit 10 — Wolf Hunting

*~~5~~ **10** Wolves/**day***	*Aug. 10–~~April~~ **June** 30*

Unit 10—Wolf Trapping

Unit 10

No limit	*Nov. 10–~~Mar. 31~~ **June 30***

Existing State Regulations

Unit 10— Wolf Hunting

10 Wolves/day	*Aug. 10–June 30*

Units 10—Wolf Trapping

No limit	*Nov. 10–June 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 10, all of which is managed by U.S. Fish and Wildlife Service (USFWS)(see **Unit 10 Map**). All of the USFWS land is part of the Alaska Maritime National Wildlife Refuge.

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 10.

Regulatory History

Since 1990, the Federal subsistence hunting season for wolves in Unit 10 has been August 10 to April 30. Between 1990 and 1994 the Federal harvest limit in Unit 10 for hunters was two wolves. In regulatory year 1994/95 the harvest limit was raised to 5 wolves based on action taken by the Federal Subsistence Board on a proposal submitted by the Alaska Department of Fish and Game and supported by the Council. Since 1990 the Federal subsistence wolf trapping season in Unit 10 has been November 10 to March 31 with no harvest limit.

The USFWS in cooperation with ADF&G developed an Environmental Assessment (EA) (USFWS 2010) to respond to the declining Unimak Island caribou herd in accordance with the National Environmental Policy Act. The EA was used as a resource guide for the USFWS decision in selecting a management action that addresses the declining Unimak Island caribou herd in a manner that is consistent with, and necessary to achieve, the Refuge mission and purposes under the ANILCA, Wilderness Act, and the National Wildlife Refuge System Improvement Act (USFWS 2010). The preparation of this EA followed the 2010 Alaska Board of Game establishment of the "Unimak Wolf Management Area" (ADF&G 2010) to conduct a predator control management action to increase the Unimak Island Caribou Herd and restore it to sustainable numbers sufficient to allow hunting again by Federally qualified subsistence users (ADF&G 2010). In March the USFWS (USFWS 2011) decided that the No Action alternative from the EA provided the best balance of conservation of fish and wildlife populations and habitats in their natural diversity, providing continued opportunity for subsistence, and protecting the wilderness character Unimak Island.

At its 2011 meeting, the Alaska Board of Game liberalized the wolf hunting and trapping regulations for Unit 10. The State wolf hunting and trapping seasons for Unit 10 were extended to June 30 and the harvest limit for hunters was increased from 5 wolves per year to 10 wolves per day. ADF&G approved an Emergency Order (number 04-01-11) to make these changes for the remainder of the 2010/11 regulatory year and the Alaska Board of Game adopted these changes into regulation beginning July 1, 2011.

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves occur on Unimak Island of Unit 10, but only occur rarely on other islands that are west of Unimak Island. Peterson (1967) reported that wolves had occasionally immigrated to other islands of Unit 10, by crossing on ice flows. While there is very little biological information about wolves on Unimak Island, general information about the species is available from research in other parts of Alaska. Wolves are opportunistic carnivores; prey species on Unimak Island likely include caribou, small mammals, birds, salmon and various marine species that are available along the coast. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves

form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves (Meier et al. 2006, Adams et al. 2008). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance. Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, Adams et al. concluded that the risks of reducing wolf populations through regulated harvest are quite low.

There is very little information on Unimak wolf numbers as an actual wolf survey has never been conducted. The information that is available for Unimak Island has been derived from infrequent, anecdotal observations or inference. Izembek NWR staff has reported incidental sightings of wolves on Unimak Island during caribou surveys (Hoffman 2011, pers. Comm.; **Table 1**). The population of wolves on Unimak Island depends on emigration of wolves from the mainland to provide genetic diversity (Keller and Waller 2002, Thraill et.al. 2009). In 1994, Izembek National Wildlife Refuge staff provided a rough estimate of 15 wolves present on Unimak Island based on observations over 5 years and anecdotal information from activities at known denning sites (USFWS 1994).

Table 1. Dates and number of wolves observed by Izembek National Wildlife staff during caribou surveys (Hoffman 2011, Pers. Comm.)

Date	Number of wolves observed
April 30 - 2 May, 2007	6 (one dead)
March 15-16, 2010	11 (on the north half of the island)
February 1, 2010	3
April 15, 2011	9

Butler (2006) reported that wolves occur at low to moderate densities on Unimak Island. ADF&G estimated that between 20–30 wolves occupy Unimak Island in 2–5 packs, based on an extrapolation from densities on the neighboring Alaska Peninsula and considering ungulate availability on Unimak Island, (USFWS 2010). Both the USFWS and ADF&G have been working to learn more about Unimak Island wolves.

Harvest History

Hunters occasionally take wolves opportunistically on Unimak Island in the fall and early spring when they are hunting other species. A very limited amount of wolf trapping occurs in the False Pass and Unimak Island area (Fall et al. 1996). There is very little information available about subsistence uses of wolves in Unit 10.

Wolves harvested by trapping and hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. From regulatory years 1999/2000 to 2009/10, the reported historic harvest of wolves in Unit 10 ranged from 0 to 4 wolves per year (ADF&G 2011, **Table 2)**. Most were harvested in the months of September and October. The two guides operating on Unimak Island during the fall hunts (Oct. 1–Dec. 31) have reported all of the reported

Table 2. Reported wolf harvest and method of take for Unit 10, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Method of take for total harvest from Unit 10				
		Trap/snare	(%)	Shot	%	Unknown
1999/2000	0	0	0	0	0	0
2000/01	2	0	0	2	100	0
2001/02	2	0	0	1	50	1
2002/03	2	0	0	2	100	0
2003/04	4	0	0	4	100	0
2004/05	0	0	0	0	100	0
2005/06	4	0	0	4	100	0
2006/07	0	0	0	0	0	0
2007/08	0	0	0	0	0	0
2008/09	0	0	0	0	0	0
2009/10	4	0	0	4	100	0

Unimak Island wolf harvest in some years (Hoffman 2011, Pers. Comm.; ADF&G 2011). Wolves are difficult animals to bring down and it is not unreasonable to assume that some additional mortality is occurring as a result of wounding loss. Butler (2009) observed that most of this area receives very little pressure and historic harvests have had little effect on the wolf population.

Effects of the Proposal

If Proposal WP12-38 is adopted, the Federal wolf hunting and trapping seasons for Unit 10 would be extended to June 30 and the harvest limit for hunters will be increased from 5 wolves per year to 10 per day. The Federal wolf hunting season would be extended by two months and the wolf trapping season would be extended by three months. A season extension into May and June, when pups are in the den and females are lactating does not occur anywhere else in Alaska Federal Regulations. These changes would provide additional subsistence hunting and trapping opportunities under Federal regulations. Currently, Federally qualified subsistence users are able to take wolves on Unimak Island under State regulations which already have the higher harvest limits and longer seasons. If the proposal is adopted, Federal and State regulations would be aligned.

The hides of wolves taken in the spring and early summer would be of little or no commercial value, however, it is possible that the few wolves harvested by subsistence users could be used to make summer clothing and handicrafts. However, there is no available information in the literature regarding the use by Unimak Island subsistence users of wolves, most likely because the use is quite low.

In the spring, female wolves with pups normally stay closer to the den. During the denning period these females would not as susceptible to harvest by hunters and trappers since they usually do not participate in long distance hunting trips with the rest of the pack when the pups are very small. It is possible, however, that a lactating female might be harvested in May or June. If this were to happen, it would most likely also result in the death of the pups.

With the liberalized State wolf hunting and trapping regulations for Unit 10 in 2011, there will likely be some additional harvest of wolves on Unimak Island. Spring brown bear hunters would be able to harvest wolves in May; the State spring brown bear season on Unimak Island is May 10–25. Residents of the village of False Pass may harvest a few wolves in May and June. The added harvest during the spring may exceed a level that can be supported biologically by the Unimak Island wolf population.

The wolf population on Unimak Island should be monitored to assess the biological impact of liberalized State harvest regulations. Targeted wolf surveys should be done to assess the impact of the change in State season and limits on the Unimak Island wolf populations.

OSM CONCLUSION

Oppose Proposal WP12-38.

Justification

The wolf population on Unimak Island is estimated between 15–30 animals and reported historic harvest has ranged from 0–4 animals. Given the small size of the wolf population, increasing the hunting harvest limit to 10 per day and extending both the hunting and trapping seasons, would violate recognized principles of fish and wildlife conservation. The proposed regulatory change could: allow more than ½ of the wolf population to be harvested in one day; allow harvest of animals whose pelts are not in prime condition; and allow harvest of lactating females in May or June resulting in the death of pups.

Currently, Federally qualified subsistence users can harvest wolves under changed State hunting and trapping regulations; which are more liberal. The State regulations became affective in spring 2011 and there has not been time to evaluate the impact of these changes.

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KODIAK/ALEUTIANS SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-38. This proposal would align Federal with existing State regulations and provide more hunting and trapping opportunities for subsistence users.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-38: This proposal requests the liberalization of the federal subsistence wolf hunting and trapping seasons and bag limits in Unit 10.

Introduction: The proponent requests the federal subsistence wolf hunting season and bag limit be increased in Unit 10 by lengthening the hunting season by two months from August 10 through April 30 to August 10 through June 30 and raising the bag limit from an annual limit of 5 wolves to a daily limit to 10 wolves per day. The proponent also requests the Federal Subsistence Board liberalize the trapping season from November 10 through March 31 to November 10 through June 30. The intent of this proposal is to align federal subsistence and state hunting and trapping regulations in Unit 10 following the Alaska Board of Game March 2011 adoption of a liberalized season and bag limit for Unit 10.

Opportunity Provided by State: In Unit 10, the following wolf hunting regulations will be effective for 2012: Ten wolves per day; residents and nonresidents; season August 10 through April 30; tag required for nonresidents; hide must be sealed within 30 days of kill. In Unit 10, the state trapping season is November 10 through March 31 The following trapping regulations will be effective for 2012: No harvest limit, seas November 10 through June 30.

Conservation Issues: None. Current harvest is insignificant. Wolf distribution in the Aleutians is limited to Unimak Island. It is unlikely that wolves will disperse to other Aleutian Islands because of the distance between Unimak Island and other Aleutian Islands. Because wolf trapping can only occur on islands with wolves, wolf trapping does not occur on the majority of islands in Unit 10. Adoption of this proposal is not expected to result in benefits for wolf conservation or federal subsistence use of wolves in Unit 10.

Other Issues: Federal and state regulations are currently misaligned creating user confusion.

Enforcement Issues: Alignment of the state and federal hunting and trapping regulations would serve to alleviate enforcement difficulties.

Recommendation: Support.

WP12-24 Executive Summary	
General Description	Proposal WP12-24 requests a season be established for one bull caribou from Aug. 1 – Sept. 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve. *Submitted by Cheesh' Na Tribal Council*
Proposed Regulation	*Unit 11 —* ***1 bull caribou by Federal registration permit only.**** ***Aug. 1 – Sept. 30*** ***Quotas and any needed closures will be announced by the Federal in-season manager after consultation with ADF&G.***
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Support**
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	**1 Oppose**

STAFF ANALYSIS
WP 12-24

ISSUES

Proposal WP12-24, submitted by Cheesh' Na Tribal Council, requests a season be established for one bull caribou from Aug. 1– Sept. 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve.

DISCUSSION

The proponent requests a season to be open from August 1 – Sept. 30 for one bull caribou by Federal registration permit. Any quotas and closures will be announced by the Federal in-season manager after consultation with Alaska Department of Fish and Game. The proponent states that there is a small harvestable surplus available within this herd and that Federal subsistence users should be able to harvest it.

There has been no open season for the Mentasta caribou herd since 1992, other than a small ANILCA, Title VIII, §804 harvest from 1996–1998 due to management objectives as stated in the Mentasta Caribou Herd Cooperative Management Plan not being met for calf production and recruitment (NPS 1995).

Existing Federal Regulation

Unit 11	*No Federal open season*

Proposed Federal Regulation

Unit 11 — ***1 bull caribou by Federal registration permit only.****	***Aug. 1 – Sept. 30***
Quotas and any needed closures will be announced by the Federal in-season manager after consultation with ADF&G.	

Existing State Regulation

Unit 11	*No State open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and within those consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) lands (**Map 1**).

Special Requirements for Park Service Lands

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.

Customary and Traditional Use Determinations

In Unit 11 north of the Sanford River, rural residents of Units 11, 12, 13A, 13B, 13C, 13D, Healy Lake, Chickaloon and Dot Lake have a positive and customary use determination for caribou. In Unit 11 remainder, rural residents of Units 11, 13A, 13B, 13C, 13D, and Chickaloon have a positive and customary use determination for caribou.

Regulatory History

In 1993, Proposal 93-94 was adopted by the Federal Subsistence Board (Board) to close Federal public lands to caribou hunting in Unit 11. The combination of low caribou numbers and low recruitment were direct indicators of a continuing conservation concern which warranted protection of this small caribou population. Under ANILCA Section 815(3), restricting the taking of fish and wildlife on Federal public lands can be authorized if necessary for the conservation of healthy populations.

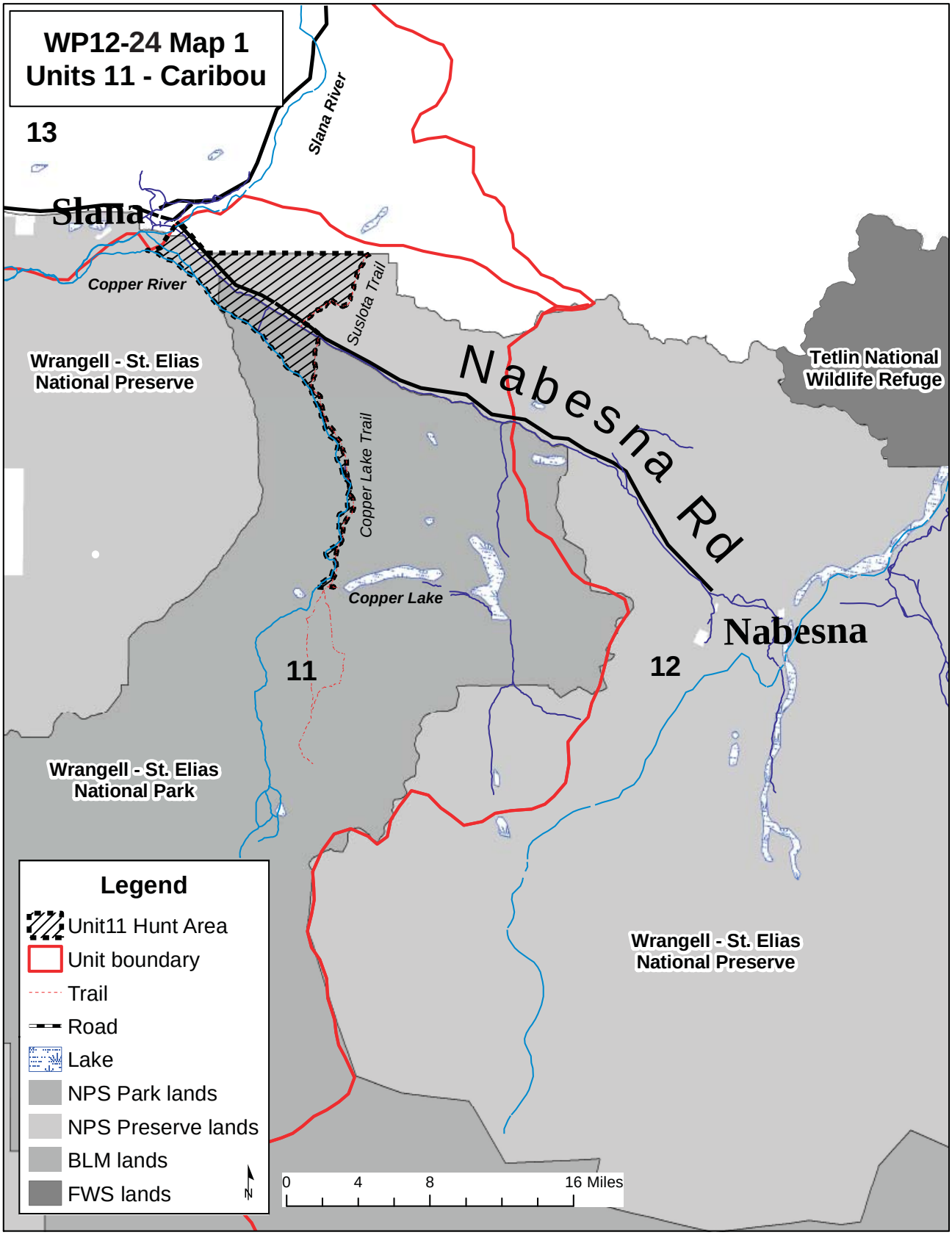
In 1996, the National Park Service (NPS) proposed (Proposal 17) establishing a limited caribou hunt (15-bull quota) based on the objectives of the "Mentasta Caribou Herd Cooperative Management Plan (1995)," which was signed by Wrangell-St. Elias NPS, the Alaska Department of Fish and Game, and Tetlin National Wildlife Refuge. The cooperative plan was also endorsed by both the Southcentral and Eastern Interior Subsistence Regional Advisory Councils. The management objectives in the cooperative plan were based on productivity and not the population size. Therefore the cooperative plan called for establishing a limited hunt despite a declining population due to increased productivity. In 1996, the Board adopted Proposal 17 with modification to reopen the caribou season only to residents of Chitina, Chistochina, Copper Center, Gakona, Gulkana, Mentasta, and Tazlina with a quota of 15 bulls. In 1998, Proposal 23 was adopted by the Board to close all caribou hunting within Unit 11 because calf recruitment was below management objectives stated in the Mentasta Caribou Herd Cooperative Management Plan (1995). The Alaska Department of Fish and Game supported the closure because the State season for Mentasta caribou in this area had been closed for several years.

Management Direction

The Mentasta Caribou Herd Management Plan (1995) states "an annual fall harvest quota will be established between 15 and 20 percent of the previous 2-year mean calf recruitment as long as such recruitment is at least 80 calves. In addition, at population levels below 2,000 the harvest limit will be limited to "bulls only" and will be closed if the 2-year mean bull:cow ratio drops below 35 bulls:100 cows".

In addition, the plan states "winter hunts for the Nelchina and Forty-mile caribou herds, may result in incidental harvest of Mentasta caribou and should be managed to minimize the effect on the Mentasta population. When quotas are below 30, permits will be allocated among these Federal subsistence users in accordance with a priority system based on: 1) customary and direct dependence upon the resources as the mainstay of one's livelihood; 2) local residency; and 3) availability of alternative resources (ANILCA, Sec. 804)".

The Cheesh'Na Tribal Council does not consider the Mentasta caribou a separate herd from the Nelchina herd (SCRAC 2011). Wilson Justin, the legal representative of the Cheesh'Na Tribal Council stated at the Southcentral Regional Advisory Council that,


WP12-24 Map 1
Units 11 - Caribou
13
Slana
Slana River
Copper River
Suslota Trail
Wrangell - St. Elias
National Preserve
Nabesna Rd
Tetlin National
Wildlife Refuge
Copper Lake Trail
Copper Lake
Nabesna
11
12
Wrangell - St. Elias
National Park
Wrangell - St. Elias
National Preserve
Legend
Unit11 Hunt Area
Unit boundary
Trail
Road
Lake
NPS Park lands
NPS Preserve lands
BLM lands
FWS lands
N
0
4
8
16 Miles

> "there never was a Mentasta herd. There's only two caribou around, the big medicine people's bull caribou, sometimes called the Glacier Caribou and then the Nelchina Herd…We never considered them as Mentasta or Chisana Herd, they were always just portions of the Nelchina Herd that didn't move out…So I object to the terminology, it's not Mentasta Caribou, it's nothing more than Nelchina Caribou and they have come there sometimes staying over through the winter into the summer in large numbers, sometime in small numbers, depending directly on predation, hunting pressure or in many cases the food source. So this number of 3,000 down to 400 is erroneous, it should not be used for managing that game. The Cheesh'Na does not believe that the game management unit boundaries under any conditions should ever be used to determine community harvest and access of those resources that are directly related to that community under all conditions."

Biological Background

Management of caribou herds in Alaska has been based on the site fidelity of caribou cows to discrete calving grounds (Skoog 1968, Hemming 1971, Gunn and Miller 1986) and aggregating together for at least a major portion of the year (Miller 1982). Cows that calve together typically also remain together during the rut which suggests that caribou with a herd are breeding together. Population dynamics of caribou are defined by geographic units rather than one large interbreeding population which requires that individual herds be managed separately (Hinkes et al. 2005). There are conflicting views on the role of animal exchange between caribou herds or between calving grounds and its effect on altering demographics (Bergerud 2000). Changes in caribou abundance may be due to changes in distribution and go undetected due to limitations of census efforts (Bergerud 2000). Adjacent herds seldom have concurrent censuses which make it difficult to identify the major shifts of caribou movement between herds. However, major shifts in calving ground use to that of another herd are presumed to be minimal (Gunn and Miller 1986, Valkenburg et al. 2002).

The Mentasta caribou herd is the primary herd within Unit 11 and calves and summers within the upper Copper River Basin, and northern and western flanks of the Wrangell Mountains (Putera 2011). Barten et al. (2002) found that parturient female caribou from the Mentasta herd used birth sites that lowered the risk of predation and traded-off forage abundance for increased safety. Minimizing risk of predation of neonates may result in ungulates selecting habitats that compromise their ability to optimize foraging (Bowyer et al. 1999, Barten et al. 2001). Female Mentasta herd caribou used sites at higher elevations with sub-optimal forage, presumably to avoid predators, and when <10 day old neonates were lost, females descended from the higher elevations to join other nonparturient females. In addition, females with neonates >10 days old also descended to join the larger group of females which coincides with moving out of the riskiest period of predation on ungulate neonates (Adams et al. 1995).

Population surveys conducted between 1987 and 1991 revealed continued declines in both total numbers and calf:cow ratios, more specifically, results from a 1991 survey revealed a critically low calf:cow ratio of 3 calves:100 cows (FWS 1992). These results may have been due to a total reproductive failure within the MCH for that year and may be due to sub-optimal nutrition for caribou cows. Poor forage quality in the summer can cause cow caribou to skip a breeding season to regain body condition due to being nutritionally stressed. The resulting decrease in body condition in female caribou can have a negative effect on productivity by causing lower weight gain or survival in calves (Crete and Huot 1993, Dale 2000).

From the 1987 fall population estimate of 3,160 animals, the herd steadily declined to the 2010 fall estimate of 336 caribou (Putera 2011, pers. comm.) (**Table 1**). The 1993–2005 population estimates

Table 1. Results from 1987–2010 population surveys of the Mentasta Caribou Herd, Unit 11 (Putera 2011, pers. comm.).

Year	June Calves:100 Cows	Fall Cows	Fall Calves	Fall Bulls	Fall Calves:100 Cows	Fall Bulls:100 Cows[7]	Fall Population Estimate[1]
1987	18	2065	248	847	12	41	3160
1988	34	1540	277	662	18	43	2480
1989	31	1615	727	258	16	45	2600
1990	-	-	-	-	-	-	-
1991	3	1347	27	566	2	42	1940
1992	16	973	58	399	6	41	1430
1993	9	683	27	260	4	38	970
1994	19	591	65	224	11	38	880
1995	26	541	119	189	22	35	850
1996	16	534	59	187	11[2]	35[2]	780
1997	15	432	23	159	5	40	610
1998	13	350	35	150	10	42	540
1999	13	230	22	177	10	77	430
2000	1	297	0	175	0	59	470
2001	11	228	12	150	5	66	586[5]
2002	21	190	55	86	29	45	410[5]
2003	17	223	38	101	16	46	522[5]
2004	8	-	-	-	5[3]	-	293[4]
2005	23	113	17	78	15	69	261
2006	-	-	-	-	-	-	-
2007	23	93	27	72	29	77	280
2008	14	89	18	65	20	73	319[6]
2009	12	79	8	68	10	86	421[6]
2010	25	88	22	106	25	120	336[6]

[1] September population estimates are based on # of cows at time of postcalving count and fall calf/bull/cow ratios

[2] 1996 fall composition count was not conducted because of early mixing with Nelchina herd. Fall calf/cow was estimated from postcalving calf/cow ratio and survival radiocollared cows (.70; 30 June –30 September). Fall bull/cow ratio is assumed to be the same as 1995.

[3] 2004 fall comp count was not conducted due to budget. Fall calf/cow was estimated from post-calving calf:cow ratio and average (1987–2003) calf survivorship (0.63)

[4] 2004 population estimate is based on extrapolation from June census, adjusted for average calf survivorship and average bull ratios.

[5] September population estimates are adjusted based on sightability probabilities.

[6] September population estimates are adjusted based on sightability probabilities and assuming a ratio of 30 bulls:100 cows within Mentasta herd to adjust for mixing of Nelchina bulls.

[7] Observed high bull:cow ratios likely due to presence of Nelchina bulls.

ranged from 970 to 261 animals (post-closure trend) and population estimates that have been adjusted for sightability probabilities show an average of 350 caribou since 2008 (range 319–421) (Putera 2010, pers. comm.). Results from June post-calving and fall post-rut surveys for the period revealed critically low calf production and survival. Fall surveys conducted between 1987 and 2009 revealed severe declines in total observed cows from 2,065 to 79, respectively (Putera 2010, pers. comm.).

Fall surveys conducted within the same 23-year period also revealed severe declines in total observed Mentasta bulls from 847 observed in 1987 to 68 bulls observed in the fall 2009 survey (**Table 1**). Although observed fall bull:cow ratios appear high, the number of cows observed is small and the bull component likely includes a significant number of Nelchina bulls. The number of Mentasta bulls per 100 cows has been difficult to determine during fall composition counts due to the presence of Nelchina bulls within the Mentasta herd range in September. Given the years of low Mentasta herd recruitment, recent population estimates for the herd are calculated using a ratio of 30 bulls per 100 cows. While Nelchina bulls have wintered within the range of the Mentasta herd (Putera 2011), the range of the Nelchina herd has varied widely due to burns and their effect on lichen availability within their traditional area (Collins et al 2011). Thus, there is limited ability to predict the extent or frequency of mixing between Nelchina and Mentasta bulls and impossible to discern whether the harvest of a bull would be from the Nelchina or Mentasta herd. Higher numbers of adult bulls in the population are important as it helps maintain synchrony in parturition. Holand et al. (2003) showed skewed sex ratio and increased young male age structure of reindeer could result in fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls. Maintaining synchrony in parturition also provides increased survival chances for calves since parturition is typically timed with the start of plant growth (Bergerud 2000). Late-born offspring have been shown to have lower body mass than caribou offspring produced earlier in the season (Holand et al. 2003) which can lead to lower juvenile survival rates due to density dependent factors of winter food limitation (Skogland 1985) and deep snows (Bergerud 2000).

The Mentasta caribou herd is considered a sedentary and low density ecotype (Bergerud 1996 Hinkes et al. 2005) versus a migratory and high density ecotype, such as the Nelchina herd, and thus more susceptible to extreme random events. The term ecotype designates populations of the same species that evolved different demographic and behavioral adaptations to cope with specific ecological constraints. A key factor in distinguishing between the two ecotypes is whether animals were dispersed or aggregated when young were born (Seip 1991, Bergerud 2000). The chronic low calf productivity and recruitment for the Mentasta caribou could make random environmental events a primary driver for a more severe population decline (Tews et al. 2006). Increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible calves and bulls with depleted energy reserves following the rut (Dau 2004, Miller and Gunn 2003). Bull caribou die at a higher rate than cows due to greater energy demands during early winter rutting activities which greatly reduce their body reserves (Russell et al. 1993, Miller and Gunn 2003).

Harvest History

Both annual reported harvest and success rates reflected overall declines between 1977 and 1989. The total harvest reported between 1977 and 1989 was 1,294 caribou. Annual harvest ranged from 149 animals harvested in 1977 to 45 animals in 1989 (ADF&G 1993). The average annual harvest for the 13-year period was 100 caribou (ADF&G 1993). Harvest success rates decreased from 43% in 1977 to 19% in 1989. There has been no reported harvest from the Mentasta Caribou herd since 1998 as there has been no State or Federal season.

Current Events Involving Species

Two similar proposals (WP10-102 and 103) were submitted to the Federal Subsistence Board for consideration in 2010. The Eastern Interior and Southcentral Regional Advisory Councils (EIRAC and SCRAC) recommended rejection of both proposals during their winter 2010 meetings. Both the EIRAC and SCRAC unanimously opposed the proposals based on conservation concerns for both the NCH and the MCH (EIRAC 2010, SCRAC 2010). Additionally, the TNWR Manager said "the depressed MCH cannot support additional harvest" (Booth 2009. Pers. Comm.),The Wrangell-St. Elias National Park Subsistence Resource Commission recommended rejection, as did the Office of Subsistence Management in its recommendation to the Federal Subsistence Board. Proposal WP10-102 requested that harvest limit be raised from one caribou to two caribou in Unit 12 remainder. Proposal WP10-103 requested the season opening date be put into regulation and start on October 21st. Ultimately, the proposals were placed on the consent agenda with a recommendation of reject and the Federal Subsistence Board concurred. The June 2009 Nelchina caribou herd census showed approximately 33,000 caribou (ADFG 2009a), a little below the State's management objective of 35,000–40,000 caribou. During the EIRAC 2010 winter meeting TNWR, staff reported that Mentasta Caribou had been observed within the boundaries of the TNWR during their fall surveys. Wrangell St. Elias National Park and Preserve staff reported the MCH herd was approximately 450 animals and could not sustain a hunt (EIRAC 2010, Putera 2010). The most recent census of the MCH was conducted in 2010 and resulted in a population estimate of 336 animals. This census also noted that the cow component of the population was critically low and calf production was below management objectives in the Mentasta Caribou Herd Management Plan (Putera 2011). While the MCH is present on the refuge during the winter caribou hunt, it is unknown how many Mentasta Caribou are mixing with the NCH (EIRAC 2010).

Effects of the Proposal

If WP12-24 is adopted, it would allow a harvest on a population that has chronically low productivity which would have detrimental effects on the caribou herd and ultimately subsistence users, by driving the population of the herd to the point where recovery is more difficult. The additional harvest is unlikely to have any biological effect on the NCH. However, impacts to the MCH are a conservation concern and deters from the principles in the MCH management plan. While it is known that the MCH migrates with the Nelchina herd, it is not known with certainty how many Mentasta caribou mix with the NCH.

OSM CONCLUSION

Oppose Proposal WP12-24

Justification

The Mentasta Caribou herd as currently defined exists in low numbers and their occupation of summer and winter ranges results in small groups distributed as a fragmented population. Because of this, total numbers and composition can be significantly affected by sightability when searching for small groups of caribou over vast terrain. Mixing of the Nelchina and Mentasta caribou bulls makes interpreting fall composition surveys difficult and there is limited ability to predict the extent, timing or frequency of mixing between the two herds and it would be impossible to discern whether the bull was from the Mentasta herd or the Nelchina herd. The possibility of increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible bulls with depleted energy reserves following the rut furthering the decline of the Mentasta caribou population. In addition, calf production and survival remain critically low and have resulted in low numbers of adult cows and bulls observed during the fall population surveys. Calf production and recruitment in particular remains below the

management objective of a running two-year mean fall calf recruitment greater than 80 calves, as stated in the "Mentasta Caribou Herd Cooperative Management Plan (1995)." These declines are indicative of low production, poor recruitment, and low survival rates among cohorts within the population.

Federal public lands within Unit 11 should remain closed to caribou hunting for the conservation of a healthy population (Section 815(3)).

In October, 2011, the Southcentral Regional Advisory Council heard testimony from the proponent regarding the historical harvest of the Mentasta caribou herd by the people of Cheesh'Na. As a result of the testimony, the Southcentral Regional Advisory Council recommended the revision of the Mentasta Caribou Herd Cooperative Management Plan by a workgroup to update the 16 year old plan to include participants from the Cheesh'Na Tribal Council, the Wrangell-St. Elias National Park and Preserve, the Tetlin National Wildlife Refuge and the Alaska Department of Fish and Game.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council Recommendation

Support Proposal WP12-24. The Council feels that, in the event this proposal is successful, an ANILCA Section 804 analysis should be undertaken and a working group established to determine harvest levels. The Council finds the testimony of the Cheesh'na Tribal Council, questioning the numbers in the Mentasta Herd Cooperative Management Plan and traditional hunting practices and how they came to be lost, compelling.

Eastern Interior Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-24. The Council cites conservation concerns.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-23/24: Caribou Hunt GMU11 within Wrangell-St. Elias

Introduction: WP12-23 seeks to establish a hunt for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 through March 31 by Federal registration permit. If adopted, WP12-23 would allow the harvest of one bull caribou per household by Federal Registration Permit from October 21 through March 31 with a limit of 25 permits issued. The proponent states the Mentasta caribou herd co-mingles with the Nelchina caribou herd within the requested hunt area and they believe that most the harvest would be from the Nelchina herd. The proponent states that while there is an opportunity to harvest caribou in other nearby locations, they are not traditional harvest locations and the expense in cash and time continue to place a burden on people with a heavy reliance on wild foods.

WP12-24 seeks to establish a season for one bull caribou from August 1 through September 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve.

Impact on Subsistence Users: More caribou would be harvested by Federal registration permit in a new area possibly at the long term expense of the herd and continuance of subsistence uses.

Opportunity Provided by State: No open season.

Conservation Issues: If adopted these proposals would allow harvest of a population known for chronically low productivity. Such harvest would have detrimental effects on the caribou herd and ultimately subsistence users, by driving the population of the herd to the point where recovery is more difficult.

Enforcement Issues: Both proposals would further malign state and federal regulations.

Other Comments: The guidelines set forth for a harvest in the management plan are based on the 2010 census in which the herd met the required population level, bull/cow and calf cow ratios.

Recommendation: Oppose

WRITTEN PUBLIC COMMENTS

Oppose. The commission opposes the proposal due to serious conservation concerns about the Mentasta caribou herd. The herd is too small to sustain a harvest. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-25 Executive Summary	
General Description	Proposal WP12-25 requests the Unit 13 caribou fall harvest season be extended an additional 9 days from Aug.10 – Sept. 30 to Aug. 1 – Sept. 30. *Submitted by the Ahtna Tene Nene' Customary and Traditional Use Committee*
Proposed Regulation	**Unit 13—Caribou** *Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.* — ***Aug. 1***. ~~*Aug. 10*~~ *– Sept. 30* *Oct. 21–Mar. 31* *Unit 13 remainder—2 bulls by Federal registration permit only.* — ***Aug. 1*** ~~*Aug. 10*~~ *– Sept. 30* *Oct. 21–Mar. 31* *Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.*
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
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. The ISC finds that the potential negative impacts to calf survival and recruitment resulting from adding nine days in early August to the current 210 day season is a valid concern and believes adoption of the proposal would violate recognized principles of fish and wildlife conservation. Additional hunting pressure during this time period not warranted; it would further diverge State and Federal regulations, create additional enforcement issues, and increase the likelihood of meat spoilage.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP12-25

ISSUES

Proposal WP12-25, submitted by the Ahtna Tene Nene' Customary and Traditional Use Committee, requests the Unit 13 caribou fall harvest season be extended an additional 9 days from Aug. 10 – Sept. 30 to Aug. 1 – Sept. 30.

DISCUSSION

The proponent requests that the harvest season be extended to allow Federally qualified subsistence users an additional 9 days of hunting opportunity. The proponent states that there will be no impact on the Nelchina caribou herd (NCH) population since the State and Federal administered hunts can be closed if the annual harvest quota is reached.

Existing Federal Regulations

Unit 13—Caribou

Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Unit 13 remainder—2 bulls by Federal registration permit only.	*Aug. 10–Sept. 30* *Oct. 21–Mar. 31*
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Proposed Federal Regulations

Unit 13—Caribou

Units 13A and 13B—2 caribou by Federal registration permit only. The sex of animals that may be taken will be announced by the Glennallen Field Office Manager of the Bureau of Land Management in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Alaska Regional Advisory Council and the Southcentral Alaska Regional Advisory Council.	***Aug. 1***. ~~*Aug. 10*~~ *– Sept. 30* *Oct. 21–Mar. 31*

Unit 13 remainder—2 bulls by Federal registration permit only.	***Aug. 1*** *~~Aug. 10~~. – Sept. 30* *Oct. 21–Mar. 31*
Hunting within the Trans-Alaska Oil Pipeline right-of-way is prohibited. The right-of-way is identified as the area occupied by the pipeline (buried or above ground) and the cleared area 25 feet on either side of the pipeline.	

Existing State Regulations

Unit 13—Caribou

One caribou by permit. Permits are only available by application.	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*
OR	
1 caribou by permit (Community)	*Aug. 10–Sept. 20* *Oct. 21–Mar. 31*
OR	
One bull by permit (Drawing)	*Aug. 20 – Sept. 20* *Oct. 21 – Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 10% of Unit 13 and consist of 2% Bureau of Land Management (BLM), 6% Denali National Park and Wrangell-St. Elias National Preserve, and 2% Chugach National Forest lands (**Unit 13 map**). Within Units 13A and 13B, Federal public lands include BLM managed lands and comprise approximately 8% of Unit 13B and 1% of Unit 13A.

Customary and Traditional Use Determinations

UNIT(S)	CUSTOMARY AND TRADITIONAL DETERMINATION FOR CARIBOU
Units 13A and 13D	Rural residents of Units 11, 12 (along the Nabesna Road), 13, and the residents of Chickaloon.
Unit 13B	Rural residents of Units 11, 12 (along the Nabesna Road), 13, residents of Unit 20D except Fort Greely, and the residents of Chickaloon.
Unit 13C	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, Dot Lake and Healy Lake.
Unit 13E	Rural residents of Units 11, 12 (along the Nabesna Road), 13, Chickaloon, McKinley Village, and the area along the Parks Highway between mileposts 216 and 239 (except no subsistence for residents of Denali National Park headquarters).

Regulatory History

The Nelchina Caribou Herd (NCH) is an important resource for many rural and non-rural users due to its proximity to Anchorage and Fairbanks and its distribution within Units 11, 12, 13, and 20 E (Tobey 2003). A State Tier II system for NCH harvest was established in 1990 for Unit 13. A State Tier I permit was added for the 1996/97 and 1997/98 seasons to allow any Alaskan resident to harvest cows or young bulls, in order to reduce the herd to the management objective. In 1998, the Tier I hunt was closed, as the herd was brought within management objectives due to the increased harvest and lower calf recruitment. The two Federal registration hunts in Unit 13 are for residents of Units 11, 13, and residents along the Nabesna Road in Unit 12 and Delta Junction in Unit 20. Since 1998, a Federal registration hunt has been opened to residents of Unit 12, Dot Lake, Healy Lake and Mentasta between November and April when the NCH migrate through the Tetlin National Wildlife Refuge.

In 2001, the Federal Subsistence Board (Board) adopted Proposal WP01-07 which changed the harvest limit of 2 caribou to 2 bulls by Federal registration permit only for all of Unit 13.

In 2002, Proposal WP02-16 was deferred until the 2003 regulatory year when it was adopted by the Board (as WP03-14). It changed the harvest limit for Unit 13A and 13B back to 2 caribou from 2 bulls, with the harvest of bulls only during the August 10 – September 30 season. During the winter season (October 21 – March 31) the Glennallen Field Office Manager of the Bureau of Land Management was delegated the authority to determine the sex of the animals taken in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. For the remainder of Unit 13, the harvest limit remained 2 bulls for the August 10 – September 30 and October 21 – March 31 season.

In 2003, proposal WP03-14 requested that the harvest limit for caribou in Unit 13 be changed from two bulls to two caribou and that the late season be changed from Oct. 21–Mar. 30 to Dec. 1 – Apr. 20. In an effort to allow more flexibility in the harvest the Board adopted proposal WP03-14 with modification at its May 2003 meeting. The Aug. 10 –Sept. 30 season was limited to a bull only harvest, while the sex of the animals that may be taken during the winter season (Oct. 21 – Mar. 31) is to be announced by the Glennallen Field Office Manager of the BLM in consultation with the ADF&G area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. The understanding was that if the population survey results indicate that the Nelchina herd had grown to over 35,000 animals then the winter season would be open to the harvest of any caribou.

In 2005, WP05-08 was adopted by the Board for Unit 13A and 13B to allow the sex of the harvested animals to be determined by the Glennallen Field Office Manager of the BLM in consultation with the Alaska Department of Fish and Game area biologist and Chairs of the Eastern Interior Regional Advisory Council and the Southcentral Regional Advisory Council. This was in effect for the entire season (August 10 – September 30 and October 21 – March 31), not just the winter season.

Emergency Order 02-01-07 closed the remainder of the 2006–2007 State harvest season for the Nelchina Caribou Herd on February 4, 2007 due to high State hunter success in the State Tier II hunt. Likewise, Emergency Order 02-08-07 closed the 2007–2008 Tier II State subsistence harvest (TC566) on September 20, 2007 and was scheduled to re-open on October 21, 2007. However concerns that the unreported harvest of the State and Federal subsistence hunts would put the harvest over 1000 bulls and 500 cows resulted in a closure of the remainder of the season as a precaution.

For the 2009–2010 the State Nelchina caribou Tier II subsistence hunt was eliminated. Two hunts were added: a Tier I hunt (Alaskans only) and a Community harvest hunt for residents of Gulkana, Cantwell,

Chistochina, Gakona, Mentasta, Tazlina, Chitina, and Copper Center. The harvest limit for each is one caribou (sex to be announced annually) with season dates of August 10 – September 20 and October 21 – March 31 with a harvest limit of 300 caribou. All other Alaskan hunters could obtain a permit and participate in a Tier I (resident only) hunt. A Federally qualified subsistence user could opt into the community harvest system or use a State registration permit to harvest one caribou and then get a Federal permit to harvest another caribou since the Federal harvest limit is two caribou.

In July 2010, the Alaska Superior Court found that elimination of the Tier II hunt was arbitrary and unreasonable (ADF&G 2010). In response, the Board of Game met in an emergency teleconference in July 2010, and opened a Tier II hunt from October 21 – March 31, maintained the existing Tier I season, awarded up to 500 additional Tier I permits to the community subsistence harvest permit holders, and awarded additional Tier I permits to others in the original applicant pool (ADF&G 2010a).

Emergency Order 04-1-10 closed the remainder of the winter Nelchina Tier II subsistence season due to harvest reports indicating that approximately 1,404 bulls and 547 cows were harvested and unreported harvest was expected to raise the total harvest above the harvest objective (ADF&G 2010b).

Management Direction

Current ADF&G management objectives for the NCH are to: maintain a fall population of 35,000 – 40,000 caribou with a minimum of 40 bulls:100 cows and 40 calves:100 cows. In addition, the management objectives include providing the potential to harvest 3,000 – 6, 000 caribou.

Biological Background

Historically the calf:cow ratio for the NCH has been high with an average of 52 calves:100 cows (1985–1996) and is determined by June and October surveys by ADF&G. The annual harvestable surplus of Nelchina caribou is dependent on productivity and survival of calves (ADF&G 2010c). More recent (2008–2011) surveys show an average of 44 calves:100 cows which is above the management goal of 40 calves:100 cows. In October 2007, sex and age composition survey estimated ratios of 35 calves:100 cows and 34 bulls:100 cows (ADF&G 2008) and the fall survey in 2008 showed 40 calves:100 cows and 39 bulls:100 cows (ADF&G 2009a). During the most recent fall survey in 2010, 65 calves:100 cows which equates to nearly 15,000 calves or 33% of the total herd (ADF&G 2010c) and 42 bulls:100 cows were observed (ADF&G 2010c).

Between 2001 and 2008, the bull:cow ratio was below the management objective of 40 bulls:100 cows with an average of 32 bulls:100 cows. The lowest ratio of 23 bulls:100 cows was in 2006–2007 (**Table 1**). From 2008 to 2010, the average bull:cow ratio increased to 38 bulls:100 cows (**Table 1**). Hunters harvested primarily bulls in Tier II, drawing, and subsistence registration hunts despite the hunt being open for either sex (**Figure 1**).

From 2001 to 2010, the fall population estimates for the NCH have remained relatively stable with the estimated herd size between 30,000–44,000 animals (**Table 1**). In June 2007, a post-calving census estimated the NCH to be approximately 32,569 caribou (ADF&G 2008), in June 2009, the census showed approximately 33,146 caribou (ADF&G 2009a), and in July 2010 the census showed an increase to 44,954 caribou (ADF&G 2010c).

Table 1. Nelchina caribou fall composition counts and estimated herd size, regulatory years 2001 – 2010

Regulatory Year	Total bulls: 100 cows	Calves: 100	Calves (%)	Cows (%)	Total bulls (%)	Composition Sample size	Total Adults	Estimate of herd size	Postcalving[a] count
2001–2002	37	40	22	57	21	3949	26,159	33,745	35,106
2002–2003	31	48	27	56	17	1710	25,161	34,380	35,939
2003–2004	31	35	21	60	19	3140	23,786	30,141	31,114
2004–2005	31	45	26	57	17	1640	27,299	36,677	38,961
2005–2006	36	41	23	57	20	3263	28,133	36,428	36,993
2006–2007	24[b]	48[b]	25	61	14	3300	NA	N/A	N/A
2007–2008	34	35	21	59	20	3027	2395	32,569	33,744
2008–2009	39	40	22	56	22	3378	2627	N/A	N/A
2009–2010	42	29	17	58	25	3076	2553	33,835	33,146
2010–2011		65							44,954

[a] Spring census
(Tobey and Kelleyhouse 2007, ADF&G 2008, Becky Schwanke, pers. comm.)

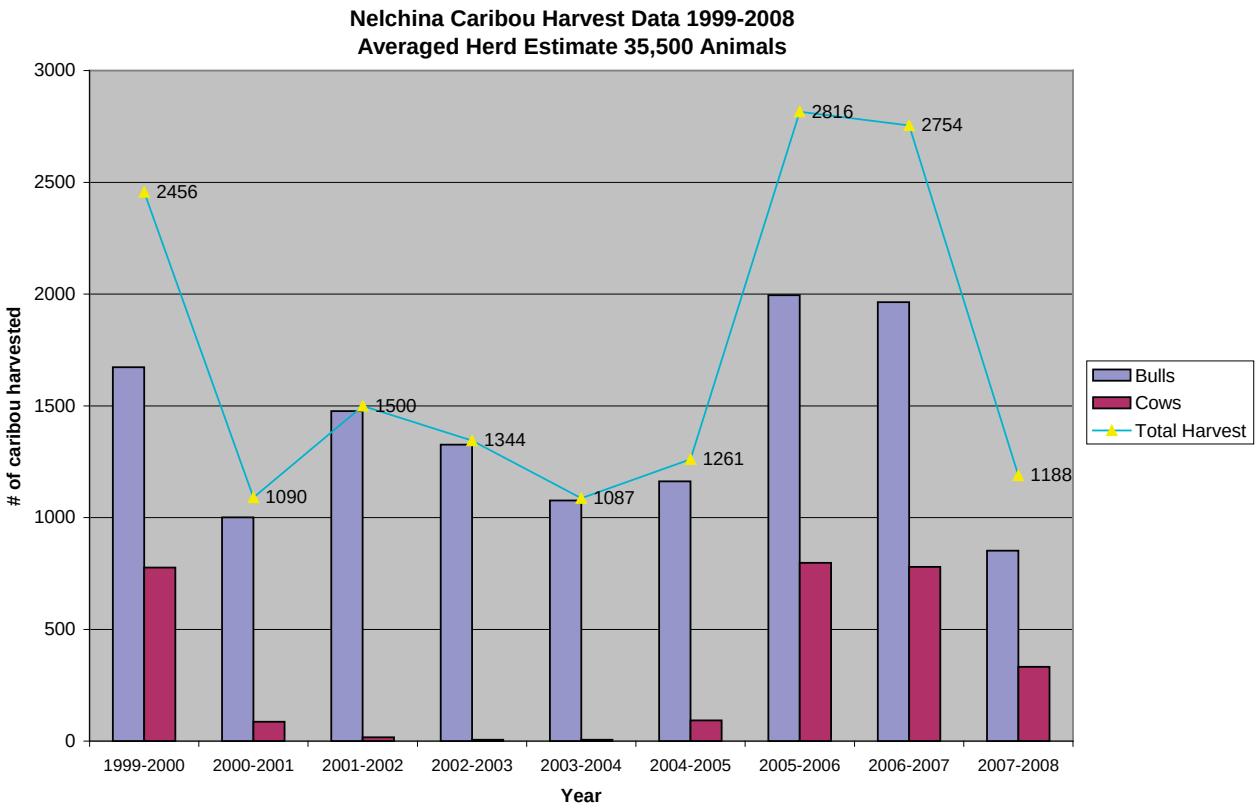

Figure 1. Nelchina Caribou Harvest Data (1999–2008) by sex of harvested animal and total harvest of all animals.

Distribution and Movements

ADF&G conducts aerial composition surveys twice each year (Tobey and Kelleyhouse 2007). In June, to determine postcalving aggregations and herd productivity and in October to ascertain bull:cow and calf:cow ratios. In addition, aerial surveys are flown in the winter to determine winter distribution. Radio-collared caribou are located seasonally to delineate herd distribution and seasonal range use.

Winter habitat for the NCH ranges from northern Unit 13 to Unit 20E. Caribou winter range in 20E is generally considered high quality due to high lichen biomass as a result of old burns (>50 years) (Dale 2000, Joly et al. 2003). In 2004, a large proportion of NCH winter range in Unit 20E burned. Many caribou still winter in 20E, although caribou now utilize adjacent unburned areas. Winter distribution for the NCH in 2006 extended into Unit 13E, across 13A and 13B, and northeast into Units 11, 12 and 20E (Tobey and Kelleyhouse 2007). In some years, a small number of caribou winter in Unit 13D and have been observed as far south as Edgerton Highway.

The eastern Talkeetna Mountains, from the Fog Lakes southeast to the Little Nelchina River, is the typical area for calving for the NCH with the core calving area extending from the Little Nelchina River north to Kosina Creek (Tobey and Kelleyhouse 2007).

Harvest History

The fall caribou season is the most popular time to hunt for State hunts (Tobey 2005) and the NCH are typically scattered widely over the western portion of Unit 13 (Schwanke 2011). Denali National Park lands within Unit 13 are on the western portion of all of Unit 13 and lie within subunit 13E. In order to hunt the Denali National Park lands, Federally qualified users must live in the resident zone community or have a 13.440 permit. Federal subsistence hunting areas on the eastern end of Unit 13 (BLM lands) may have limited number of caribou available (Schwanke 2011) during the fall season.

Successful harvests in the fall make the winter season more susceptible to emergency closures when the harvest quota is reached before the end of the season on March 31. A large percentage of NCH typically migrates out of Unit 13 in October and does not return from wintering areas in Units 11, 12 and 20E until April. Therefore success during the winter season is largely dependent upon the number of caribou that remain in Unit 13 (Tobey and Kelleyhouse 2007) and if the season has been closed due to successful harvest in the fall season reaching the harvest objective. .

Between 2004 and 2009, the State hunts (TC566/RC566) were the primary source for harvest of the NCH and accounted for 75% of the overall harvest (**Figure 2**). The Federal registration hunts (FC1302; formerly RC513/514), limited to those users with a positive customary and traditional use determination for caribou in Unit 13 are administered by the BLM and comprised 24% of the harvest between 2004 to 2009 (**Figure 2**). From 2004 to 2009, participation in the Federal registration hunt has remained relatively consistent with an average annual harvest of 420 caribou, (ranged from 273 to 610). In 2009, the joint harvest quota was 1000 caribou. The community hunt harvested 125 caribou and the total harvest from State and Federal hunts was 810 caribou for 2009–2010 (ADF&G 2010c).

The majority of the harvest occurs under State regulations on State managed land (**Figure 3**). Federal lands make up approximately 10% of total lands in Unit 13, Much of the Federal harvest occurs when caribou cross along the Richardson Highway between Paxson and Sourdough during the fall migration. Additional caribou are also available to qualified Federal user throughout the entire season in small areas of 13E near Broad Pass in Denali National Park and on BLM lands along the Denali Highway near Tangle Lakes (Tobey 2005). The harvest chronology shows that most of the State harvest occurs during August and September (**Figure 4**). Federally qualified subsistence users currently have an additional 10 day season at the end of September and the harvest within the first week of August is minimal compared with the State harvest during the same time period (**Figure 5**). In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since the average high and low temperatures from 2008–2010 are similar between the first week (57° high, 47° low) and second week (62° high, 46° low) of August (Weather Underground 2011).

Current Events Involving Species

At the BOG meeting in March 2011, Proposal 50 addressed revisions to the State caribou seasons in Unit 13. For 2011–12, State caribou hunting in Unit 13 will occur under a Tier I hunt, a subsistence harvest hunt, and drawing hunts (Schwanke 2011, personal communication).

Effects of the Proposal

If this proposal were adopted, it would add an additional 9 days to the beginning of the Federal harvest season. Giving Federally qualified subsistence users an additional 9 days prior to the opening of the State hunt would provide an additional opportunity for Federal users. However, there should be no conservation concerns for the NCH as the productivity and recruitment for the herd has been high with an average

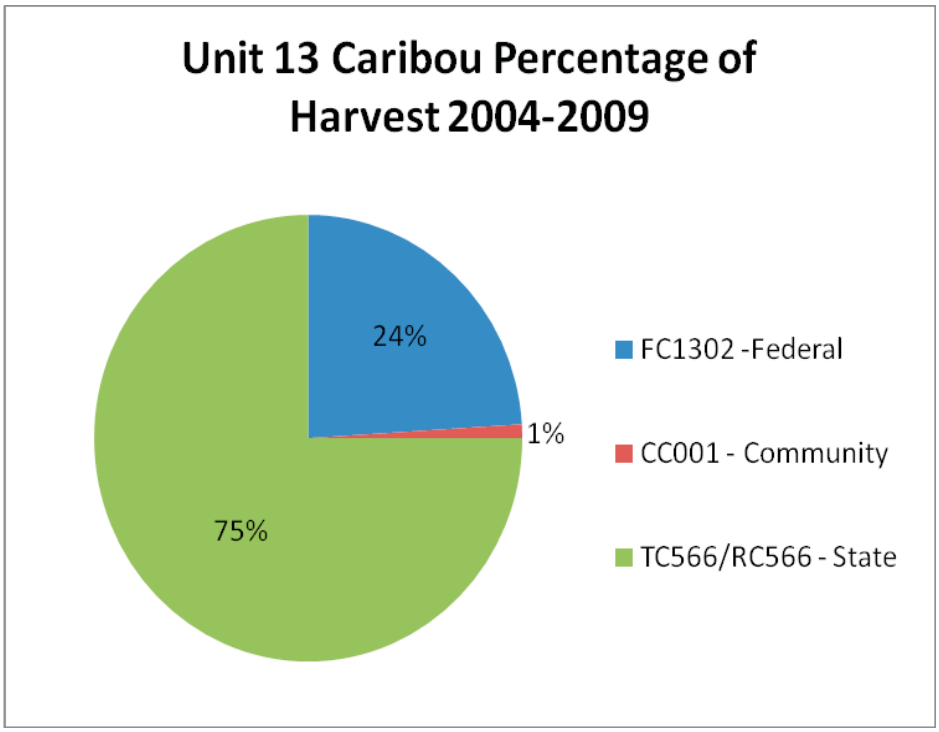

Figure 2. Unit 13, Percentage of Total Harvest by State and Federal Hunts, 2004–2009.

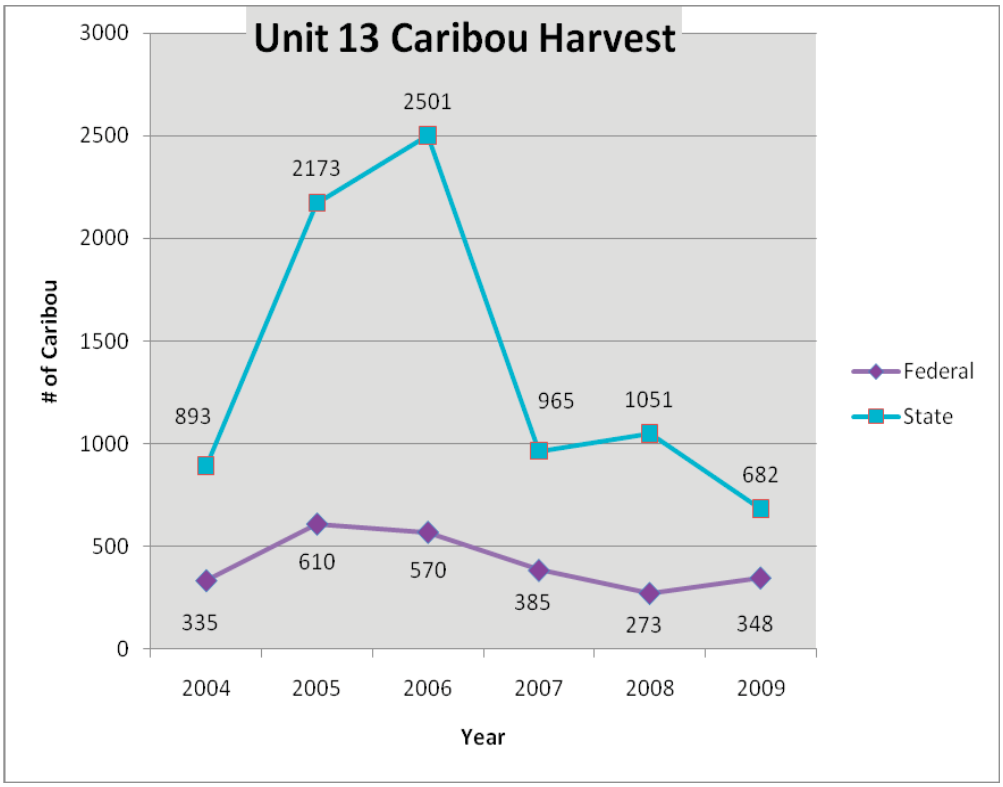

Figure 3. Unit 13, Harvest by predominate State and Federal Hunts (TC566, FC1302), 2004–2009.

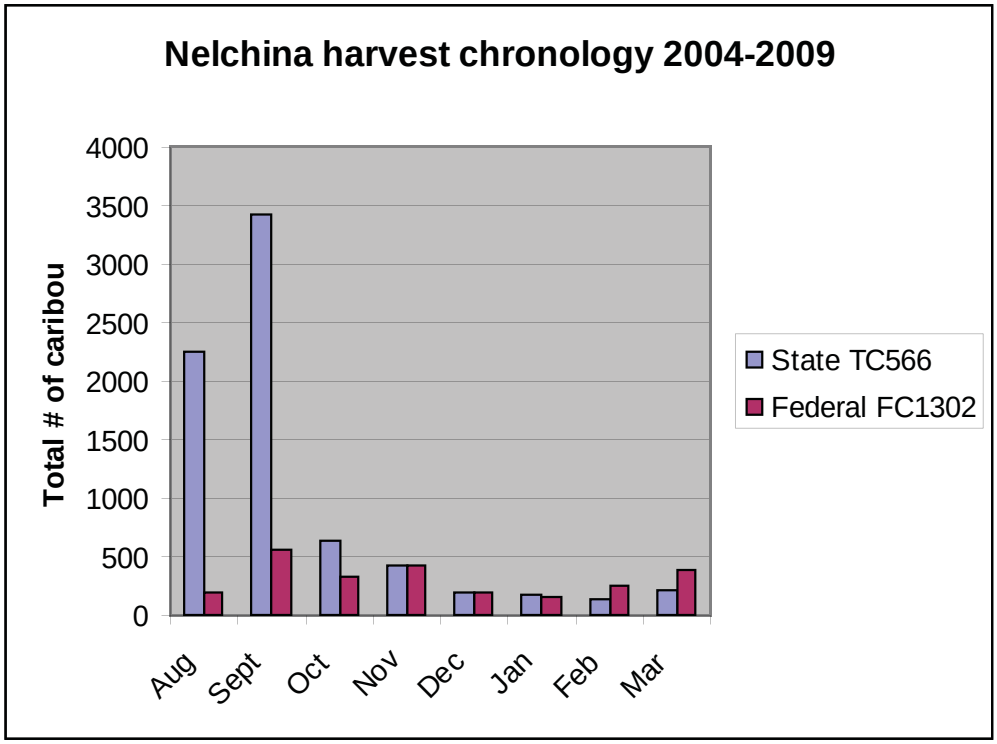

Figure 4. Unit 13, Harvest chronology by month early and late season (TC566, FC1302), 2004–2009.

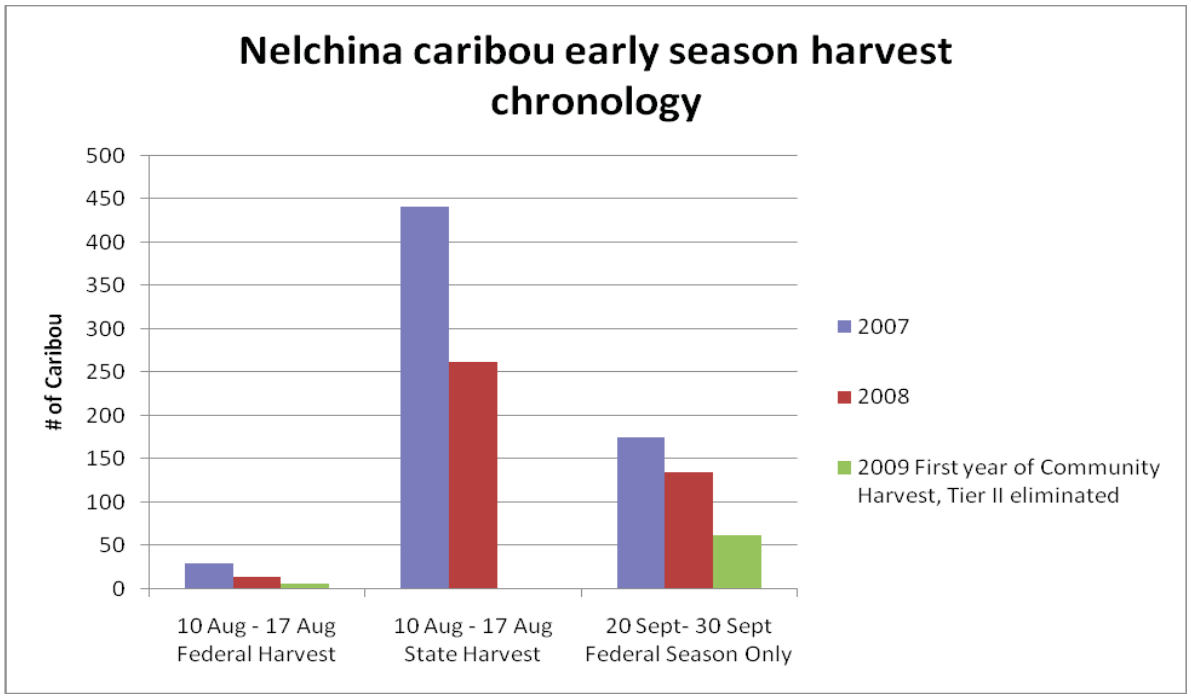

Figure 5. Unit 13, Harvest chronology for state and federal hunts for early season August 10 – Sept. 30 (TC566, FC1302), 2007–2009.

of 41 calves:100 cows (2008–2010) and 65 calves:100 cows in 2011, and if necessary Federal mangers can close the hunt to avoid exceeding the harvest quota. Additionally, in 2010, more State permits were awarded for several hunts due to the high productivity of the herd. The harvest chronology shows that most of the State harvest occurs during August and September.

OSM CONCLUSION

Support Proposal WP12-25

Justification

The majority of the NCH harvest comes from State administered hunts, which are closed by Emergency Order when the annual harvest quota is reached. The Federal hunt, if necessary, can also be closed to avoid exceeding the annual harvest quota. Currently conservation concerns seem minimal considering the high productivity and recruitment of an average of 41 calves:100 cows (2008–2010) and 65 calves: 100 cows in 2011 which are above the management goal of 40 calves:100 cows. Providing an opportunity for Federally qualified subsistence users to harvest a caribou prior to the opening of a State season may not give a significant opportunity due to weather and variance in migratory patterns of the NCH; however there are no conservation concerns and the population of caribou can support the additional 9 days of opportunity. In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since he average high and low temperatures from 2008–2010 are similar between the first week and second week of August.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council Recommendation

Support Proposal WP12-25. The Council does not find a conservation concern that would result from this proposal, and sees it as a way to provide additional subsistence harvest opportunity while spreading out hunter effort.

Eastern Interior Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-25. The Council cites law enforcement concerns.

INTERAGENCY STAFF COMMITTEE COMMENT

The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal. The ISC finds that the potential negative impacts to calf survival and recruitment resulting from adding nine days in early August to the current 210 day season is a valid concern and believes adoption of the proposal would violate recognized principles of fish and wildlife conservation. Additional hunting pressure during this time period not warranted; it would further diverge State and Federal regulations, create additional enforcement issues, and increase the likelihood of meat spoilage.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-25: This proposal requests extending the dates of the federal subsistence caribou hunt in Unit 13.

Introduction: This proposal was submitted to liberalize the federal subsistence caribou hunting season dates by 9 days in Unit 13 by changing the season from August 10 through September 30 to August 1 through September 30. The proponent indicates the status of the Unit 13 caribou herd has met management population level objectives and liberalizing the federal subsistence hunting season is warranted.

Impact on Subsistence Users: Adoption of this proposal will provide an additional 9 days of opportunity for federally qualified subsistence hunters to harvest caribou in Unit 13. Adoption of this proposal will increase federal subsistence caribou hunting opportunity, though not success. The distribution of Nelchina caribou during early August typically ranges from the eastern Talkeetna Mountains east to the MacLaren River drainage. Caribou rarely expand into the eastern portion of the unit, and into federal subsistence hunting areas until late August or early September.

Opportunity Provided by State: The Unit 13 state caribou hunting regulations follow:

> Residents may harvest one caribou per household by Tier I registration permit (RC566) from August 10 through September 21 and from October 21 through March 31. Community subsistence harvest permits are also available to residents. The bag limit and the season dates are the same as RC566. Additionally, a limited number of drawing permits are available to residents from August 20 through September 21 and from October 21 through March 31.
>
> Unit 13 is closed to hunting caribou by non-residents.

Conservation Issues: The Nelchina Caribou Herd is managed for near maximum sustained yield for the benefit of Alaskan hunters. Annual reproduction and survival dictate the annual harvestable surplus. With calves born during late May and early June, many cows are still accompanied by a calf in early August. Additional hunting pressure during this time is not in the best interest of maximum calf survival and recruitment.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal will add additional enforcement issues. If adopted, federal and state regulations will be become further out of alignment.

Other Comments: Current federal hunting season dates sufficiently accommodate hunters during the period when caribou are abundant in federal subsistence hunting areas. This federal subsistence caribou hunt in Unit 13 has never been emergency closed, providing 210 days of caribou hunting opportunity each year. The additional hunting opportunity of this proposal would not be expected to outweigh the negative impact it would have on calf survival. Federally

qualified subsistence hunters currently receive 2 permits per person, and have an additional 10 days to hunt from 20 September to 30 September versus state hunters. Adding an additional 10 day period in early August would push the caribou season into warmer weather. Should caribou be harvested, meat spoilage could become an issue.

Recommendation: Oppose

WRITTEN PUBLIC COMMENTS

Support. There is not a conservation concern for the Nelchina caribou herd, and the proposal will benefit subsistence users by providing additional opportunity at a time when there is less competition from other hunters. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-26 Executive Summary	
General Description	Proposal WP12-26 requests the closure of hunting and trapping seasons for red fox in Units 7 and 15. *Submitted by Kenai National Wildlife Refuge in conjunction with the Chugach National Forest*
Proposed Regulation	**Unit 7—Fox, Red (including Cross, Black and Silver Phases)** *Hunting* ~~*Nov. 1 – Feb. 15*~~ ~~*2 foxes*~~ ***No open season*** *Trapping* ~~*Nov. 10 – Feb. 28*~~ ~~*No limit.*~~ ***No open season*** **Unit 15—Fox, Red (including Cross, Black and Silver Phases)** *Hunting, no established harvest limit or season* *Trapping* ~~*Nov. 10 – Feb. 28*~~ ~~*1 fox*~~*.* ***No open season*** *§ __.26(n)(15)(iii)(D) Unit – specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare*
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal. However, the ISC suggests that the Board review the Southcentral Alaska Regional Advisory Council recommendation to "oppose." If the Board were to support this proposal, which would be counter to the Council's recommendation, it could do so based on the 2nd exception clause of section 805c of ANILCA (that the Council recommendation "violates recognized principles of fish and wildlife conservation").
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-26

ISSUES

Proposal WP12-26, submitted by Kenai National Wildlife Refuge in conjunction with the Chugach National Forest requests the closure of hunting and trapping seasons for red fox in Units 7 and 15.

DISCUSSION

The proponents request that the Federal harvest season be closed since red fox are uncommon to rare on the Kenai Peninsula and suitable habitat is limited to the central portions of Unit 15 (USFWS 2009). The proponents state there has been only one unconfirmed report of a red fox being trapped in recent years. Additionally unconfirmed sightings of red fox have been received sporadically from the public over the last three decades. The proponents believe low population levels may be due to competition and predation by coyotes and other predators. The low fox population on the Kenai Peninsula has led to conservation concerns as there is no harvestable surplus and any continued harvest may lead to local extirpation of the species. There is no hunting season for red fox under State regulations in Units 7 and 15. While there is a trapping season for red fox under State regulations in Units 7 and 15 with a 1 fox harvest limit, due to conservation concerns for the species the Kenai National Wildlife Refuge has closed red fox trapping on the Refuge through the special conditions of the Kenai NWR annual trapping permit. Eliminating Federal subsistence harvest is a step toward facilitating the recovery of the fox population.

Existing Federal Regulations

Unit 7—Fox, Red (including Cross, Black and Silver Phases)

Hunting *2 foxes*	*Nov. 1 – Feb. 15*
Trapping *No limit.*	*Nov. 10 – Feb. 28*

Unit 15—Fox, Red (including Cross, Black and Silver Phases)

Hunting, no established harvest limit or season

Trapping *1 fox.*	*Nov. 10 – Feb. 28*

§ __.26(n)(15)(iii)(D) Unit –specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare Special Provisions: Taking a red fox by any means other than a steel trap or snare is prohibited.

Note: Recreational trapping for red fox, within those portions of the Kenai National Wildlife Refuge within Unit 7 and 15, is currently closed through the special conditions of the Kenai NWR annual trapping permit.

Proposed Federal Regulations

Unit 7—Fox, Red (including Cross, Black and Silver Phases)

Hunting	*~~Nov. 1 – Feb. 15~~*
~~2 foxes~~	***No open season***
Trapping	*~~Nov. 10 – Feb. 28~~*
~~No limit.~~	***No open season***

Unit 15—Fox, Red (including Cross, Black and Silver Phases)

Hunting, no established harvest limit or season	
Trapping	*~~Nov. 10 – Feb. 28~~*
~~1 fox~~.	***No open season***

§ __.26(n)(15)(iii)(D) Unit –specific regulations: You may not take red fox in Unit 15 by any means other than a steel trap or snare

Existing State Regulations

Unit 7—Fox

Hunting	*No state season*
Trapping	*Nov. 10 – Feb. 28*
1 fox	

Unit 15—Fox

Hunting	*No state season*
Trapping	*Nov. 10 – Feb. 28*
1 fox.	

Extent of Federal Public Lands

Approximately 78% of the lands in Unit 7 are Federal public lands, consisting of 50% Chugach National Forest lands managed by the U.S. Forest Service, 23% Kenai Fjords National Park lands managed by the National Park Service, and 5% of lands managed by the Kenai National Wildlife Refuge (KNWR) (**Unit 7 and 15 maps**). Kenai Fjords National Park lands are not open to subsistence uses. In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% are NPS and U.S. Forest Service managed lands

Customary and Traditional Use Determinations

In Unit 7, all rural residents have a positive customary and traditional use determination for hunting red fox. In Unit 15, there is no Federal subsistence priority to hunt red fox. For trapping, all rural residents have a positive customary and traditional use determination for red fox in Unit 7 and 15.

Regulatory History

The current Federal regulations for hunting and trapping red fox in Units 7 and 15 have been the same since 1998.

There is no hunting season for red fox under State regulations in Units 7 and 15. Although there is a trapping season for red fox under State regulations in Units 7 and 15, due to conservation concerns for the species the Kenai National Wildlife Refuge has closed red fox trapping on the Refuge through the special conditions of the Kenai National Wildlife Refuge annual trapping permit.

Management Direction

The Kenai National Wildlife Refuge has designated the red fox as a species of special interest, a potential candidate for local extirpation, and a candidate for restoration efforts (USFWS 2009). ADF&G management objectives for red fox and other furbearers within Unit 7 and 15 are to allow for sustainable harvests and to monitor the harvest through sealing and trapper questionnaires (McDonough 2007).

Biological Background

Prior to 1980, the distribution and density of red fox on the Kenai Peninsula was limited and likely decreased due to competition and predation from increased numbers of coyotes and wolves (Peterson and Woolington 1982). Coyotes engage in interference and exploitative competition with red foxes that can reduce and significantly limit red fox populations (Dekker 1989, Major and Sherburne 1987). Red foxes will avoid areas and habitats heavily used by coyotes and will typically maintain their home ranges on the periphery of coyote home ranges (Dekker 1989, Major and Sherburne 1987). In Unit 15C within the Caribou Hills, a small remnant population of red foxes exists with an occasional observation reported from other areas of the Kenai Peninsula such as Skilak and Tustumena lakes (USFWS 2009, McDonough 2007).

All fox species exhibit wide fluctuations in abundance depending on food availability. Low food abundance typically affects reproductive success and lowers juvenile survival. Adult survival may also be affected as individuals may need to forage further and longer which may make them susceptible to predation and increase energy expenditure (Lindstrom 1989). Harvesting by humans is a significant source of mortality for red fox as is disease, primarily rabies (Storm et al. 1976).

Harvest History

The last known harvests of red foxes on the Kenai Peninsula were in 1969–1970 and 1978–1979 when a total of 12 foxes were taken. No confirmed harvest has been reported on the Kenai Peninsula in the last 25 years (USFWS 2009). There have been unconfirmed sightings since 2002 near Kasilof, in the Caribou Hills, and east toward Cooper Landing (USFWS 2009).

Canines (wolves, foxes, and coyotes) are typically taken in either blind sets (to capture the animal as it passes through an area) or with a scent post foothold set (draws animal to particular location where it steps into the trap). Due to a canine's behavior of using scent to mark and identify territory and travel corridors, incidental take of other species of canines is possible in sets made for another species of canine. Coyotes and wolves are present on the Kenai Peninsula, and both have no limit for trapping from Nov. 10 – Mar. 31. In the 2008–2009 Alaska Trapper Report, there were 44 coyotes trapped and 12 wolves in Units 7 and 15. It would be far more unusual, however, to take a canine in a set placed for beaver (typically as these sets are in placed in water) or in a leaning pole set for mink/marten/weasel. Canines

might be taken in a castor mound set for beaver or a ground cubby for mink/marten/weasel (where traps are on dry ground and scent or bait may draws the target animal in), however, the chance is very low.

The only current harvest related data for red fox are fur acquisition and fur export reports, which record sales transactions between trappers and fur dealers, and record shipments of furs outside of the State for sale or tanning. Because such transactions can include furs taken in previous years, and because many trappers keep their trapped furs for tanning and use at home, this information is not an exact measure of harvest levels (Scott and Kephart 2002). In 2008–2009, 56% of Southcentral trappers stated they kept their red fox furs and ranked the red fox as the least important furbearer to trap within Southcentral Alaska (Schumaker 2010). Units 7 and 15 are two of the seven units that comprise the Southcentral region and there is no specific data for the Kenai Peninsula.

Effects of the Proposal

If this proposal is adopted, the Federal subsistence hunting and trapping seasons for red fox in Units 7 and 15 would be eliminated. Closing the seasons would have little effect on subsistence users since red fox already occur at such low densities. Currently, there is no State red fox hunting season in either unit. Additionally, trapping red fox under State regulations is not allowed on the Kenai National Wildlife Refuge (52% of Unit 15) and the Kenai Fjords National Park (23% of Unit 7). Red fox is a species of interest for restoration on the Kenai National Wildlife Refuge and closing the Federal season may prevent local extirpation of the species and allow the population to increase.

OSM CONCLUSION

Support Proposal WP 12-26

Justification

The red fox is a species of interest for restoration on the Kenai National Wildlife Refuge and the observed low abundance provides no harvestable surplus on the Kenai Peninsula. Trappers within Southcentral Alaska have stated that red fox is the least important furbearer to trap, and closing the Federal season will have little effect on subsistence users. Harvesting by humans is a significant source of mortality for red fox (Storm et al. 1976) and closing the Federal season may prevent local extirpation.

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SOUTHCENTAL SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-26. The Council feels that the human take is insignificant, poses no conservation concern, and notes that the equivalent area of forest lands carry no such restriction.

INTERAGENCY STAFF COMMITTEE COMMENT

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. However, the ISC suggests that the Board review the Southcentral Alaska Regional Advisory Council recommendation to “oppose.” If the Board were to support this proposal, which would be counter to the Council’s recommendation, it could do so based on the 2nd exception clause of section 805c of ANILCA (that the Council recommendation “violates recognized principles of fish and wildlife conservation”).

ADF&G Comments on WP12-26
December 5, 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-26: This proposal requests total closure of federal subsistence red fox trapping and hunting in all Federal public lands in Units 7 and 15.

Introduction: This proposal was submitted to close all federal subsistence red fox hunting and trapping in Units 7 and 15 encompassing all Federal public lands on the Kenai Peninsula. The proponent indicates the combination of low reported harvest and infrequent sightings indicates a lack of harvestable surplus for this population. The proponent indicates adoption of this proposal is unlikely to allow the species to fully recover but adoption may prevent local extirpation.

Impact on Subsistence Users: Adoption of this proposal will prohibit the harvest of red fox by federally qualified subsistence users in Units 7 and 15. Adoption of this proposal is expected to have little impact on federally qualified subsistence hunters and trappers due to the low probability of encountering red fox in Units 7 and 15. If this proposal is adopted, federally qualified subsistence trappers who incidentally take a red fox will be required to surrender the carcass to the nearest Alaska Department of Fish and Game or Department of Public Safety office. Subsistence users will be affected by the implementation of regulations which differ from those of the state in this area which are likely to be confusing and present enforcement issues.

Opportunity Provided by State: The state trapping regulations for Units 7 and 15 provides a November 10 through February 28 season with a bag limit of 1 red fox per year. There is no open hunting season for red fox in Units 7 and 15 under state hunting regulations.

Conservation Issues: Red fox numbers in Units 7 and 15 are low and are present in low densities. The department does not have population estimates for this population. Red fox may be taken by both hunters and trappers in this area. The reported red fox harvest in Unit Units 7 and 15 in the last 20 years has been very low.

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

Other Comments: The department recommends the federal public land managing agencies reaffirm to federal subsistence users any incidentally harvested foxes on all lands in Alaska are property of the State of Alaska. Collection of harvested fox carcasses for scientific analysis will be key to furthering knowledge about the population. State regulations grant temporary amnesty for the possession of incidentally harvested fur bearers during a close season as long as the harvester is transporting the harvest to designated State of Alaska staff.

Recommendation: Oppose

WP12-28 Executive Summary	
General Description	Proposal WP12-28 requests a change under Special Provisions to allow the take of one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the annual Memorial/ Sobriety Day Potlatch. *Submitted by the Native Village of Eyak*
Proposed Regulation	**Special Provision—Unit 6B or 6C** *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*
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	**Oppose** as this opportunity is already provided for by the State of Alaska and has not been utilized.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-28

ISSUES

Proposal WP12-28, submitted by the Native Village of Eyak, requests a change under Special Provisions to allow the take of one moose, rather than one bull moose, from Federal public lands in Units 6B or 6C for the annual Memorial/Sobriety Day Potlatch.

DISCUSSION

The proponent, noting that locating a bull moose for Memorial/Sobriety Day Potlatch harvest is becoming difficult, makes the following observations in the proposal in support of the proposed regulatory change.

> In 2009 and 2010 it became increasingly difficult to locate a bull moose for harvest. In 2010 in particular, the designated hunter spent hundreds of hours in effort trying to locate a bull, while passing up on numerous potential opportunities to harvest a cow. The Tribe was concerned that a moose could not be harvested in time for the annual Potlatch, and in fact the final harvest only took place a matter of days before the event. The Cordova District Wildlife Biologist indicated at the time that there would be no conservation concern in changing the permit to allow harvest of a cow moose, but this potential did not exist in regulation. While it is the intent of the Tribe to harvest only bull moose whenever possible, we would like to be able to reserve the option of cow harvest as a contingency in the event no bull can be located in time for the Potlatch.

The Cordova District Subsistence Biologist states that there are no conservation concerns with one moose of either sex harvested from Federal public lands in Units 6B or 6C. On the contrary, given current low bull/cow ratios, a cow harvest might take some pressure off of the bull moose population (Burcham 2011, pers. comm.).

Existing Federal Regulation

> **Special Provision—Unit 6B or 6C**
>
> *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one bull moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*

Proposed Federal Regulation

> **Special Provision—Unit 6B or 6C**
>
> *One permit will be issued by the Cordova District Ranger to the Native Village of Eyak to take one ~~bull~~ moose from Federal public lands in Unit 6B or 6C for their annual Memorial/Sobriety Day potlatch.*

Extent of Federal Public Lands

Federal public lands comprise approximately 82% of Unit 6B and include lands managed by the Chugach National Forest (90%), Bureau of Land Management (10%), and Wrangell-St.Elias National Park and Preserve (.1%). Federal public lands comprise approximately 64% of Unit 6C and 100% of the lands are managed by the Chugach National Forest.

Customary and Traditional Use Determination

All rural resident of Units 6A, 6B, and 6C have a positive customary and traditional use determination to harvest moose in Unit 6B and 6C.

Regulatory History

The Federal Subsistence Board adopted the current regulation at its May 2, 2000 meeting. Briefly, the Board recognized a customary and traditional use of moose for the Memorial/Sobriety Day potlatch, and concurred with the summary statement of Interagency Staff:

> The Native Village of Eyak's memorial sobriety potlatch is an annual reoccurring event, which the Board has endorsed by previous special actions. This would make it — this would put it into the annual regulatory process whereby it would stand unless modified. Taking of one bull moose for ceremonial purposes will not significantly impact the moose population. And another persuasive piece of testimony that was provided at the Council meeting by one of the members is that these potlatches are attended, not only by the local residents, but by a cross-section of communities in Prince William Sound, which in our minds further legitimizes the event (FSB 2000:39).

Note that State regulations 5 AAC 92.019 allow the taking of big game for certain religious ceremonies. Under this regulation permits were issued to the Alaska Federation of Natives in 2010 for a memorial potlatch. Federally qualified subsistence users may wish to pursue this option for memorial potlatches.

Effect of the Proposal

Harvesting one moose of either sex is not anticipated to have any effects on the moose population in Units 6B or 6C. Providing more certainty that a moose would be harvested for the Memorial/Sobriety Day Potlatch would be benefit Federally qualified subsistence users. No effects are anticipated on non-Federally qualified users.

OSM CONCLUSION

Support Proposal WP12-28.

Justification

Adopting this proposal would provide a higher likelihood that a moose would be harvested for the Memorial/Sobriety Day Potlatch, and is not anticipated to have any effects on the moose population in Units 6B or 6C.

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SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-28. The Council supports this proposal as there are no conservation concerns, and recognizes the difficulty the community has had in recent years obtaining a bull moose for culturally important events.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Draft Comments on WP12-28
December 5, 2011, Page 1 of 1

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

Wildlife Proposal WP12-28: Authorize the harvest of one either sex moose in Unit 6 B or C for the annual Native Village of Eyak Memorial/Sobriety Day Potlatch.

Introduction: This proposal was submitted to change the federal subsistence moose hunting permit conditions issued by the Cordova District Range to the Native Village of Eyak to all harvest of either sex moose for an annual potlatch. The current federal subsistence permit stipulates only one bull may be harvested by a federally qualified subsistence designated hunters. The proponent requests changing the permit to allow the harvest of either sex moose because of difficulties harvesting a bull moose for the event in 2009 and 2010.

Opportunity Provided by State: Opportunity is provided by the State under State of Alaska regulations 5 AAC 92.034, Alaska Department of Fish and Game (ADF&G) "may issue a permit for the taking of game for the teaching and preservation of historic or traditional Alaskan cultural practices, knowledge, and values…" Although no requests for a permit for this memorial event have ever been submitted to ADF&G, a permit for this event likely would have been approved.

Conservation Issues: None. The Unit 6B and C moose populations are healthy.

Other Comments: The existing state permit applies to all lands. Use of state permits reduces land status confusion issues associated with ceremonial permits. ADF&G is concerned about the current process for addressing cultural or ceremonial federal permit requests. The applicant should be notified of the availability for cultural or ceremonial permits from the State. A better understanding is also needed of the basis for issuance of cultural or ceremonial permits within the federal responsibility to provide subsistence use of fish and wildlife.

Enforcement Issues: Adoption of this proposal will continue divergent federal and state hunting regulations in Unit 6. Enforcement issues in areas with mixed land ownership will also continue. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 6B and C to ensure hunters are not inadvertently hunting on non-federal public lands as these lands boarder most of the Cordova road system.

Recommendation: Oppose as this opportunity is already provided for by the State of Alaska and has not been utilized.

WP12-29 Executive Summary	
General Description	Proposal WP12-29 requests a season to be established for moose in Unit 7 for that portion draining into Kings Bay with a season from August 10 – September 20 by Federal registration permit. The Seward District Ranger will close the Federal season when the quota, to be determined, is reached. *Submitted by the Southcentral Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 7, that portion draining into Kings Bay** ~~*Federal public lands are closed to the harvest of moose*~~. ~~*No Federal open season*~~ ***1 moose by Federal registration permit only. The Seward District Ranger will close the Federal season when the quota is reached.*** ***Aug. 10– Sept. 20***
OSM Conclusion	**Oppose**
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. However, the ISC suggests that the Board review the Southcentral Alaska Regional Advisory Council's recommendation to "support." If the Board were to oppose this proposal, which would be counter to the Council's recommendation, it may choose to do so based on the 2nd exception clause of section 805c of ANILCA (that the Council recommendation "violates recognized principles of fish and wildlife conservation"). If the Board were to support the Council's recommendation, it is likely that the Seward District Ranger would set a "zero-harvest" quota for conservation reasons, until the population could sustain additional harvest.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-29

ISSUES

Proposal WP12-29, submitted by the Southcentral Subsistence Regional Advisory Council requests a season to be established for moose in Unit 7 for that portion draining into Kings Bay with a season from August 10 – September 20 by Federal registration permit. The Seward District Ranger will close the Federal season when the quota, to be determined, is reached.

DISCUSSION

The proponent requests that a Federal season be opened for moose in Unit 7 for that portion draining into Kings Bay to give an opportunity to Federally qualified subsistence users to harvest moose and to discourage poaching. The proponent states that having an opportunity to harvest moose would create interest in the stewardship of the moose population within the community of eligible users and would lead to the support of good management practices. General hunt State regulations apply to non-Federal lands in the vicinity of Nellie Juan Lake, with a harvest limit of one bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.

Existing Federal Regulation

Unit 7, that portion draining into Kings Bay	
Federal public lands are closed to the harvest of moose.	*No Federal open season*

Proposed Federal Regulation

Unit 7, that portion draining into Kings Bay	
~~*Federal public lands are closed to the harvest of moose*~~***.*** ***1 moose by Federal registration permit only. The Seward District Ranger will close the Federal season when the quota is reached.***	~~*No Federal open season*~~ ***Aug. 10– Sept. 20***

Existing State Regulation

Unit 7 remainder	
Residents and Nonresidents: One bull with spike-fork 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

Federal public lands for this portion of King's Bay consist solely of Chugach National Forest, administered by the U.S. Forest Service. Federal public lands are currently not open to moose harvest by any user **(See Unit 7 Map).**

Customary and Traditional Use Determinations

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

Regulatory History

Proposal 18B (C&T 1997) and Proposal 21 (1997) – requested a positive customary and traditional use determination and a moose season for residents of Chenega Bay and Tatitlek. Proposal 21 did not request a Federal closure, but requested a new hunt open only to Federally qualified subsistence users. The harvest limit was two moose per community, which could be taken in the Kings Bay (**Map 1**), during a Sept. 1–Dec. 31 season. The intent of Proposal 21 was to create a four-month season and harvest limit for moose in the affected area. At its April 1997 meeting, the Federal Subsistence Board adopted Proposal P21 with modification to create a season from Aug. 10 – Sept. 20 for residents of Chenega Bay and Tatitlek, with a closure to all other users.

Special Action WSA01-02, submitted by the Chugach National Forest, U.S. Forest Service, requested that the Kings Bay moose harvest in Unit 7 scheduled for Aug. 10–Sept. 20, 2001, be closed. 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.

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 qualified federal subsistence users.

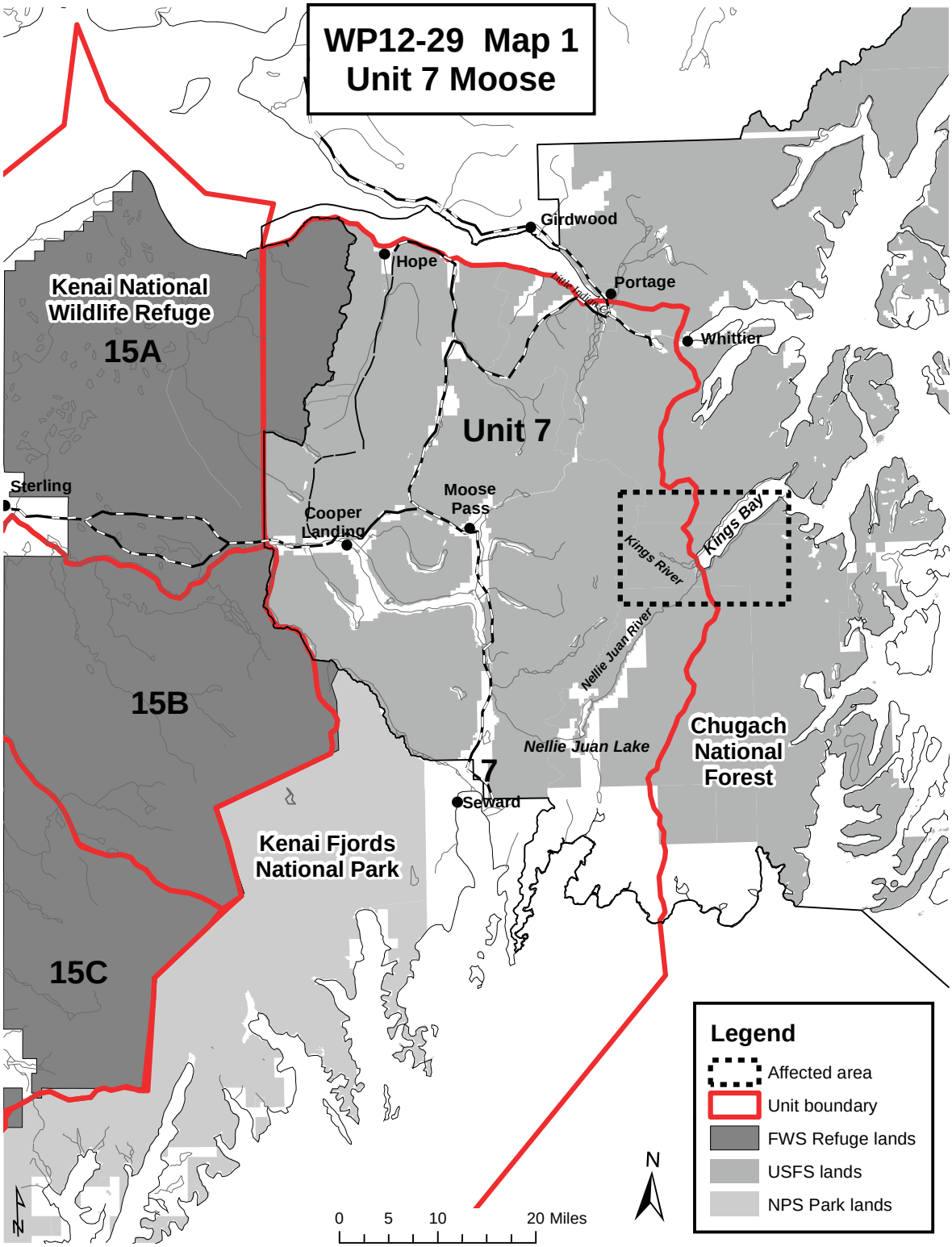
In 2006, Proposal WP06-16 requested a season extension and harvest limit expansion. At the Mar. 14–16, 2006 Southcentral Alaska Subsistence Regional Advisory Council meeting, the Council discussed changing the Kings Bay moose harvest limit, harvest season, and removing the Federal closure. The Council voted to support WP06-16 with modifications to: Remove the antler restrictions, but retain the bull harvest; add a permit with a seven-day reporting requirement; change the harvest dates to Sept. 1–Dec. 31; and retain the Federal closure. The proponent from Chenega Bay stated they had never been confined 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 their upper topography habitat 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 1 bull harvest and the Federal closure because the Council was concerned about the small population of moose in the area. However because of conservation concerns, the Interagency Staff Council recommended the opposition of the proposal contrary to the recommendation of the Southcentral Alaska Regional Advisory Council. Subsequently, the Federal Subsistence Board closed Federal lands to the hunting of moose by all users at its May 2006 meeting.

Management Direction

Currently, there are no management objectives for this moose population.

Biological Background

The amount of moose habitat in the Kings Bay area is very small, and consists of narrow riparian areas along the Kings River and Nellie Juan River. An aerial survey conducted by ADF&G on January 8, 1997,


WP12-29 Map 1
Unit 7 Moose
Girdwood
Hope
Portage
Whittier
Kenai National
Wildlife Refuge
15A
Unit 7
Sterling
Cooper
Landing
Moose
Pass
Kings Bay
Kings River
Nellie Juan River
15B
Nellie Juan Lake
Chugach
National
Forest
7
Seward
Kenai Fjords
National Park
15C
Legend
Affected area
Unit boundary
FWS Refuge lands
USFS lands
NPS Park lands
N
0 5 10 20 Miles

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 glacier country in which it rises. 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 nine moose were observed is significant. Black bear have 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. Their restricted use area makes the remaining herd vulnerable to hunters who walk up the river valley or use authorized motorized access.

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.). A total of five moose were observed. Four cows 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.). One bull moose was observed upstream in the Kings River watershed (Zemke 2006 pers. comm.). No calves were observed in the area. Most of the tracks were observed within ½ mile of the shoreline. The surveyors believed that this was not the total number of moose in this heavily timbered steep country, and could not be sure the total number of moose missed, however it could be as high as 25 to 50 percent of the total moose numbers. The surveyors were relatively certain there were a very limited number of moose in the area during this period. The number of moose in this area in the fall would be hard to predict from this late spring survey. Moose may transition out of the area before heavy winter snowfall.

Harvest History

Harvest data indicate that no moose were harvested from this area from 1997–2000 (ADF&G 2000). As of 2001, 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 or 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 on Federal public lands in the Kings Bay drainage in 1997 by the establishment of exclusive Federal subsistence management regulations for the area. The State's general hunt regulations apply to non-Federal lands in the vicinity of Nellie Juan Lake, with a

harvest limit of one bull with 50-inch antlers or antlers with 4 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.

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

Other Alternatives Considered

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. Modifying the proposal to allow the harvest of one bull moose per community with customary and traditional determination could still result in a conservation concern. Residents of Cooper Landing, Hope, Chenega and Tatitlek have customary and traditional use determination and allowing one bull moose per community could result in four bulls being harvested within this small population.

Effects of the Proposal

If Proposal WP12-29 were adopted, it would establish a harvest season from Aug. 10 – Sept. 20 for the harvest of any moose. The Seward District Ranger of the Chugach National Forest would establish a quota have the authority to close the Federal season once the quota is reached. Establishing a season may have detrimental effects on the moose population since there are four communities that have a positive and customary use determination for moose in this portion of Unit 7. If the season is allowed, Federally qualified individuals would be eligible to harvest a moose, which could lead to over harvest of this small herd.

Allowing the possibility of cow harvest in such a small population could also have detrimental effects on the health of the moose population. Cows are important to maintain the herd. If a cow is harvested, it will reduce the potential for recruitment of new moose into the population and thus have a negative impact on the small herd.

OSM CONCLUSION

Oppose Proposal WP12-29

Justification

There is little information on the current status of the affected moose population. Based on 1997, 2001, and 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 subsistence or non-subsistence harvest. Interchange of moose with other areas is likely minimal due to difficult terrain. If the season is allowed and individuals from the four Federally qualified communities are eligible to harvest a moose, this could lead to over harvest of this small herd and would violate sound principles of wildlife management (ANILCA, Title VIII, § 802(1)), and potentially result in the extirpation of the population. Therefore, continuation of the closure to all users is likely necessary for continued viability of this wildlife population (§ 816(b)).

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SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-29. The Council feels that this proposal will provide opportunity to a group of subsistence users that are likely to see only a very limited harvest in this remote area, and reasons that the hunt can be closed after limited harvest occurs. The Council feels that supporting this proposal demonstrates to small, subsistence reliant communities that the Federal Subsistence Program is considering their interests.

INTERAGENCY STAFF COMMITTEE COMMENT

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. However, the ISC suggests that the Board review the Southcentral Alaska Regional Advisory Council's recommendation to "support." If the Board were to oppose this proposal, which would be counter to the Council's recommendation, it may choose to do so based on the 2nd exception clause of section 805c of ANILCA (that the Council recommendation "violates recognized principles of fish and wildlife conservation"). If the Board were to support the Council's recommendation, it is likely that the Seward District Ranger would set a "zero-harvest" quota for conservation reasons, until the population could sustain additional harvest.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-29: This proposal requests opening a federal subsistence moose hunt in a portion of Unit 7.

Introduction: This proposal was submitted to establish a federal subsistence moose hunt in that portion of Unit 7 draining into Kings Bay for the residents of Chenega Bay, Tatitlek, Cooper Landing, and Hope. The proposal requests establishing a bag limit of one bull moose by federal registration permit from August 10 through September 20. The proposal indicates the Seward Ranger District will close the federal subsistence season when a to be determined quota is reached.

Impact on Subsistence Users: Adoption of this proposal will provide federally qualified subsistence users some opportunity to harvest bull moose in the Kings Bay area. Adoption of this proposal could immediately lead to over harvest from a small and sparse population which will be detrimental to continuance of subsistence uses in the future.

Opportunity Provided by State: Kings Bay is within Unit 7 Remainder and state moose hunting regulations follow:

> Residents and non-residents are allowed one bull with spike-fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side with a harvest ticket from August 20 through September 20.

Conservation Issues: The moose population in this area is considered stable but extremely low. Even a slight increase in harvest has the potential to negatively impact this population jeopardizing its sustainability. Previous attempts to count this population failed to satisfactorily reveal calves.

Enforcement Issues: The proponent indicated adoption of this proposal will assist with elimination of poaching moose in this area.

Other Comments: Current state hunting antler configuration regulations have been adopted by the Alaska Board of Game for a conservative approach to prevent over harvesting by reducing the percentage of a population which is made available for harvest. The Alaska Department of Fish and Game has concerns regarding what methodology will be utilized in determining a quota for an any bull hunt targeting a population of moose that have been observed to hover near a dozen animals without resulting in an immediate conservation concern.

Recommendation: Oppose

WP12-04/05 Executive Summary	
General Description	Proposal WP12-04 requests extending the coyote (*Canis latrans*) trapping season closing date to from February 15 to April 30 in Units 1–4. Proposal WP12-05, submitted by Andy Savland, requests that coyote taken incidentally with a trap or snare during any open trapping season may be retained by the trapper in Units 1–5. *Submitted by Monte Mitchell*
Proposed Regulation	WP12-04 *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.* **Units 1, 2, 3, and 4 — Coyote (trapping)** *No limit* *Dec. 1 – ~~Feb. 15~~* ***Apr. 30*** **Unit 5 — Coyote (trapping)** *No limit* *Nov. 10 – Feb. 15* WP12-05 *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.* **Units 1, 2, 3, and 4 — Coyote (trapping)** *No limit* *Dec. 1 – Feb. 15* **Unit 5 — Coyote (trapping)** *No limit* *Nov. 10 – Feb. 15* ***Units 1–5 — Coyote taken with a trap or snare during any open trapping season may be kept and used for subsistence purposes.***

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WP12-04/05 Executive Summary *(continued)*	
OSM Conclusion	**Oppose** Proposal WP12-04 **Support** Proposal WP12-05 **with modification** to allow for the retention of coyotes during trapping seasons which extend beyond the current coyote season and have a high probability of catching coyotes. The modified proposed regulation would read: *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.* ***Units 1–5 — Coyotes taken incidentally with a trap or snare during an open Federal trapping season for wolf, wolverine, or beaver may be legally retained.***
Southeast Regional Council Recommendation	**Oppose** Proposal WP12-04. **Support** Proposal WP12-05 **with modification** to allow for the retention of coyotes during trapping seasons which extend beyond the current coyote season and have a high probability of catching coyotes. The Council determined that there is no conservation concern with coyotes in the Southeast Region. This proposal (as modified) will promote subsistence use of coyote and benefit subsistence users. The modified proposed regulation would read: *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.* ***Units 1–5 — Coyotes taken incidentally with a trap or snare during an open Federal trapping season for wolf, wolverine, or beaver may be legally retained.***
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.

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WP12-04/05 Executive Summary *(continued)*	
ADF&G Comments	**Take no action** on WP12-05 based upon **support** for WP12-04.
Written Public Comments	**1 Support** Proposal WP12-05 **with modification.**

STAFF ANALYSIS
WP12-04/05

ISSUES

Proposal WP12-04, submitted by Monte Mitchell, requests extending the coyote (*Canis latrans*) trapping season closing date to from February 15 to April 30 in Units 1–4. Proposal WP12-05, submitted by Andy Savland, requests that coyote taken incidentally with a trap or snare during any open trapping season may be retained by the trapper in Units 1–5.

DISCUSSION

The proponents of these two proposals are seeking (through different methods) to allow Federally qualified subsistence users the ability to retain coyotes taken outside the regular coyote season while trapping for other species. The proponent of WP12-04 asks for an extension to the end of the coyote season in Units 1–4 while the proponent of WP12-05 is asking to retain coyotes taken outside the regular coyote season while trapping for other species in Units 1–5. The proponents have indicated that coyotes are becoming more prominent where they trap, and it is nearly impossible to avoid trapping coyotes in traps or snares set for wolves. One of the proponents also indicated that he has taken an average of 2 coyotes per season after the February closure which had to be forfeited to the State.

Existing Federal Regulation

> *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.*
>
> **Units 1, 2, 3, and 4 — Coyote (trapping)**
>
> | | |
> |---|---|
> | *No limit* | *Dec. 1 – Feb. 15* |
>
> **Unit 5 – Coyote (trapping)**
>
> | | |
> |---|---|
> | *No limit* | *Nov. 10 – Feb. 15* |

Proposed Federal Regulation

WP12-04

> *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.*
>
> **Units 1, 2, 3, and 4 — Coyote (trapping)**
>
> | | |
> |---|---|
> | *No limit* | *Dec. 1 – ~~Feb. 15~~* ***Apr. 30*** |

Unit 5 – Coyote (trapping)

No limit	*Nov. 10 – Feb. 15*

WP12-05

You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.

Units 1, 2, 3, and 4 — Coyote (trapping)

No limit	*Dec. 1 – Feb. 15*

Unit 5 — Coyote (trapping)

No limit	*Nov. 10 – Feb. 15*

Units 1–5 — Coyote taken with a trap or snare during any open trapping season may be kept and used for subsistence purposes.

Existing State Regulations

Unit 1–4 – Coyote (trapping)

No limit	*Dec. 1 – Feb. 15*

Unit 5 – Coyote (trapping)

No limit	*Nov. 10 – Feb. 15*

Possession of Furbearers
If you take an animal during a closed season or for which there is no open season, it is the property of the state. If you salvage the animal, transport it immediately to the nearest office of ADF&G or Alaska Wildlife Troopers and surrender it, you will not be cited.

Extent of Federal Public Lands

Federal public lands comprise approximately 95% of the Southeast Region which includes Units 1–5. The Forest Service manages the Tongass National Forest. The National Park Service (NPS) manages the Glacier Bay National Park and Preserve, Sitka National Historical Park, Klondike Gold Rush National Historical Park and the Wrangell-St. Elias National Park and Preserve. In order to engage in subsistence in Wrangell-St. Elias National Park, the NPS requires subsistence users either live within the park's resident zone (36 CFR 13.430; 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent. The US Fish and Wildlife Service manages the Alaska Maritime National Wildlife Refuge. The Bureau of Land Management manages lands near Icy Bay.

Customary and Traditional Use Determinations

There is no specific Customary and Traditional use determination for coyotes in Units 1–5. All rural residents of the state are eligible to harvest coyotes under Federal subsistence trapping regulations.

Regulatory History

The Alaska Board of Game during its November 2006 meeting passed a proposal to change the opening date of the coyote trapping season in Unit 5 from December 1 to November 10. Wolverine and wolf seasons were opening on November 10 and this date change allowed trappers in Unit 5 to retain any coyote incidentally taken in gear set during the beginning of the trapping season for wolverine or wolf.

The Federal trapping season for coyotes in Units 1–5 was from December 1 to February 15 until 2007. During the 2007 regulatory cycle, WP07-11 was submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council). This proposal asked that the opening date for coyote trapping in Unit 5 be changed from December 1 to November 10. The Council submitted the proposal in order to align the starting date for coyote trapping under Federal subsistence trapping regulations in Unit 5 with the start date for coyotes under state regulation as discussed above. The Federal Subsistence Board supported this proposal.

Biological Background

The coyote, like the wolf, is a member of the dog family (Canidae) and resembles a medium-sized shepherd-collie type dog. Distinctive features of the coyote are its sharp pointed ears that never droop, a sharp pointed nose, and long bushy tail. The legs of the coyote are generally slimmer and the feet smaller than those of a dog of comparable size. Coyotes average 22 to 33 pounds (10–15 kg) or about one-third the size of wolves. Males are slightly heavier than females. Coyote average 2 feet high (.6 m) at the shoulder and, including tail, are approximately 4 feet (1.2 m) long. The summer coat is predominantly gray, washing into tan along the belly, lower legs, muzzle, and ears. Some guard hairs are tipped with black, as is the tail. The upper lip and underside are whitish. The intensity and amount of coloring varies, and individuals are usually lighter in winter (ADF&G 2007).

Coyotes were first noted in the state shortly after the turn of the 20th century. Populations were first reported on the mainland of Southeast Alaska. Within Unit 1, particularly sections 1C and 1D, reports of harvests and sightings of coyotes have been increasing. This is especially true for the Juneau road system, as well as Pt. Couverden where the authors of the coyote proposals trap (Pappas 2011). Coyotes are noted as being present within Units 1C, 1D, and 5 however, actual numbers are unknown. No coyotes have been noted in Units 1A, 1B, 2, 3, or 4 (Barten 2011).

Harvest History

Canines (wolves, foxes, and coyotes) are typically taken in “blind” set snares (to capture the animal as it passes through an area) or with a scent post foothold set (draws animal to particular location where it steps into the concealed trap). Due to a canine’s behavior of using scent to mark and identify territory and travel corridors, it is not uncommon to catch other species of canines in sets made for another species of canine. Most trappers in Southeast Alaska use snares to target wolves. Since snares are typically fatal to the canine when caught, release is not an option.

Neither the Alaska Department of Fish and Game (ADF&G) nor the Federal subsistence regulations require coyotes to be sealed. Any information on coyotes harvested would have to come directly from the trapper either through conversation or the Annual Trapper Survey & Questionnaire. Trappers in Southeast Alaska do not specifically target coyotes, and those harvested have been typically taken in snares set for wolves. Coyote harvest in Units 1–5 averages less than ten per year. The majority of the harvest is occurs in Unit 1C (Barten 2011).

Multiple suggestions, to extend coyote trapping seasons to match wolf and wolverine seasons, have been noted in both the 2006–2007 and 2007–2008 Annual Trapper Survey & Questionnaires (ADF&G 2010a, ADF&G 2010b). A comparison of the Federal trapping season closing dates for coyote, wolf, wolverine, and beaver can be found in **Table 1**.

Table 1. Comparisons of the season dates for the Federal Trapping seasons in Units 1-5 for coyote, wolf, wolverine, and beaver.

	Species	Opening date	Closing date
Unit 1			
	Coyote	December 1	February 15
	Wolf	November 10	April 30
	Wolverine	November 10	March 31
	Beaver	December 1	May 15
Unit 2			
	Coyote	December 1	February 15
	Wolf	November 15	March 31
	Wolverine	November 10	March 31
	Beaver	December 1	May 15
Unit 3			
	Coyote	December 1	February 15
	Wolf	November 10	April 30
	Wolverine	November 10	March 31
	Beaver	December 1	May 15 (Mitkof Island closes April 15)
Unit 4			
	Coyote	December 1	February 15
	Wolf	November 10	April 30
	Wolverine	November 10	March 31
	Beaver	December 1	May 15
Unit 5			
	Coyote	December 1	February 15
	Wolf	November 10	April 30[1]
	Wolverine	November 10	March 31
	Beaver	November 10	May 15

[1] The closing date for wolf trapping in this unit in the Federal Subsistence Wildlife Regulation booklet is in error. The date reflected in this table comes from 36 CFR.

Although not specifically mentioned by either proponent, beaver season in Units 1–5 runs into late spring. Trappers will target beaver by either setting conibear style traps or snares "blindly" in the ditches and ponds that beaver travel within or by setting large foothold traps near a castor mound. Taking a canine in a beaver trap set in the water would be very unusual, however the possibility does exist of capturing a coyote in a castor mound set.

Effects of the Proposal

WP12-04 will extend the ending date of the trapping season for coyotes, thus increasing the opportunity to legally retain coyotes. However, the proposal would not allow for the retention of coyotes taken during trapping seasons that start before the coyote season. With no estimates of coyote populations within Units 1–5, it is unclear whether the extension of a season that targets coyotes would be consistent with principles of wildlife conservation.

WP12-05 will allow Federally qualified subsistence users to retain coyotes taken while a trapping season for another species is open. This action benefits subsistence users by allowing for the retention of an animal that would otherwise have to be forfeited to the State or Federal government. This proposal will not significantly increase coyote harvest since they are not specifically targeted and are rarely taken. No conservation concern for coyotes is anticipated. There would be no effect on other users. This proposal provides additional administrative benefit by avoiding future proposals to change coyote seasons each time a trapping season for another species (wolf, wolverine, or beaver) is changed.

OSM CONCLUSION

Support Proposal WP12-05 **with modification** to allow for the retention of coyotes during trapping seasons which extend beyond the current coyote season and have a high probability of catching coyotes.

The modified proposed regulation would read:

> *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.*
>
> ***Units 1–5 – Coyotes taken incidentally with a trap or snare during an open Federal trapping season for wolf, wolverine, or beaver may be legally retained.***

Oppose Proposal WP12-04

Justification

Adopting proposal WP12-05 with modification will allow Federally qualified subsistence users to retain coyotes, taken in gear set for wolves, wolverine or beaver that would otherwise be required to be forfeited to the State or Federal government. Coyote harvested outside of the coyote season has been minimal (2 per year). The retention of coyotes should only be allowed in the wolf, wolverine, and beaver seasons, as these seasons have the highest probability of catching coyotes. Allowing trappers to retain coyote taken during these seasons should not significantly increase coyote harvest since coyotes are not targeted and rarely taken. No conservation concern for coyotes is anticipated. There would be no effect on other users. Adoption of this modified proposal eliminates the need for the Federal Subsistence Board to further change coyote seasons should the seasons for wolf, wolverine or beaver change in future wildlife regulatory cycles.

Proposal WP12-04 is opposed since it would not allow for the retention of coyotes taken during wolf, wolverine or beaver seasons that start before the present coyote season and would not accomplish the intent of the proponent. Additionally, with no estimates of coyote populations within Units 1–5, the extension of a season that targets coyotes is not supported because it is unclear whether harvest would be consistent with principles of wildlife conservation.

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Pappas, G. 2011. Subsistence Team Liaison, Personal Communication. ADF&G, Anchorage, AK.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-04. The Council determined that Proposal WP12-05 is a more appropriate proposal to address this issue.

Support Proposal WP12-05 **with modification** to allow for the retention of coyotes during trapping seasons which extend beyond the current coyote season and have a high probability of catching coyotes. The Council determined that there is no conservation concern with coyotes in the Southeast Region. This proposal (as modified) will promote subsistence use of coyote and benefit subsistence users.

The modified proposed regulation would read:

> *You may trap wildlife for subsistence uses only within the seasons and harvest limits in these unit trapping regulations. Trapping wildlife out of season or in excess of harvest limits for subsistence uses is illegal and prohibited. However, you may trap unclassified wildlife such as squirrel and marmot species in all units, without harvest limits, from July 1, 2010 through June 30, 2012.*
>
> ***Units 1–5 – Coyotes taken incidentally with a trap or snare during an open Federal trapping season for wolf, wolverine, or beaver may be legally retained.***

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-04 and WP12-05: Proposal WP12-04 would extend the federal subsistence trapping season for coyote by six weeks in Units 1-4 to match the wolf trapping season closure date of April 30. Proposal WP12-05 requests that federal subsistence trappers be allowed to retain incidentally harvested coyotes during any trapping season in Units 1-5.

Introduction: Current federal subsistence trapping seasons for coyote in Units 1-4 are December 1 through February 15. Proposal WP12-04 seeks to liberalize the trapping season dates to match the wolf trapping season dates with the intent of allowing trappers to legally retain coyotes that with the present season dates are considered by-catch and must be turned over to the department. The proponent indicates coyote are being accidentally caught in traps set for wolves during the period when the wolf trapping season is open but the coyote trapping season is closed.

The proponent for WP12-05 seeks the allowance for retention of coyotes incidentally caught in traps set for other species after the coyote season has been closed. The proponent indicates the incidentally caught and retained out of season coyotes could be used for subsistence purposes. Currently, coyotes (and other fur bearers listed in federal regulations) incidentally taken during a closed season are considered property of the State. Incidental taken coyote require salvage, immediate transport, and surrender to the nearest ADF&G office or Alaska Wildlife Trooper. If adopted as proposed, federally qualified subsistence users could retain incidentally trapped coyotes from all trapping seasons and trap types. The proponent indicates coyote are being accidentally caught in traps set for wolves during the period when the wolf trapping season is open but the coyote trapping season is closed.

Impact on Subsistence Users: During the 10-year period 2001-2010, an average of 148 wolves (range 100-195) were taken annually by trappers in Units 1-4. 412 trappers took wolves between 2001 and 2010 for an average harvest of 3.5 wolves per trapper. The majority of wolves were taken in Units 1A, 2 and 3. The number of coyotes taken during and outside the established trapping season is unknown. Anecdotal information suggests the coyote harvest in Units 1-4 is low. Changing the existing coyote trapping season is expected to have little effect on subsistence trappers.

Opportunity Provided by State: The coyote trapping season throughout Units 1-4 extends from December 1 through February 15 and November 10 through February 15 in Unit 5. There is no daily or annual limit on harvest of coyote. The wolf trapping season in Units 1, 3, and 4 is November 1 through April 30 and is December 1 through March 31 in Unit 2. Coyotes may also be taken in Units 1-4 under both state and federal hunting regulations with a bag limit of two coyotes, and an open season from September 1 to April 30.

State trapping regulations prohibit the possession of fur, or parts of a furbearer if the trapper knows or should know the animals were illegally taken (e.g. out of season incidentally trapped coyote) unless they are being transported directly from the field to be surrendered to an ADF&G or Alaska Wildlife Trooper representative. If a trapper takes an animal during a closed season or for which there is no open season, it is the property of the State. If a trapper salvages the animal,

transports it immediately to the nearest office of ADF&G or Alaska Wildlife Troopers and surrenders it, the trapper will not be cited for possession of illegally taken animal.

Conservation Issues: There is no empirical data available for coyote population levels in Southeast, Alaska. Responses to the 2008-2009 Trapper Questionnaire suggests coyotes are either not present, or are scarce in Units 1-4. Alaska trapping regulations do not require coyote furs to be sealed, therefore reliable harvest data is not available. Anecdotal information is obtained through conversations with trappers, trapper questionnaires, and when coyotes are taken outside the present seasons and the hides are turned over to the department.

Other Comments: Incidental take of furbearers outside established seasons is known to occur, however no enforcement action is taken if the take is not the result of directed trapping efforts targeting that species and the animal is surrendered to ADF&G or the Alaska Wildlife Troopers. Trappers reporting fur harvest in the 2008-2009 Trapper Questionnaire did not provide any information regarding the importance of coyotes in their trapping efforts (1=Very Important, 11=Least Important). Generally, the State does not support extending the trapping season for a species for which there is no population or reliable harvest data. However, the State understands the need to allow trappers to retain incidentally taken coyotes under these circumstances.

Recommendation: Support WP12-04 with modification. The department recommends that federal subsistence coyote trapping season match the state's wolf trapping seasons in Units 1-4 by adjusting the trapping season dates in Unit 2 to December 1 through March 31.

Take no action on WP12-05 based upon support for WP12-04.

WRITTEN PUBLIC COMMENTS

Support Proposal WP12-05 **with modification** to align the coyote trapping season in Unit 5 with the wolverine season — November 10 to March 1. The commission felt that this was the best way to address this issue. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-06 Executive Summary	
General Description	Proposal WP12-06 requests that the deer harvest season in Unit 4 close December 31. *Submitted by Mike Svenson*
Proposed Regulation	**Unit 4 — Deer** *6 deer, however, female deer may be taken only from Sept. 15– ~~Jan.~~ **Dec.** 31.* *Aug. 1 – ~~Jan.~~ **Dec.** 31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-06

ISSUES

Proposal WP12-06, submitted by Mike Svenson, requests that the deer harvest season in Unit 4 close December 31.

DISCUSSION

The proponent states that it is not "fair chase" to harvest deer in January and would like to see the elimination of the January deer season. The proponent also is concerned about the harvest of pregnant does.

Existing Federal Regulation

Unit 4 — Deer

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

Proposed Federal Regulation

Unit 4 — Deer

6 deer, however, female deer may be taken only from Sept. 15– ~~Jan.~~ ***Dec.*** *31.* *Aug. 1 – ~~Jan.~~* ***Dec.*** *31*

Existing State Regulation

Unit 4 — Deer

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

Extent of Federal Public Lands

Federal public lands comprise approximately 96% of Unit 4. The US Forest Service manages 99% of those lands as part of the Tongass National Forest. The National Park Service manages less than 1% of those lands as the Sitka National Historical Park which is closed to subsistence hunting and trapping. The US Fish and Wildlife Service manages less than 1% of those lands as part of Alaska Maritime National Wildlife Refuge (St. Lazaria Island) (see **Unit 4 Map**).

Customary and Traditional Use Determinations

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

Regulatory History

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

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

State and Federal in-season closures restricting female deer harvest have been implemented since 2007, primarily in the Northeast Chichagof Controlled Use Area (NECCUA) of Unit 4, in response to the deep snow winters that depressed the Unit 4 deer population.

There were three regulatory proposals during the 2010 cycle addressing Unit 4 deer regulations in relation to the steep population drop that occurred during the winter of 2006–07. These proposals analyzed a variety of timing and harvest restrictions to protect the deer population and subsistence priority. None of the proposals was adopted.

Current Events

Federal and State managers closed the doe harvest season in the NECCUA of Unit 4 for the 2010/11 regulatory year to help the population recover from deep-snow winters during 2006–07, 2007–08, and 2008–09.

Biological Background

Sitka black-tailed deer spend the winter and early spring at low elevation where 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. Migratory deer follow the greening vegetation up to alpine for the summer. Resident deer remain at lower elevations. The breeding season, or rut, generally occurs in October through November and peaks in late November (ADF&G 2009). Wolves and black bears are not present in Unit 4, so the primary predator, besides humans, is brown bears. The number of deer killed by brown bears are estimated to equal 15%–20% of the annual total of deer harvested by hunters (Mooney 2009). Unit 4 deer population levels fluctuate, primarily influenced by winter snow depths (Olson 1979).

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 4 have been impacted by large scale changes in habitat, while the habitat is largely intact in other areas. Areas with substantial timber harvest, such as northeastern Chichagof and northwestern Baranof Islands, 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, so managers use a variety of indices and observations to monitor the deer population. Prior to the winter of 2006–07, deer densities were likely above carrying capacity following a period of mild winters in the early 2000s (Mooney 2009). The deep snow winter of 2006–07 caused a substantial drop in the population (Mooney 2009).

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 2010). **Figure 1** shows pellet-group survey results for all of Unit 4. Prior to the deep snow winters starting in 2006–07, pellet-group surveys indicated a slightly increasing population, reflecting a series of low snow winters (Mooney 2009). Pellet-group surveys since 2006 appear to indicate a downward trend.

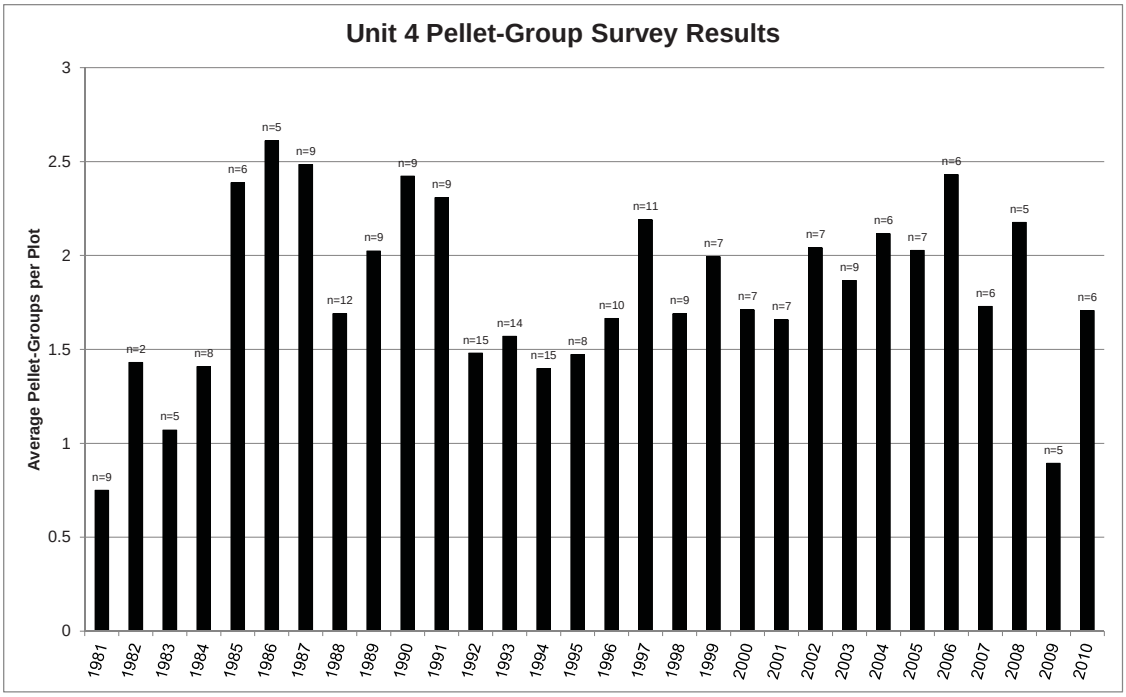

Figure 1. Average pellet-group counts for all of Unit 4 since transects began in 1981 (McCoy 2010) Data labels represent the number of VCUs surveyed that year.

After the mild winter of 2009–10, recruitment appears to have improved in 2010 (Mooney 2010, pers. comm.). During spring surveys in 2011, deer populations appear to be trending up, although the rate varies within the unit (Mooney 2011, pers. comm.).

Harvest History

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

Deer harvest in Unit 4 in 2007/08 (1,858 ± 236) was down significantly from 2006/07 (7,746 ± 594) and is the lowest harvest for Unit 4 in over a decade (McCoy *et al*. undated). Prior to 2007/08, Unit 4 deer harvest was mostly stable, fluctuating around 7,000 deer. Preliminary information indicates that the total Unit 4 deer harvests increased during regulatory years 2008 and 2009 and were 4123 and 3461 deer, respectively (McCoy 2011, pers. comm.). Approximately 4% (470 deer) of the annual harvest occurs in January which is the least of any month during the season and well below the primary harvest months (**Table 1**).

Table 1. Deer harvest chronology for a Unit 4 from 2005-2009 (McCoy pers. comm. 2011). Percentages do not total 100% because some harvest reports lacked harvest date information and due to harvest during other months.

	Deer Harvested	Percent of Total	Annual Average
August	4544	10%	909
September	3554	8%	711
October	6991	15%	1398
November	20577	43%	4115
December	6859	14%	1372
January	1747	4%	349

Note: This data is preliminary and the numbers will change when finalized. However, the trends are not expected to change.

Effects of the Proposal

Adopting this proposal would likely reduce deer harvest, although a small percentage of the overall deer harvest occurs in January. Closure of the January season is not necessary for conservation of the resource. The primary population regulator in Unit 4 is winter weather. Current harvest levels are not generally considered sufficient to regulate the population. Due to severe winters 3–5 years ago, doe harvest has been temporarily closed in portions of Unit 4 where harvest is most likely to influence population recovery.

Adopting this proposal would reduce opportunity for subsistence users. Although the January harvest is relatively low, it provides an important opportunity for those that may not have been able to hunt earlier in the season, or were not successful earlier. It can provide an opportunity for fresh meat late in the season. It can be a relatively efficient hunt under the right snow conditions. Efficiency of effort is a characteristic of subsistence harvests.

Adopting this proposal would not eliminate harvest of pregnant females, which was a stated concern of the proponent. To eliminate the harvest of pregnant females the doe season would need to close by early to mid October.

OSM CONCLUSION

Oppose Proposal WP12-06.

Justification

This proposal would reduce opportunity for subsistence users. It is not necessary for conservation of the resource. It would have relatively little influence on the total harvest, and would not accomplish the proponents stated goal of eliminating harvest of pregnant does.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-06. There is not a conservation concern in Unit 4 that will be addressed by this proposal. The January season has no impact on non-subsistence users but it does provide an important subsistence opportunity and should be retained. Female deer are either pregnant or will become pregnant earlier in the season so closing the January season to protect pregnant deer makes no sense.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-06: Shorten the federal subsistence deer season in Unit 4 one month.

Introduction: This proposal seeks to shorten the federal subsistence deer hunt during the month of January. The proponent indicates elimination of the January portion of the federal subsistence hunt would protect pregnant does from harvest. The proponent indicates if this proposal is adopted, the remaining five month federal subsistence hunting season should provide ample opportunity to harvest deer.

The federal subsistence deer hunting season for Unit 4 is August 1 through January 31, and the state season is August 1 through December 31. The state season originally also ended January 31 but was reduced in 1993 to protect deer when extremely vulnerable if winter weather concentrates them on the beaches. The recent federal subsistence deer hunting season in Unit 4 not only extends through January 31, but the bag limit is 6 deer of which antlerless deer may be taken from September 15 to January 31.

Impact on Subsistence Users: Federally qualified subsistence hunters would have four fewer weeks (20 weeks instead of 24 weeks) to harvest their 6 deer seasonal bag limit if this proposal is adopted. The proposed season should be sufficiently long for subsistence users to acquire deer given that the realized harvest reduction will be 3-8% of the total annual harvest based on the chronology of harvest from previous years.

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

Conservation Issues: Conservation concerns exist for portions of the deer populations in Unit 4 due to recent high winter kills. **The department opposes the January doe season in this area for the following reasons:** 1) during January, deer are more likely to be concentrated on beaches, making them very vulnerable to high levels of harvest; 2) when deer numbers are low as is the case in some areas today, the January season could prove detrimental to the rebound of deer populations at the local level due to concentrated areas of high harvest; and 3) bucks shedding antlers in late December and January make it difficult for hunters to clearly identify bucks from does resulting in higher harvests of does.

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

WP12-10 Executive Summary	
General Description	Proposal WP12-10 requests the addition of a regulation to require antler destruction of deer and moose taken by Federally qualified designated hunters in Units 1–5. *Submitted by Andy Savland*
Proposed Regulation	**Designated Hunter** *In order to receive a Federal Subsistence Registration Permit or Federal Designated Harvester Permit or designate someone to harvest fish or wildlife for you under a Federal Designated Harvester Permit, you must be old enough to reasonably harvest that species yourself (or under the guidance of an adult).* *If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §__.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time unless otherwise specified in unit-specific regulations at §__.26. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.* *A rural Alaska resident who has been designated to take wildlife on behalf of another rural Alaska resident in accordance with §__.10(d)(5)(ii) must promptly deliver the wildlife to that rural Alaska resident and may not charge the recipient for his/her services in taking the wildlife or claim for themselves the meat or any part of the harvested wildlife.* ***When participating in the designated hunter program in Units 1-5, designated hunters must remove at least one antler from the skull plate, cut the skull plate in half, or cut and or break off one of the main beams of the deer or moose's antler. Antler destruction must be completed before leaving the kill site, unless the antlers must be submitted to the ADF&G for measuring.***
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**

continued on next page

WP12-10 Executive Summary *(continued)*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP12-10

ISSUES

Proposal WP12-10, submitted by Andy Savland, requests the addition of a regulation to require antler destruction of deer and moose taken by Federally qualified designated hunters in Units 1-5.

DISCUSSION

The proponent states that some designated hunters use the benefits to pursue trophy animals, which are not sought for food value. The proponent feels that adopting this proposal would reduce the take of trophy animals. Three other proposals requesting changes to the designated hunter program have been submitted for 2012. WP12-02 requests designated hunters only be able to harvest for people who are 60 years of age or older, or disabled. WP12-11 requests that the mountain goat be added to the Federal designated hunter permit in Southeast Alaska (Units 1-5). WP12-13 requests that a Federal designated hunter be limited to hunting deer for only two recipients in Units 1B and 3.

Existing Federal Regulation

Designated Hunter

In order to receive a Federal Subsistence Registration Permit or Federal Designated Harvester Permit or designate someone to harvest fish or wildlife for you under a Federal Designated Harvester Permit, you must be old enough to reasonably harvest that species yourself (or under the guidance of an adult).

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §__.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time unless otherwise specified in unit-specific regulations at §__.26. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.

A rural Alaska resident who has been designated to take wildlife on behalf of another rural Alaska resident in accordance with §__.10(d)(5)(ii) must promptly deliver the wildlife to that rural Alaska resident and may not charge the recipient for his/her services in taking the wildlife or claim for themselves the meat or any part of the harvested wildlife.

Proposed Federal Regulation

Designated Hunter

In order to receive a Federal Subsistence Registration Permit or Federal Designated Harvester Permit or designate someone to harvest fish or wildlife for you under a Federal Designated

Harvester Permit, you must be old enough to reasonably harvest that species yourself (or under the guidance of an adult).

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §__.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time unless otherwise specified in unit-specific regulations at §__.26. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.

A rural Alaska resident who has been designated to take wildlife on behalf of another rural Alaska resident in accordance with §__.10(d)(5)(ii) must promptly deliver the wildlife to that rural Alaska resident and may not charge the recipient for his/her services in taking the wildlife or claim for themselves the meat or any part of the harvested wildlife.

When participating in the designated hunter program in Units 1-5, designated hunters must remove at least one antler from the skull plate, cut the skull plate in half, or cut and or break off one of the main beams of the deer or moose's antler. Antler destruction must be completed before leaving the kill site, unless the antlers must be submitted to the ADF&G for measuring.

Existing State Regulation

Proxy Hunter

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 physically disabled, or 65 years of age or older. A person may not be a proxy for more than one beneficiary at a time.

Proxy hunting is allowed for all deer hunts, most caribou hunts and some moose hunts, with the following restrictions:

Antler destruction:

- *consists of removing at least one antler from the skull plate or cutting the skull plate in half to destroy the trophy value,*
- *is required for all species,*
- *is required for each animal taken by the proxy hunter (both the proxy hunter's animals and the beneficiary's animals),*
- *must occur at the kill site unless uncut antlers must be submitted to ADF&G for measuring,*
- *will be completed after measuring by ADF&G.*

Both beneficiary and proxy must have obtained licenses, regardless of age, and any necessary harvest tickets and/or permits, before applying for a Proxy Hunting Authorization at any ADF&G office or other issuing location.

Extent of Federal Public Lands

Federal public lands comprise approximately 95% of the Southeast Region which includes Units 1-5. The Forest Service manages the Tongass National Forest. The National Park Service manages the Glacier Bay National Park and Preserve, Sitka National Historical Park, Klondike Gold Rush National Historical Park, and the Wrangell-St. Elias National Park and Preserve. There is no subsistence hunting allowed within the Glacier Bay National Park, Sitka National Historical Park, or the Klondike Gold Rush National Historical Park. 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. The US Fish and Wildlife Service manages the Alaska Maritime National Wildlife Refuge. The Bureau of Land Management manages lands near Icy Bay.

Customary and Traditional Use Determinations

All rural residents of Units 1-5 have a positive customary and traditional use determination for both species in some portion of Units 1-5.

Regulatory History

In 1994, four proposals related to the use of designated hunters to harvest wildlife for others were rejected by the Federal Subsistence Board (Board). The Board recognized that the taking of resources by a few hunters in a community and the sharing of the harvest is a cultural tradition throughout Alaska. The Board, in rejecting these proposals, directed the staff to work with the Regional Councils to develop proposed regulations for the 1995-96 regulatory year that address the situation on a State-wide basis (59 Fed. Reg., no page number, [June 3, 1994]). The first designated hunter rule in the Southeast Region occurred in 1995 when the Board instituted a designated hunter system for deer in Units 1-5 and for moose in Unit 5 (60 Fed. Reg. 115. 31544 [June 15, 1995]). In 1997, the Board rejected a proposal to eliminate the designated hunter option (62 Fed. Reg. 103. 29017 [May 29, 1997]). In 2002, the Board rejected four proposals requesting revisions to the designated hunter provision for deer in the Southeast Region, because they were considered detrimental to subsistence users and unnecessary for conservation purposes (67 Fed. Reg. 125. 43710 [June 28, 2002]). In 2003, the Board established a Statewide designated hunter program for subsistence harvest of moose, deer, and caribou, subject to unit-specific provisions (68 Fed. Reg. 124. 38466 [June 27, 2003]). This rule included the establishment of a possession limit for designated hunters of two harvest limits. In 2005 and 2006, the Board rejected proposals requesting the cutting of antlers from moose or separation from the skull plate as an unnecessary restriction on subsistence users (70 Fed. Reg.119. 36269 [June 22, 2005]; 71 Fed. Reg. 126. 37644 [June 30, 2006]).

Biological Background

Moose

With the exception of two transplants, moose were present on all major ranges in southeast Alaska by the 1950s (ADF&G 1990). In most cases, moose thrived and the population increased rapidly as a result of previously unexploited range. Hunting and other human use expanded as the moose populations increased.

The northwestern moose subspecies occupies the southern Southeast Region (Units 1A, 1B, 3, and part of 1C) up to the Stikine River/Thomas Bay area with Alaskan/Yukon moose subspecies occurring in the northern Southeast Region (Rausch *et. al* 2008). The northwestern moose is smaller in body size and does not develop the large antlers typical of the Alaskan/Yukon moose.

Moose habitat in southeast Alaska is associated with riparian and post-glacial early-successional vegetation types and is isolated by mountains, icefields, and fjords. Some populations have become established in areas where clear-cut logging has changed old-growth forests to early successional stages (ADF&G 1990).

Moose occur in harvestable populations in Units 1, 3, and 5. Unit 1D does not have a Federal moose season due to lack of Federal lands with suitable moose habitat. Moose are occasionally observed in Unit 2, but there is no moose harvest season there (ADF&G 2008). Moose occur on Pleasant Island in Unit 4 but there is no harvest season in Unit 4. In the majority of their range in southeast Alaska, moose are subject to predation by brown bears, black bears, and wolves, which limits moose populations in some areas of Alaska (Rausch *et. al* 2008).

ADF&G conducts aerial surveys to gather moose population data, however, in some areas surveys are not productive due to dense forest cover and the lack of winter concentration areas. Southeast Region moose are divided into 11 discrete populations for management purposes (ADF&G 1990). As of 2007, most of these populations appeared stable (ADF&G 2008). Deep snow winters from 2006-2009 reduced moose populations in study areas of northern Southeast (White and Barten 2010) and possibly other areas of Southeast Alaska as well.

Deer

Sitka black-tailed deer spend the winter and early spring at low elevation where 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. Migratory deer follow the greening vegetation up to alpine for the summer. Resident deer remain at lower elevations. The breeding season, or rut, generally occurs in October through November and peaks in late November (ADF&G 2009).

Southeast Alaska deer populations fluctuate primarily in response to the depth and duration of the winter snowpack (Olson 1979). Deer are subject to predation by black bears, brown bears and wolves in Southeast, but not all these predators occur in all areas. Wolves and black bears are not present in Unit 4, whereas brown bears are not present in Unit 2 and parts of Unit 3. The mainland (Unit 1) tends to have all three major predators as well as more severe winters and lower quality habitats. Thus, densities are lower there.

Harvest History

Moose

In the Southeast Region, moose harvest regulations have become more restrictive over time. Starting as open hunts with liberal season lengths, the majority of hunts now require permits and have harvest quotas. Bulls-only harvest quotas, often with antler size restrictions, predominate, although occasional cow or either-sex hunts have been held (ADF&G 1990). Moose are harvested in the Southeast Region primarily for meat and none of the populations have been managed to produce trophy animals (ADF&G 1990). Designated hunter harvest report data suggest that Federal designated hunters in Units 1-5 have taken 7

moose (less than 1%) since 2003 (Table 1). The maximum reported harvest by an individual designated hunter is 2 moose.

Deer

Designated hunter harvest report data suggests that Federal designated hunters take approximately 2% of the total estimated deer harvest each year in Units 1-5 (Table 1). The maximum reported harvest by an individual designated hunter is 20 deer.

Traditional harvest

The subsistence way of life is very much a part of the social fabric of Alaskan rural communities. Within Alaska Native cultures, the harvesting of subsistence foods is inextricably intertwined with social interactions. Social interactions may be in the form of extended families spending time at fish camps during the summer, young hunters learning harvesting skills from their older relatives, or individuals sharing their harvest successes with community members. Subsistence includes a cultural value system of sharing, which Alaska Natives have maintained since before contact with Russians and Europeans (Wolfe and Ellana 1983).

The hunting of ungulates in Southeast Alaska is 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). Deer and moose are vital food staples and an important protein source for many rural Alaskans.

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 supply deer to other households as well as their own (Turek *et. al* 2004). Regardless of the demographics and cultural histories of communities throughout POW Island, residents gave very similar answers to the questions regarding sharing and hunting practices.

Effects of the Proposal

Implementing this proposal would add an unnecessary burden on subsistence users because under current regulations they must promptly deliver the harvested animal, including the antlers and all salvageable meat, to the recipient.

Implementing this proposal would likely create confusion because, for deer, in all hunts limited to one sex, if antlers are used as evidence of sex, they must remain naturally attached to the entire carcass. While antlers are not the only acceptable evidence of sex, it could create confusion for some users on the appropriate action to take.

Implementing this proposal is unlikely to change designated hunter harvest substantially. Deer and moose in southeast Alaska do not develop large antlers prized by trophy hunters, although there is likely a relative trophy value to a large animal from the area. Designated hunters are required to salvage the meat of deer and moose and, although adding a burden to their hunt, cutting the antlers is not likely to substantially change their harvest patterns. It is likely that some subsistence users target large antlered animals, but the extent of this practice is unknown, and there is no evidence to suggest that it is causing a

conservation concern. Large antlered animals also have large bodies and are desirable for the amount of meat they provide.

OSM CONCLUSION

Oppose Proposal WP12-10.

Justification

This proposal would create an unnecessary burden on subsistence users. Federal regulations require that designated hunters salvage the meat from deer and moose harvested in Units 1-5. The extent to which subsistence users target large antlered animals is unknown, but there is nothing illegal about doing so, as long as the salvage requirements are met. Regulations are already in place requiring designated hunters to salvage all usable meat, restricting them to two harvest limits in possession, and requiring them to promptly deliver the wildlife to the recipient. The designated hunter may not claim for themselves the meat or any part of the harvested wildlife. Harvest by designated hunters is a small, but socially important, percentage of the overall harvest.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-10. The proposal does not address a conservation issue and current Federal regulations require all parts of the animal taken by a designated hunter be provided to the recipient. Neither the staff analysis nor the experience of the Council supports a conclusion that trophy hunting is occurring by designated hunters. The proposal may limit subsistence uses of deer and moose.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-10: Require antler destruction on deer and moose taken by federal subsistence designated hunters in Units 1-5.

Introduction: This proposal seeks to require the destruction of antlers from deer and moose harvested by federal subsistence designated hunters. The proponent indicates adoption of this proposal will eliminate the small percentage of federal subsistence designated hunters who might take multiple animals per year in hopes that one of the animals will be a trophy. Current federal subsistence designated hunter regulations do not address this issue.

Impact on Subsistence Users: If adopted, federally qualified subsistence designated hunters would be required to destroy antler trophy value of all deer and moose harvested for others by cutting at least one antler from the skull plate, cutting the skull plate in half, or cutting or breaking one of the main beams of the antlers.

Opportunity Provided by State: Under the State of Alaska proxy regulations, a person may only proxy hunt for a beneficiary if the beneficiary is an Alaska resident, has a valid hunting license, is blind, 70-percent disabled, or 65 years of age or older. State antler destruction regulations are statewide in scope and apply to all deer, some moose and some caribou hunts. In the Southeast region (Units 1-5) state antler destruction regulations for deer require the destruction of the antler trophy value for all deer harvested by means of proxy hunting, whether taken by the proxy hunter for themselves, or taken by the proxy hunter for a beneficiary. In other words, if a hunter decides to sign up as a proxy hunter for a beneficiary, all deer harvested by the hunter that year will require antler destruction (both the proxy hunter's animals and the beneficiary's animals). Moose antler destruction is required for all proxy hunter harvested animals in Units 1-5 moose hunts where an antler restriction regulation is not in place. Proxy hunting for moose is not allowed in any Unit 1-5 moose hunt were antler restrictions are in regulation (e.g. 50" or spike fork regulations). The Alaska Board of Game approved proxy hunting antler destruction regulations to prevent hunters from serially trophy hunting under the guise of proxy hunting for beneficiaries. The intent of this proposal generally parallels the intent of state hunting regulation associated with antler destruction and proxy hunting.

Conservation Issues: Conservation concerns exist for portions of the deer and moose populations in Units 1-5. Conservative regulations have been carefully established to ensure deer and moose populations are sustainable. Conservative management plans, including moose antler restrictions, are implemented to prevent over exploitation. The state proxy hunting restrictions with antler destruction stipulations were designed and implemented to prevent abuses to the proxy system. This is especially true for easily accessible areas where a single hunter might take numerous animals under the proxy system at the expense of other hunters who want to harvest their own game. This not only takes opportunity away from other hunters, but may cause conservation concerns in small areas.

ADF&G Comments on WP12-10
December 5, 2011, Page 1 of 2

Enforcement: Adoption of this proposal would significantly reduce differences in federal and state regulations which presently add to confusion and enforcement issues in areas with mixed land ownership.

Recommendation: Support.

WRITTEN PUBLIC COMMENTS

Oppose. The proposed change would be a burden to subsistence users. If there are a few cases of abuse, there are other ways to address them. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-11 Executive Summary	
General Description	Proposal WP12-11 requests adding the mountain goat to the Federal Designated Hunter permit in Southeast Alaska (Units 1–5). *Submitted by Monte Mitchell*
Proposed Regulation	*If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou (**and goats in Units 1–5)** on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*
OSM Conclusion	**Support** Proposal WP12-11 **with modification** to allow only one harvest limit in possession at any one time. The modified regulation should read: **Units 1–5—Designated Hunter** *If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou (**and goats in Units 1–5)** on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except **for goats, where designated hunters may have no more than one harvest limit in possession at any one time, and** where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*
Southeast Regional Council Recommendation	**Support** Proposal WP12-11 **with modification** to allow only one harvest limit in possession at any one time. The Council agrees with the conclusion and rationale as presented in the staff analysis. Allowing one goat by a designated hunter will support a cultural practice and provide an increased subsistence opportunity. The ability to harvest two goats on any one trip may be wasteful and could result in a conservation concern.

continued on next page

WP12-11 Executive Summary *(continued)*	
Southeast Regional Council Recommendation (Continued)	The modified regulation should read: **Units 1–5—Designated Hunter** *If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou* ***(and goats in Units 1–5****) on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except* ***for goats, where designated hunters may have no more than one harvest limit in possession at any one time, and*** *where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*
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	**1 Oppose**

STAFF ANALYSIS
WP12-11

ISSUES

Proposal WP12-11, submitted by Monte Mitchell, requests adding the mountain goat (goat) to the Federal Designated Hunter permit in Southeast Alaska (Units 1–5).

DISCUSSION

The proponent states that due to the nature of the terrain that goats inhabit, some Federally qualified subsistence users are physically unable to pursue them. Adding goats to the list of eligible species to hunt under the Federal Designated Hunter Permit in Units 1–5 would allow Federally qualified users the benefits of the meat and hides of this species.

Existing Federal Regulation

Units 1–5—Designated Hunter

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.

Proposed Federal Regulation

Units 1–5—Designated Hunter

If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou ***(and goats in Units 1–5)*** *on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*

Existing State Regulation

Units 1–5

N/A (there is no designated hunter system under the State, and currently goats are not allowed under the proxy hunting authority)

Extent of Federal Public Lands

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

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination (C&T) for goat harvest in Units 1A and 1D, rural residents of Units 1B and 3 have a positive C&T for goats in Unit 1B, and residents of Haines, Kake, Klukwan, Petersburg, and Hoonah have a positive C&T for goats in Unit 1C. Residents of Sitka, Hoonah, Tenakee, Pelican, Funter Bay, Angoon, Port Alexander, and Elfin Cove have a positive C&T for goats in Unit 4. All rural residents of Unit 5A have a positive C&T for goats in Unit 5. In order to engage in subsistence in Wrangell-St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent. Yakutat, in Unit 5A, is a resident zone community for Wrangell-St. Elias National Park.

Regulatory History

In Units 1–5, the State uses a weighted point system whereby males=1 point and females=2 points. General management guidelines for Units 1–5 (1A, 1B, 1C, 1D, 4 and 5) are to maintain a guideline harvest not to exceed 6 points per 100 goats observed (ADF&G 2008). Hunters are encouraged to harvest males rather than females, and are prohibited from harvesting nannies with kids (effective in 2006 by Alaska Board of Game regulation). Quotas are combined for harvest by Federal and State users. Each hunt area is delineated into discreet geographic management areas and a quota is established for each area. Quotas for each management area are generally low, ranging from 1–30. Current quotas, for example, range from 2–5 in Unit 4, 5–6 in Unit 5, and 1–10 in Unit 1D (Scott 2011). Once the harvest quota for an area is met, an Emergency Order (EO) is used to close the season. Most goat hunts in Units 1–5 are managed under a State registration permit open to all hunters, and drawing permits are available for Unit 1A; however, a Federal registration permit is required for the taking of a second goat in Units 1A and 1B remainder, and Federal permits are available for Units 5A remainder and 5B.

Current Events Involving Species

The Alaska Department of Fish and Game (ADF&G) issued an Emergency Order (E.O.) effective July 31, 2011, closing that portion of Unit 5(A) that is bounded on the east by the western edge of Harlequin Lake and the Yakutat Glacier, on the west by Russell Fiord, and on the north by Nunatak Fiord (including the East Nunatak Glacier), due to conservation concerns. Aerial surveys conducted during 2006–2010 in this area indicate a significant decline in goat numbers. This area was also closed by E.O. in 2009 and 2010.

The Sitka Ranger District, under authority delegated by the Federal Subsistence Board, closed the watersheds of Blue Lake, Medveije Lake, and the southern half of the Katlian River drainage, on Baranof Island in Unit 4, to the harvest of mountain goats by all users, effective Monday, August 1, 2011, remaining in effect for the remainder of the season which runs through December 31, 2011. ADF&G has issued a closure in the same watersheds, effective from August 1, 2011, to the close of the season on December 31, 2011. In addition to the closure, a 2011 management plan establishing sub-management units within these watersheds, with distinct male and female goat harvest caps for each area, was established. An overall decline in the goat population in these areas has occurred since the extreme winter weather of 2006–2007.

Biological Background

Goats occupy steep and rugged terrain, and occur in Alaska throughout Southeast and along the coastal mountains to Cook Inlet. In Southeast Alaska, goats have been introduced to non-native range on Baranof Island (Unit 4) where the population expanded, to Chichagof Island (Unit 4) where the transplant

apparently failed, and most recently on Revillagigedo Island (Unit 1A) where they have become established (ADF&G 2011). Recent genetic investigations suggest that a residual population may have existed in seclusion on Baranof Island prior to the 1923 transplants from Tracy Arm (Paul 2009). Goats in coastal areas typically migrate from alpine summer rangers to winter ranges at lower elevations, typically in old-growth forest habitats (ADF&G 2011).

Males (billies) and females (nannies) are similar in appearance, except that males are ~ 40% larger than females and have differently shaped horns (ADF&G 2011). Nannies usually do not reproduce until around the age of 5 (see Festa-Bianchet and Côte 2008 for review); indeed, White et al. (2008) did not document any case where females less than four years of age had kids at heel during the summer in a Southeast Alaska goat population. Female goats appear to have adopted a very conservative reproductive strategy, generally exhibiting a low reproductive effort and favoring strategies to ensure their long-term survival over any one reproductive event (Festa-Bianchet and Côte 2008). Females generally produce single kids; twinning may be more common in introduced and rapidly growing populations than in native or established and stable populations (Côte and Festa-Bianchet 2003). Productivity varies between populations and annually. White et al. (2007), for example, observed that 57–64% of females in a Southeast Alaska goat population were seen with kids during the summer; however, this study did not directly monitor the initial parturition rate. White et al. (2008) reported that younger and older females were less likely to have a kid at heel than prime-aged females (i.e. 7–9 years old).

Goat populations are extremely sensitive to adult female mortality (Gaillard et al 2000), therefore a male only harvest is generally recommended to maintain population productivity (Hebert and Turnbull 1977, Youds et al. 1980, Festa-Bianchet and Côte 2008). Indeed, harvest of mature females has led to declines in native populations (see Festa-Bianchet and Côte 2008 for reviews). Male only harvest is not without problems, however, including further skewing the sex ratio and increasing the risk of inbreeding (Festa-Bianchet and Côte 2008). Either-sex harvests are generally implemented because of the difficulty of sexing animals in the field (Voyer et al. 2003, Festa-Bianchet and Côte 2008).

Population Trends

The current population estimate is 7,300–10,200 goats for Unit 1A; goat populations appear to be stable throughout most of this unit (Porter 2008). Data are insufficient to determine precise goat population trends in Unit 1B; however, available information indicates Unit 1B goat populations have remained relatively stable, with the exception of the late 1960s and early 1970s when severe winters reduced the herd (Lowell 2008). In Unit 1C, goat populations seem to be at medium to high densities when compared to historical data over most of the range (Barten 2008). In Unit 1D, mountain goat populations appear to be at medium to high densities in those areas routinely surveyed (Scott 2008).

The 2004 population estimate for Unit 4 (Baranof Island) was approximately 1,529 (Mooney 2008). The harsh winters of 2006–2008, with record-breaking snowfall and persistent deep snowpack well into early June, reduced the goat population on the island. Aerial surveys of goats since 2006 show a declining adult population (~900–1000) as well as steep declines (61% reduction) in kid numbers (Mooney 2011, pers. comm.). Recent high harvest rates of female goats have impacted recruitment of the population, and recent aging of harvested females indicates the age structure of this component is getting older, raising conservation concerns for managers (Mooney 2011, pers. comm.).

Within Unit 5, the goat population in the Nunatak Bench area declined starting in 2000 and remains at a low density; 33 goats were observed during fall aerial surveys in both 2008 and 2009; (Oehlers 2008, 2009); this area has been closed under both State and Federal regulation since 2000. Goat populations in the area of Unit 5 from Harlequin Lake to the Alsek River appear stable; 157 goats were observed during

a fall survey in 2010 (Oehlers 2010). Recent suveys indicate a decline in numbers between Harlequin Lake and Nunatak Fiord; 48 goats were observed in 2009 (Oehlers 2009) as compared to an estimated 154 goats in 2006 (Barten 2006).

Harvest History

Between 2006 and 2010, a total of 735 goats were harvested in Unit 1–5 (**Table 1**). Of this total, 235 (37%) were harvested by Federally qualified subsistence users; this figure is based on the harvesters community of residence, but does not necessarily reflect the regulations (State or Federal) under which the harvest was conducted.

Table 1. Reported harvest of goats in Units 1-5, 2006-2010 (Scott 2011). Designation of Federally qualified subsistence user is based on harvester's community of residence.

Year	Federally qualified subsistence user	Alaska Resident	Non-resident	Unknown
2006	67	35	64	
2007	69	36	50	
2008	26	46	61	
2009	58	35	48	1
2010	53	31	52	3

Because it is difficult to predict the designated hunter harvest of goats, and therefore the effects, if this proposal is accepted, the following designated hunter harvest of ungulates data are presented for comparative purposes. Between 2003 and 2010, 1 moose was harvested by designated hunters in each of Units 1(B) and 3. During the same time period, 19 and 316 deer were harvested by designated hunters in Units 1 and 3, respectively.

Traditional harvest

The subsistence way of life is very much a part of the social fabric of Alaskan rural communities. Within Alaska Native cultures, the harvesting of subsistence foods is inextricably intertwined with social interactions. Social interactions may be in the form of extended families spending time at fish camps during the summer, young hunters learning harvesting skills from their older relatives, or individuals sharing their harvest successes with community members. Subsistence includes a cultural value system of sharing, which Alaska Natives have maintained since before contact with Russians and Europeans (Wolfe and Ellana 1983).

The hunting of ungulates in Southeast Alaska is 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). Deer and moose are vital food staples and an important protein source for many rural Alaskans.

In 1997, the Alaska Department of Fish and Game 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 supply deer to other households as well as their own (Turek et. al 2004). Several individuals mentioned this pattern specifically in their responses. Regardless of the demographics and cultural histories of communities throughout POW Island, residents

gave very similar answers to the questions regarding sharing and hunting practices.

Other Alternatives Considered

Several alternatives are available to mitigate any potential negative side effects of this proposal, such as over harvest or harvesting of nannies, if designated hunters are allowed to harvest multiple animals.

One alternative would be to add goats to the designated hunter permit (for Units 1–5), but with the condition that the designated hunter have no more than one harvest limit in possession at any one time. Mountain goats inhabit rugged terrain, and the harvest and transport of one animal is challenging (the dressed weight of a 250 pound goat, for example, is approximately 150 pounds). Harvesting and transporting two animals at a time would be more difficult, and may lead to unintended waste if the designated hunter is unable to remove both animals from the field. This alternative would also address some of the potentially negative effects of the initial proposal such as over harvest or the harvesting of nannies. A similar restriction is in place for the designated hunting of goats in Unit 6D.

Another alternative for designated hunters interested in harvesting more than one goat would be to restrict the designated hunter to harvesting one goat per 24 hour period. This alternative would likely reduce the risk of multiple animals and/or nannies being taken from one group, and also reduce the risk of unintentional waste. Similarly, the designated hunter could be required to report their harvest, including the sex of the harvested animal, before they are allowed to harvest any additional animals, reducing the chance of over harvesting. Other alternatives would be to shorten the required harvest reporting time period (for example, from 5 days to 2 days), or to limit the number of persons for which a designated hunter may harvest goats.

Effects of the Proposal

It is difficult to predict the effects of the proposal; however, it is expected that the designated hunter effort/harvest for mountain goats may be similar to the current pattern of designated hunter harvest for moose, which is fairly low. Because the State manages mountain goat harvest in a combined State and Federal quota, the total harvest of goats is not expected to change. If this proposal is adopted, although the total harvest is not likely to change, the percent of the total harvest by subsistence users, including designated hunters, may increase, thereby reducing the opportunities for State harvesters.

If designated hunters are allowed to have two harvest limits in their possession at any one time, they may harvest two animals out of one herd, potentially resulting in the harvest quota being met sooner or possibly being exceeded in areas of low quotas before an Emergency Order can be implemented. Designated hunters targeting two animals out of one herd may also be less selective in the sex of animals taken; higher female harvest by designated hunters would result in the harvest quota being reached sooner, and has the potential to negatively affect the reproductive rate of that population. While the option to designate a hunter will benefit the recipient, enabling them to enjoy the benefits of the meat and hides of goats, and supports the traditional practice of hunting for others, opportunities for other users to harvest goats may be diminished.

OSM CONCLUSION

Support Proposal WP12-11 **with modification** to allow only one harvest limit in possession at any one time.

The modified regulation should read:

> **Units 1–5—Designated Hunter**
>
> *If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou* ***(and goats in Units 1–5)*** *on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except* ***for goats, where designated hunters may have no more than one harvest limit in possession at any one time, and*** *where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*

Justification

As stated by the proponent, due to the nature of the terrain that goats inhabit, some Federally qualified subsistence users are physically unable to pursue them, and are therefore unable to enjoy the benefits of the meat and hides of this species under Federal regulations. Adoption of this proposal, as modified, will enable these Federally qualified subsistence users to enjoy the benefits of the meat and hides of goats, and supports the traditional practice of hunting for others. Because there is a combined State and Federal quota for goats, adoption of this proposal as modified is not expected to affect the total harvest of goats in Units 1–5. The modification to allow the designated hunter to have no more than one harvest limit in their possession at any one time will help to minimize any over-harvest and potential waste, as well as maintain opportunities for other subsistence and non-Federally qualified subsistence users.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-11 **with modification** to allow only one harvest limit in possession at any one time. The Council agrees with the conclusion and rationale as presented in the staff analysis. Allowing one goat by a designated hunter will support a cultural practice and provide an increased subsistence opportunity. The ability to harvest two goats on any one trip may be wasteful and could result in a conservation concern.

The modified regulation should read:

> **Units 1–5—Designated Hunter**
>
> *If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user (designated hunter) to take deer, moose and caribou* ***(and goats in Units 1–5)*** *on your behalf. Designated hunters may hunt for any number of recipients, but have no more than two harvest limits in possession at any one time except* ***for goats, where designated hunters may have no more than one harvest limit in possession at any one time, and*** *where specified under unit-specific provisions. Any designated hunter taking wildlife on behalf of another rural Alaska resident shall deliver the wildlife promptly to that rural Alaska resident.*

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-11: Authorize designated hunting of mountain goat in Southeast Alaska.

Introduction: This proposal seeks to add mountain goat to the federal subsistence designated hunter program in Units 1-5. The proponent indicates adoption of this proposal will provide meat and hides to some federally qualified users who cannot participate in the hunt for any reason. The proponent also indicates the additional harvest will not impact the goat populations because the State micromanages the goat hunts by sub unit. Current federal subsistence designated hunter regulations do not list mountain goats as a species which can be harvested by designated hunters.

Impact on Subsistence Users: If adopted, federally qualified subsistence designated hunters could harvest as many goats as the number of designated permits he/she seeks during the federal subsistence goat hunting season which lasts up to five month annually. If adopted, federal subsistence designated hunters could harvest up to two possession goats per day (current federal subsistence designated hunter regulations allow two bag limits in possession at a time).

Opportunity Provided by State: State regulations prohibit proxy hunting for mountain goats statewide.

Conservation Issues: Immediate conservation concerns could develop from over harvest from a particular goat herd or sub unit in Southeast Alaska. This is especially true for female goats with young which are often found in groups making them the most visible, and the most vulnerable to harvest. Allowing hunters to take multiple goats through a federally designated hunter program could cause conservation concerns by increasing the take on female goats which are the most important yet susceptible portion of the population.

Presently goat populations in Unit 4 and Unit 5 are at low levels to the point where harvest quotas have been lowered, and portions closed due to low goat numbers. In other portions of the region goat populations are still recovering from the three hard winters of 2006-2008. Conservative harvest strategies are being employed to assure that goats in these areas are not over harvested.

If this proposal is adopted the risk exists of having hunters take multiple goats at a time (potentially several females), which could jeopardize goat populations at least at local levels. The department's strategy for managing goats is to minimize the harvest of females to provide for healthy populations. Heavy snow pack can drive mountain goats into more easily accessed areas (such as lowlands and ocean beaches) in the winter which could lead to significant increases in goat concentrations and harvest rates. With the potential for several females being taken at one time, and maybe even more if several designated hunters are targeting the same group of goats, the department may have to close areas entirely to prevent over harvest.

Enforcement Issues: This proposal would allow persons to be a designated hunter under federal regulations for a species not allowed by proxy hunting under state regulations. If this proposal is adopted, it is the responsibility of federal agencies to inform designated hunters that they can only hunt on federal public lands and to enforce this provision. Additionally, if this proposal is adopted, the federal land managers will be required to develop a goat hunt permitting and reporting system because regulations governing the State's permitting, licensing, and reporting system prohibits proxy hunting for mountain goats and/or possession of more than one bag limit of mountain goat.

Other Comments: The State authorizes proxy hunting only for moose, deer, and caribou. Other differences between state proxy hunting and federal designated hunter regulations are described in the Office of Subsistence Management's analysis. Whether or not designated hunting should be authorized for species other than moose, deer, and caribou merits additional discussion.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose. The current designated hunter provisions already provide for people needing someone else to hunt for them, and there are concerns about the health of the goat population in Unit 5. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-13 Executive Summary	
General Description	Proposal WP12-13 requests that the Federal designated hunting provisions limit the number of Federally qualified recipients that a designated hunter may hunt deer for in Units 1B and 3. *Submitted by Wrangell Fish and Game Advisory Committee*
Proposed Regulation	**General provisions** *§___.25(e) If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user to take deer, moose, and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulation in §___.26.* **Unit Specific Regulations** ***§___.26(n)(1)(vii)(C) In Unit 1B, a designated hunter may hunt deer for only two other specified recipients per year.*** ***§___.26(n)(3)(iii)(C) In Unit 3, a designated hunter may hunt deer for only two other specified recipients per year.*** **Unit 1B — Deer** *2 antlered deer* — *Aug. 1 – Dec. 31* **Unit 3 — Deer** *Unit 3 Mitkof, Woewodoski, and Butterworth Islands – 1 antlered deer* — *Oct. 15 – Oct. 31* *Unit 3 remainder — 2 antlered deer* — *Aug. 1 – Nov. 30* *Dec. 1 – Dec. 31 season to be announced*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.

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WP12-13 Executive Summary *(continued)*	
ADF&G Comments	**Support** Proposal WP12-13 **with modification**. (1) Adopt the portion of the proposal which restricts designated hunter take but modify the proposal to reducing the allowed possession limit to one bag limit of deer at any time. (2) Do not adopt regulations which limit the total number of recipients a federal subsistence hunter may harvest for annually in areas without conservation concerns, have high deer densities, and are outside of high use areas. (3) Adopt antler destruction regulations for all deer harvested by federal subsistence designated hunters. The Alaska Board of Game approved proxy hunting antler destructions regulations to prevent hunters from serially trophy hunting under the guise of proxy hunting for other beneficiaries. The intent of this recommended modification parallels the intent of state hunting regulation.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-13

ISSUES

Proposal WP12-13, submitted by Wrangell Fish and Game Advisory Committee, requests that the Federal designated hunting provisions limit the number of Federally qualified recipients that a designated hunter may hunt deer for in Units 1B and 3.

DISCUSSION

The proponent is concerned that the designated hunter program allows for over exploitation of deer within Units 1B and 3. The proponent states that some hunters use the designated hunting system to take 20–30 deer or more in a hunting season, with the majority of these deer being young bucks. Since younger bucks do not provide as much meat as fully mature bucks, more deer are taken to meet subsistence users needs which is slowly over exploiting the resource. The proponent indicates that the deer populations in Units 1B and 3 are the lowest of all the units within southeast Alaska. The proponent believes that the deer populations in these units will increase by limiting the number of recipients a designated hunter may harvest for during a season within these units.

Existing Federal Regulations

General provisions

§___.25(e) If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user to take deer, moose, and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulation in §___.26.

Unit 1B — Deer

2 antlered deer	*Aug. 1 – Dec. 31*

Unit 3 — Deer

Unit 3 Mitkof, Woewodoski, and Butterworth Islands — 1antlered deer	*Oct. 15 – Oct. 31*
Unit 3 remainder — 2 antlered deer	*Aug. 1 – Nov. 30* *Dec. 1 – Dec. 31* *season to be announced*

Proposed Federal Regulation

General provisions

§___.25(e) If you are a Federally qualified subsistence user (recipient), you may designate another Federally qualified subsistence user to take deer, moose, and caribou on your behalf unless you are a member of a community operating under a community harvest system or unless unit-specific regulations in §___.26 preclude or modify the use of the designated hunter system or allow the harvest of additional species by a designated hunter. The designated hunter must obtain a designated hunter permit and must return a completed harvest report. The designated hunter may hunt for any number of recipients, but may have no more than two harvest limits in his/her possession at any one time, unless otherwise specified in unit-specific regulation in §___.26.

Unit Specific Regulations

§___.26(n)(1)(vii)(C) In Unit 1B, a designated hunter may hunt deer for only two other specified recipients per year.

§___.26(n)(3)(iii)(C) In Unit 3, a designated hunter may hunt deer for only two other specified recipients per year.

Unit 1B — Deer

2 antlered deer	*Aug. 1 – Dec. 31*

Unit 3 — Deer

Unit 3 Mitkof, Woewodoski, and Butterworth Islands – 1 antlered deer	*Oct. 15 – Oct. 31*
Unit 3 remainder — 2 antlered deer	*Aug. 1 – Nov. 30* *Dec. 1 – Dec. 31* *season to be announced*

Existing State Regulations

State regulations have similar provisions which allow for residents that meet certain criteria the ability to have someone else hunt for them. The State's system is referred to as "proxy" hunting and is 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.*

Extent of Federal Public Lands

Federal public lands compromise approximately 99% of Unit 1B and are managed by the US Forest Service as part of the Tongass National Forest (**see Unit 1 map**). Federal public lands comprise approximately 94% of Unit 3 and are managed by the US Forest Service as part of the Tongass National Forest (**see Unit 3 map**).

Customary and Traditional Use Determinations

Rural residents of Units 1A, 1B, 2, and 3 are qualified to subsistence hunt for deer within Unit 1B. Rural residents of Units 1A, 3, Port Alexander, Port Protection, Pt. Baker and Meyers Chuck are qualified to subsistence hunt for deer within Unit 3.

Federal Regulatory History

Federal Designated Hunting regulations allow a Federally qualified subsistence user to hunt for another Federally qualified user (recipient) who also qualifies for that particular hunt. There are no age or disability provisions required of the recipient. The designated hunter is required to have a current Federal Designated Hunting permit in their possession, along with the recipient's harvest ticket(s) or permit for that particular specie. The hunter can hunt for any number of recipients, but may not possess more than two harvest limits at a time. All wildlife taken under designated hunting rules must be delivered promptly to the recipient. The hunter can accept no compensation for hunting.

In 2002, WP02-04, -05, and -06 were considered within the same analysis. The proposals were all similar, seeking to limit the eligibility or the recipients along with the number of recipients a designated hunter could hunt for. Proposal WP02-10 was also considered during this cycle. This proposal asked for a prohibition on designated hunting within a portion of Unit 3. The proposals were opposed by the Southeast Alaska Regional Subsistence Advisory Council. Federal Subsistence Board (Board) action to oppose the proposals occurred through action on the consent agenda.

A similar proposal (WP12-02) will be deliberated by the Board during this regulatory cycle. This proposal is asking the designated hunting program be altered statewide to allow designated hunting only for Federally qualified subsistence users that are either over the age of 60 or a person that is disabled. Action on that proposal could directly effect this proposal.

Biological Background

The Sitka black-tailed deer is native to the wet coastal rainforests of Southeast Alaska. Deer populations in Alaska are dynamic and fluctuate considerably with the severity of the winters. When winters are mild, deer numbers generally increase. Periodically, however, a severe winter will cause a major decline in the population. Deer have a high reproductive potential, and reduced populations normally recover rapidly. In some cases, predation may accelerate a decline in deer numbers, or slow recovery to higher levels. (ADF&G 2011)

Harvest History

Deer harvests reported from Units 1B and 3 on Federal Designated Hunting permits is low. **Table 1** shows estimated deer harvests, the reported designated hunter harvest, maximum harvest reported on a permit, and average harvest per permit of deer reported from Federal Designated Hunter permits since 2003 within these units.

Table 1. Estimated number of Sitka Black tail deer harvested in Units 1B and 3, reported harvest by Federal designated hunters, maximum number and average number of deer reported harvested on designated hunting permits. (Pappas 2011; USFWS 2011)

Year	Unit 1B Deer Hvst Estimate	Unit 3 Deer Hvst Estimate	Unit 1B Fed Des. Hvst	Unit 3 Fed Des. Hvst	Max Rptd Hvst on Permit	Average Hvst/Permit
2003			7	48	6	2
2004			3	58	13	2.2
2005	59	706	3	45	14	1.8
2006	108	775	3	39	4	1.7
2007	34	596	0	20	5	2.5
2008	35	379	1	32	8	2.1
2009	126	600	0	36	5	2.4
2010			2	38	4	1.4

Cultural Aspects of Designated Hunting

The subsistence way of life is very much a part of the social fabric of Alaskan rural communities. Within Alaska Native cultures, the harvesting of subsistence foods is inextricably intertwined with social interactions. Social interactions may be in the form of extended families spending time at fish camps during the summer, young hunters learning harvesting skills from their older relatives, or individuals sharing their harvest successes with community members. Subsistence includes a cultural value system of sharing, which Alaska Natives have maintained since before contact with Russians and Europeans (Wolfe and Ellana 1983).

The hunting of ungulates in Southeast Alaska is 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). Deer and moose are vital food staples and an important protein source for many rural Alaskans.

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 supply 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. It is anticipated that comparable information would be found if the same study were conducted in communities of Units 1B and 3.

Effects of the Proposal

This proposal reduces the number of Federally qualified recipients a designated hunter would be able to hunt deer for within Units 1B and 3. Adoption of the proposal will have a negative effect on rural residents that are both unable to hunt for themselves and dependent on deer as a food source.

Adopting the proposal will likely not reduce the total deer harvest within these areas as the reported harvests from Federal Designated Hunter permits are low. Adopting this proposal will result in an exception to the general designated hunting regulations within these areas. Because the deer populations within these units are predominantly influenced by winter weather conditions and predation, and

are managed by seasons and harvest limits, the proposal will have no measurable effect on the deer population. With little or no effect on the deer population, there would be no effect on non-Federally qualified users.

OSM CONCLUSION

Oppose Proposal WP12-13.

Justification

Adoption of this proposal would restrict the traditional practice of hunting for others and would limit the ability of some Federally qualified subsistence users, unable to hunt for themselves, to enjoy the benefits of deer harvested by others.

Deer populations in this area are predominantly influenced by winter weather conditions and predation. Additionally, deer conservation is managed by the applicable seasons and harvest limits with further reinforcement coming from the designated hunting regulations. The number of deer taken annually by designated hunters is small compared to the total harvest. For these reasons, the proposal will likely have no measurable effect on the deer population so there is no need to restrict the traditional practice of hunting for others.

LITERATURE CITED

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Wolfe, R. J., & Ellana, L. (1983). Resource use and socioeconomic systems: case studies of fishing and hunting in Alaskan communities (Technical Report 61). Juneau: Alaska Department of Fish and Game, Division of Subsistence. Retrieved June 3, 20011, from http://www.adfg.alaska.gov/techpap/tp061.pdf

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-13. The Council agreed with the conclusions contained in the staff analysis and determined that complaints regarding the current regulations originated with only a few individuals. The motivation and circumstances regarding high harvesters was not adequately described by the proponent. The issue is likely transitory in nature and may have been resolved. The designated hunting program in the Units as a whole is successful and working as intended.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-13: Limit federal subsistence designated hunters annual harvest limit to the total allowable take of three annual limits of deer in Units 1, 1B, and 3.

Introduction: This proposal seeks to limit the total annual harvest of a federal subsistence designated hunter to their own bag limit plus two additional bag limits for other federally qualified recipients per year. The proponent indicates adoption of this proposal will eliminate the small percentage of federal subsistence designated hunters who harvest "20-30" deer a year over a 4-6 month federal subsistence season. The proponent also indicates the current federal subsistence designated hunter program may lead to over exploitation of finite populations in Units 1, 1B and 3, harvest of small spike deer, and leave an open door to unlimited harvest under current federal subsistence regulation. The author further states that current federal subsistence designated hunter regulations do not address localized depletion or over exploitation of deer population within the identified Units.

Impact on Subsistence Users: If adopted, federally qualified subsistence designated hunters would be restricted to a total annual harvest of the designated hunter's bag limit and the bag limits for two additional federally qualified recipients. If adopted, fewer recipients of the designated hunter program would benefit from "super-harvesters."

Opportunity Provided by State: Proxy deer hunting for another licensed beneficiary resident of Alaska who is blind, 70-percent disabled, or 65 years of age or older is allowed statewide. Proxy hunters are only allowed to hunt for one beneficiary at a time, although they can be in possession of their personal bag limit plus that of the beneficiary simultaneously. Antler destruction for deer in Units 1-5 is required for all animals harvested by proxy hunters. In other words, if a hunter decides to sign up as a proxy hunter for a beneficiary, all deer harvested by the hunter that year will be subject to antler destruction (both the proxy hunter's animals and the beneficiary's animals). State antler destruction regulations for deer in Units 1-5 require the destruction of antler trophy value for all deer harvested by means of cutting at least one antler from the skull plate, cutting the skull plate in half, or cutting or breaking one of the main beams of the antlers.

Conservation Issues: Deer numbers in Units 1, 1B and 3 are markedly lower than in other parts of southeast Alaska, including Units 1C, 2, and 4. In lower density areas, lower harvest limits and regulations designed to control cumulative harvest are necessary for preventing unsustainable harvests. For example, only bucks are legal for harvest in Units 1A, 1B, and 3 due to low deer numbers. After the severe winters of 2006-2008, deer numbers declined even further than previously, and deer hunter success has declined as well. Aside from severe winter weather, extensive logging of low elevation old growth forests continues to reduce the extent of deer winter range and lowers the carrying capacity for deer in Unit 3 and in portions of Unit 1B. Continuation of unlimited harvest potential by the current federal subsistence designated hunter program might create conservation issues in several of these areas. For example, if Southeast Alaska experiences another severe winter and deer are forced to the beaches, a single federally qualified hunter with unlimited access to beneficiaries could harvest a high percentage of deer in a particular area and lead to localized depletions. If this proposal is adopted deer harvests during heavy snowfall years would be

less likely to overexploit the deer populations by limiting the number of deer a federally designated hunter could take.

The department deems the declining trend in both the reported cumulative and maximum harvest by federal designated hunters since 2005 (see Table 1, USFS staff analysis) as a reflection of recent declines in the availability of Unit 3 deer. Federal designated hunters who circumvent the state bag limit by harvesting multiple deer for nonhunting family members, acquaintances and other recruited beneficiaries reduce the availability of deer for other federally qualified hunters who hunt deer to feed their families. If this proposal is adopted along with recommended modifications, harvest pressure on Unit 3 deer will be reduced thereby allowing depleted populations to recover. Furthermore, the number of deer available for federally qualified hunters who actually take to the field will be improved. Limiting the number of deer a federal designated hunter may take will allow a more equitable distribution of deer among those who actively hunt deer for their own families.

Recommendation: Support with modification.

(1) Adopt the portion of the proposal which restricts designated hunter take but modify the proposal to reducing the allowed possession limit to one bag limit of deer at any time.

(2) Do not adopt regulations which limit the total number of recipients a federal subsistence hunter may harvest for annually in areas without conservation concerns, have high deer densities, and are outside of high use areas.

(3) Adopt antler destruction regulations for all deer harvested by federal subsistence designated hunters. The Alaska Board of Game approved proxy hunting antler destructions regulations to prevent hunters from serially trophy hunting under the guise of proxy hunting for other beneficiaries. The intent of this recommended modification parallels the intent of state hunting regulation.

WP12-15 Executive Summary	
General Description	Proposal WP12-15 requests closing subsistence bear hunting within ¼ mile of Margaret Creek (located on Revillagigedo Island in Unit 1) downstream of the outlet of Margaret Lake and also close bear hunting within ¼ mile of the Dog Salmon Creek (located on Prince of Wales Island in Unit 2) wildlife viewing area and within ¼ mile of Dog Salmon Creek downstream of the viewing platform to Polk Inlet. *Submitted by Brien Salazar*
Proposed Regulation	**Unit 1—Brown Bear** *Unit 1A —1 bear every four regulatory years by State registration permit only.* — *Sept. 15–Dec. 31, Mar. 15–May 31* ***The Margaret Creek drainage within one-quarter mile of Margaret Creek downstream from the mouth of Margaret Lake to the mouth of the creek is closed to the taking of black bears and brown bears.*** **Unit 1—Black Bear** *Unit 1A—2 bear, no more than one may be a blue or glacier bear* — *Sept. 1–June 30* ***The Margaret Creek drainage within one-quarter mile of Margaret Creek downstream from the mouth of Margaret Lake to the mouth of the creek is closed to the taking of black bears and brown bears.*** **Unit 2—Black Bear** *2 bear, no more than one may be a blue or glacier bear.* — *Sept. 1–June 30* ***Dog Salmon Creek drainage within ¼ mile of the Dog Salmon Creek wildlife viewing area and within ¼ mile of Dog Salmon Creek downstream of the viewing platform to mouth of the creek is closed to the taking of black bears.***
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.

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WP12-15 Executive Summary *(continued)*	
ADF&G Comments	**Support** Proposal WP12-15 **with modification** to restrict bear hunting year-round on federal public lands within ¼ mile on either side of Margaret Creek from the dock to the lake and oppose restricting bear hunting near Dog Salmon Creek.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-15

ISSUES

Proposal WP12-15, submitted by Brien Salazar, requests closing subsistence bear hunting within ¼ mile of Margaret Creek (located on Revillagigedo Island in Unit 1) **(Map 1)** downstream of the outlet of Margaret Lake and also close bear hunting within ¼ mile of the Dog Salmon Creek (located on Prince of Wales Island in Unit 2) wildlife viewing area and within ¼ mile of Dog Salmon Creek downstream of the viewing platform to Polk Inlet **(Map 2)**.

DISCUSSION

The U.S. Forest Service (USFS) maintains wildlife viewing platforms at both Margaret Creek (accessible by boat and air) and Dog Salmon Creek (accessible by boat, air, and road). The USFS also regulates commercial bear viewing tours in these areas through outfitter/guide permitting. There is strong demand from both Alaska residents and visitors to see Alaska wildlife, particularly bears. The only other developed bear viewing areas in Southeast Alaska are at Anan Creek on Cleveland Peninsula and Pack Creek on Admiralty Island. The proponent states that there are inherent dangers of bear viewing and hunting taking place at the same location.

The proponent's company, Taquan Air, has an outfitter/guide permit for 3,400 guests for the Margaret Creek viewing area, and has operated in this area for 12 years. Taquan Air has been operating in the Dog Salmon Creek (drains into Polk Inlet) area for nine years, and is permitted by the USFS to bring 2,000 visitors for wildlife viewing to Polk Inlet each year. Based on the company guide's reporting, there has been increased bear hunting activity and annual declines in bear sightings since the company started bringing guests to Dog Salmon Creek. The proponent states that at the present rate of bear population decline, it won't be long before the platform on Dog Salmon Creek will not be a viable bear viewing facility.

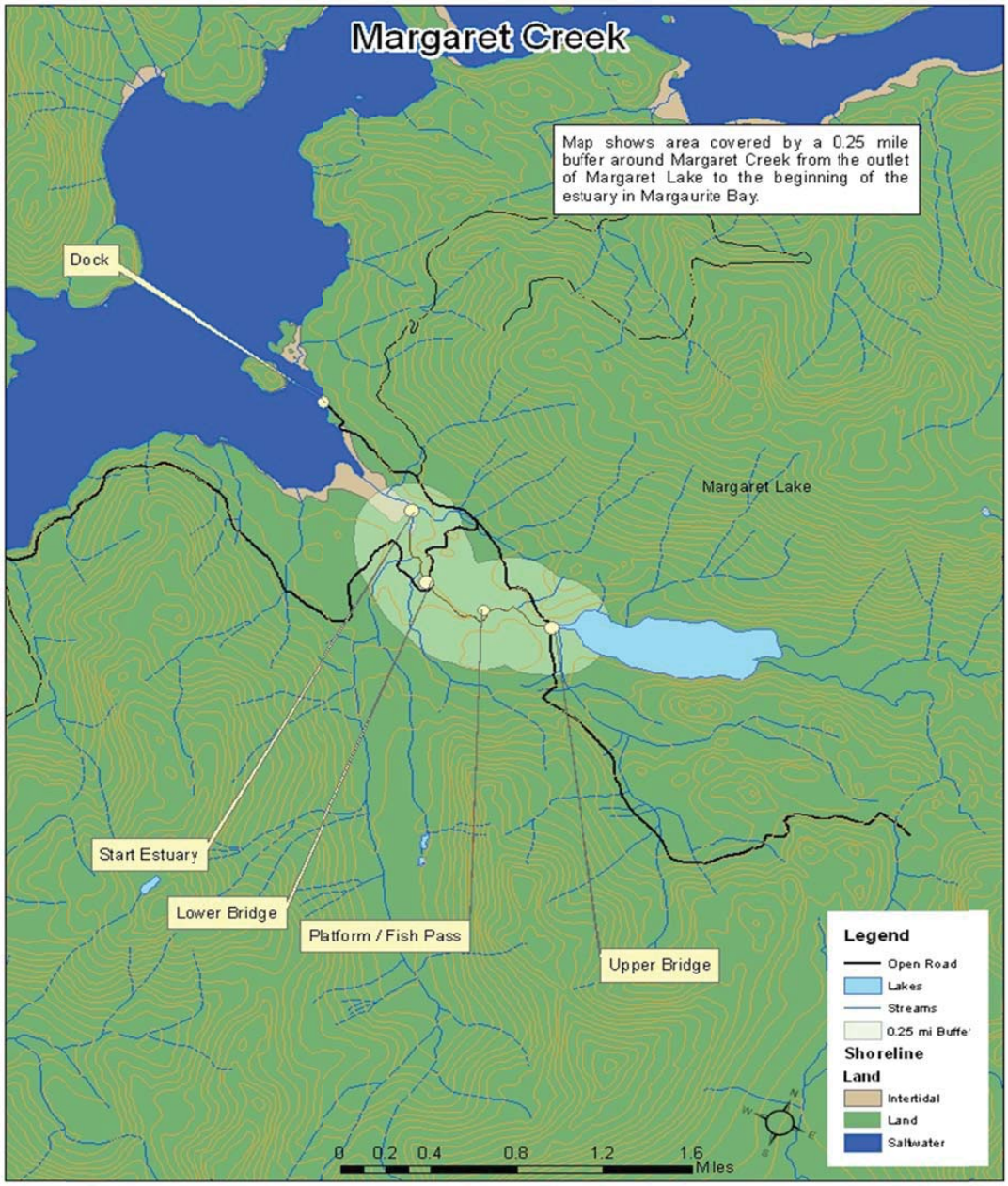
The proponent states that the proposed regulation is necessary to maintain a healthy bear population for those wanting to enjoy wildlife viewing in a wilderness setting, as well as for the safety of these same people.

On June 7, 2011, the proponent clarified that the intent of this proposal was to close the aforementioned areas to subsistence harvest of bears.

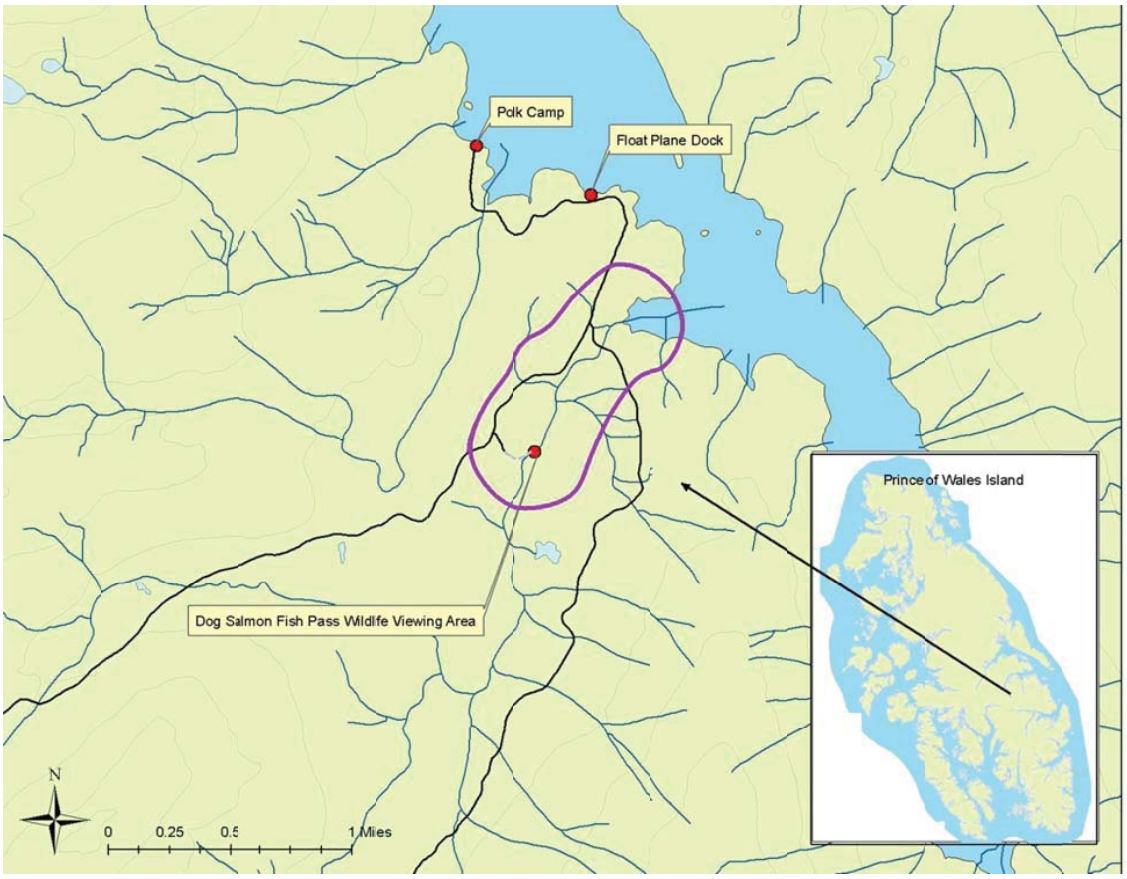
Existing Federal Regulation

Unit 1—Brown Bear	
Unit 1A — 1 bear every four regulatory years by State registration permit only.	*Sept. 15–Dec. 31, Mar. 15–May 31*
Unit 1—Black Bear	
Unit 1A — 2 bear, no more than one may be a blue or glacier bear.	*Sept. 1–June 30*
Unit 2—Black Bear	
2 bear, no more than one may be a blue or glacier bear.	*Sept. 1–June 30*

Map 1. – WP12-15. The Margaret Creek wildlife viewing/fish pass site showing the ¼ mile closure to bear hunting implemented by the Alaska Board of Game. The proponent of WP12-15 requested a closure of the same area as closed by the Board, except the area from the mouth of Margaret Lake downstream to ¼ mile of the wildlife viewing area. Ketchikan is located approximately 23 air miles to the south.



Map 2. WP12-15. The Dog Salmon Creek wildlife viewing area shown with ¼ mile buffer areas around the viewing site and along Dog Salmon creek to the mouth of the creek that would be closed to bear hunting.



Proposed Federal Regulation

Unit 1—Brown Bear

Unit 1A —1 bear every four regulatory years by State registration permit only.	*Sept. 15–Dec. 31* *Mar. 15–May 31*

The Margaret Creek drainage within one-quarter mile of Margaret Creek downstream from the mouth of Margaret Lake to the mouth of the creek is closed to the taking of black bears and brown bears.

Unit 1—Black Bear

Unit 1A—2 bear, no more than one may be a blue or glacier bear	*Sept. 1–June 30*

The Margaret Creek drainage within one-quarter mile of Margaret Creek downstream from the mouth of Margaret Lake to the mouth of the creek is closed to the taking of black bears and brown bears.

Unit 2—Black Bear

2 bear, no more than one may be a blue or glacier bear. *Sept. 1–June 30*

Dog Salmon Creek drainage within ¼ mile of the Dog Salmon Creek wildlife viewing area and within ¼ mile of Dog Salmon Creek downstream of the viewing platform to mouth of the creek is closed to the taking of black bears.

Existing State Regulation

Unit 1—Brown Bear *Sept. 15–Dec. 31*

Unit 1A—One bear every four regulatory years by permit, available in person in Douglas, Haines, Ketchikan, Petersburg, Sitka, online at www.hunt.alaska.gov or by mail from Douglas beginning Aug. 17

OR

One bear every four regulatory years by permit available beginning Mar. 3 *Mar. 15–May 31*

The Margaret Creek drainage within one-quarter mile of Margaret Creek downstream from the mouth of Margaret Lake to the mouth of the creek is closed to the taking of black bears and brown bears.

Unit 1—Black Bear

Unit 1A—Residents—Two bears but not more than one may be a blue or glacier bear

Nonresidents—One bear

Unit 2—Black Bear *Sept. 1–June 30*

Residents—Two bears, but not more than one may be a blue or glacier bear. *Sept. 1–June 30*

Nonresidents—one bear

Extent of Federal Public Lands

Federal public lands compromise approximately 95% of Unit 1A and are managed by the U.S. Forest Service as part of the Tongass National Forest (see **Unit 1 Map**). Federal public lands comprise approximately 83% of Unit 2. The US Forest Service manages 99% of those lands as part of the Tongass National Forest. The US Fish and Wildlife Service manages less than 1% of those lands as part of Alaska Maritime National Wildlife Refuge (Forrester Island) (see **Unit 2 Map**).

Customary and Traditional Use Determinations

Rural residents of Unit 1A have a positive customary and traditional use determination (C&T) for brown bear harvest in Unit 1A, except there is no Federal subsistence priority for residents of Hyder. All rural residents have a positive C&T for black bear harvest in Unit 1A. All rural residents have a positive C&T for black bear harvest in Unit 2.

Regulatory History

Currently at Dog Salmon Creek, there is signage at the main road, trailhead, and parking area referencing 36 CFR 261.10(d) which prohibits shooting within 150 yards of a developed recreation site.

At their November 5–9, 2010 meeting, the Alaska Board of Game (BOG) passed a hunting closure within a quarter mile of Margaret Creek downstream from the mouth of Margaret Lake, to the mouth of the creek. The BOG rejected a similar proposal for a hunting closure in Dog Salmon Creek, on the grounds that the Alaska Department of Fish and Game (ADF&G) and the USFS are currently collaborating on developing a viewing management plan for this area, which may include an expanded hunting closure area.

A similar proposal was submitted by the National Park Service to the Federal Subsistence Board in 1995. This proposal (#53) requested that lands within one mile of the Kantishna airport to the Former Mt. McKinley Park boundary be closed to all subsistence hunting from June 1–Sept. 30, with the reasoning to improve safety and reduce potential user-conflicts (wildlife viewers and subsistence users). The ISC recommendation was to adopt the proposal as modified by the Denali Subsistence Resource Commission and the Eastern Interior Regional Council, which would revise the closed period to June 30 – September 12. After much discussion, the Board deferred action on the proposal while going on record supporting the National Park Service taking the necessary administrative action to address the public safety issue. The resulting regulation (36 CFR 13.912) was implemented as follows:

> **§ 13.912 Kantishna area summer season firearm safety zone.**
>
> *What is prohibited? No one may fire a gun during the summer season in or across the Kantishna area firearm safety zone, unless they are defending life or property.*
>
> *(a) The summer season begins on the Saturday of Memorial Day weekend and continues through the second Thursday following Labor Day or September 15, whichever comes first.*
>
> *(b) The Kantishna Area firearm safety zone includes: The Kantishna Airstrip; the State Omnibus Act Road right-of-way; and all public lands located within one mile of the Kantishna Airstrip or the State Omnibus Act Road right-of-way, from the former Mt. McKinley National Park boundary at mile 87.9 to the south end of the Kantishna Airstrip.*

Biological Background

Quantitative data are not available for Unit 1 brown bears; however, indications are that the population is stable. Currently, there is brown bear research in the Unuk River area of Unit 1A and Bradfield Canal in Unit 1B (Scott 2007). No black bear population studies have been conducted in Unit 1A; however, the population for Revillagigedo Island (including the Margaret Creek bear viewing area) is estimated at 1,764 bears (Scott 2007).

Unit 2 (Prince of Wales and adjacent islands) has some of the best black bear habitat in Southeast Alaska, including abundant productive salmon streams, many large estuaries, and subalpine and alpine areas at lower, more hospitable elevations compared to mainland locations (Porter 2008). The larger average skull sizes of Unit 2 bears compared to other Southeast Alaska bears is another indication of productive habitats (Porter 2008). Black bear populations around the Dog Salmon Creek viewing area appear to be stable (Porter 2011).

Harvest History

During the period from 2000–2010, an average of 7 and 21 black bears were harvested in the watersheds surrounding Margaret Creek and Dog Salmon Creek viewing areas, respectively (**Tables 1 and 2**; Porter 2011). These data represent the harvest within over 30 and 50 square miles around the Margaret Creek and Dog Salmon Creek bear viewing areas, respectively. There were no bears harvested by Federally qualified subsistence users in the Margaret Creek viewing area watersheds from 2000–2010. A total of 16 black bears were harvested by Federally qualified subsistence users in the Dog Salmon Creek area watersheds during this time period, averaging 1 bear per year.

Effects of the Proposal

At Margaret Creek, the Alaska Board of Game recently implemented a hunting closure within a quarter mile of Margaret Creek downstream from the mouth of Margaret Lake, to the mouth of the creek. The action was taken to increase safety for bear viewers and to potentially increase the number of bears available for viewing. Adopting this proposal would align Federal and State regulations in this area. Federally qualified bear hunters would be restricted by closing this area. Non-Federally qualified subsistence users at Margaret Creek would not be affected since that area is already closed to bear harvest under State regulations.

Adopting the proposal at Dog Salmon Creek would not affect non-Federally qualified subsistence users since it remains open under State regulations, and Federally qualified subsistence users could still harvest bears in this area under State regulations.

Adopting this proposal would unnecessarily restrict Federally qualified users from taking bears in both areas. Federally qualified users can only be restricted if there is a conservation concern with the resource, to continue subsistence uses, or for public safety. No conservation concern with Federally qualified users taking bears has been identified at either location. A closure clearly does not continue subsistence uses of bears in these areas. The safety concern is minimal since Federally qualified users rarely take bears at either location and the wildlife viewing tours are largely conducted in the summer when bear hunting season is closed, although there may be some overlap between hunters and viewings during the beginning and end of the hunting season. Additionally, USFS regulation prohibits the discharge of a weapon within 150 yards of a developed recreation site such as the wildlife viewing platforms at Margaret and Dog Salmon Creeks.

The U.S. Forest Service is evaluating increasing the size of the area currently closed to the discharge of weapons around the viewing site at Dog Salmon Creek to increase public safety as part of a comprehensive recreation management plan. Whereas the Federal Subsistence Board can regulate the "taking" of wildlife, the Forest Service has the authority to prohibit the discharge of weapons which would better address any safety issues in the areas under consideration by this proposal. With the U.S. Forest Service working with users and cooperators to develop this plan, this proposed regulation is not needed.

Table 1. Reported harvest of black bears in the watersheds surrounding Margaret Creek bear viewing area, 2000-2010 (Porter 2011). Designation of Federally qualified subsistence user is based on harvester's community of residence.

Year	Federally qualified subsistence user	Non-federally qualified subsistence user	Non-resident	Total
2000	0	3	7	10
2001	0	3	3	6
2002	0	1	3	4
2003	0	5	1	6
2005	0	2	3	5
2005	0	5	4	9
2006	0	3	2	5
2007	0	8	9	17
2008	0	4	4	8
2009	0	2	4	6
2010	0	3	3	6

Table 2. Reported harvest of black bears in the watersheds surrounding Dog Salmon Creek bear viewing area, 2000-2010 (Porter 2011). Designation of Federally qualified subsistence user is based on harvester's community of residence.

Year	Federally qualified subsistence user	Non-federally qualified subsistence user	Non-resident	Total
2000	1	0	9	10
2001	4	0	19	23
2002	1	4	26	31
2003	2	0	25	27
2004	2	1	26	29
2005	2	2	19	23
2006	0	1	9	10
2007	1	1	15	17
2008	0	1	25	26
2009	2	3	19	24
2010	1	3	12	16

OSM CONCLUSION

Oppose Proposal WP12-15.

Justification

Adopting this proposal would unnecessarily restrict Federally qualified users from taking bears in both areas. Federally qualified users can only be restricted if there is a conservation concern with the resource, to continue subsistence uses, or for public safety. No conservation concern with Federally qualified users taking bears has been identified at either location. A closure clearly does not continue subsistence uses of bears in these areas. The safety concern is minimal since Federally qualified users rarely take bears at either location and the wildlife viewing tours are largely conducted in the summer when bear hunting season is closed. Additionally, U.S. Forest Service regulation prohibits the discharge of a weapon within 150 yards of a developed recreation site such as the wildlife viewing platforms at Margaret and Dog

Salmon Creeks. Furthermore, adopting the proposal at Dog Salmon Creek would not have the intended effect of reducing bear hunting, since it remains open under State regulations, and Federally qualified subsistence users could still harvest bears in this area under State regulations.

A closure to bear hunting would only partially address the concerns stated by the proponent. Whereas the Federal Subsistence Board can regulate the "taking" of wildlife, the Forest Service has the authority to prohibit the discharge of weapons which would better address any safety issues in the areas under consideration by this proposal. The development of comprehensive recreation management plans by the U.S. Forest Service with users and cooperators would create an effective solution.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-15. Although very few bears are taken by hunters at these two locations, the Council determined that adopting this proposal would unnecessarily restrict subsistence users. These sites are developed recreation locations and US Forest Service regulations prohibit the discharge of firearms within 150 yards of any developed recreation facility.

INTERAGENCY STAFF COMMITTEE COMMENT

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 WP12-15
December 5, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-15: Close two areas in Units 1 and 2 to federal subsistence bear hunting to provide for a safe and enjoyable wildlife viewing from established platforms.

Introduction: The proponent submitted this proposal to close the following two established bear viewing areas for safety reasons and to increase the chances for viewing of wildlife.

a. Margaret Creek: to within a quarter mile radius of Margaret Creek wildlife viewing platform and downstream from the mouth of Margaret lake including the area within a quarter mile radius from the mouth of Margaret Creek outlet (in Unit 1).

b. Dog Salmon Creek: to within a quarter mile radius of the Dog Salmon Creek wildlife viewing platform and downstream to within a quarter mile radius from the mouth of Dog Salmon Creek at Polk Inlet (in Unit 2).

Impact on Subsistence Users: If adopted, federal subsistence hunters would be prohibited from hunting for bear in the two identified areas. To date, no bears have been harvested under federal subsistence regulations in the two areas identified in this proposal.

Opportunity Provided by State: State Statute 16.05 255(a) authorizes the Alaska Board of Game to develop regulations which consider a variety of factors including for the purpose of safety:

> Sec. 16.05.255. Regulations of the Board of Game; management requirements.
>
> (a) The Board of Game may adopt regulations it considers advisable in accordance with AS 44.62 (Administrative Procedure Act) for
>
> > (11) taking game to ensure public safety;

This authority was exercised during the November 5-9, 2010 Alaska Board of Game meeting which adopted a modified proposal 4 restricting bear hunting within ¼ mile on either side of Margaret Creek from the dock to the lake for year-round.

Enforcement Issues: Adoption of this proposal might result in some confusion by federal subsistence users who would have to know the exact boundaries of the closed areas. If this proposal is adopted, the department recommends the United States Forrest Service issue detailed maps clearly identifying the boundaries of the areas closes to federal subsistence bear hunting.

Recommendation: Support with modification to restrict bear hunting year-round on federal public lands within ¼ mile on either side of Margaret Creek from the dock to the lake and oppose restricting bear hunting near Dog Salmon Creek.

WP12-22a Executive Summary	
General Description	Proposal WP12-22a requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 8 and 15. A related analysis, WP12-22b, addresses hunting seasons and harvest limits for brown bear. *Submitted by the Ninilchik Traditional Council*
Proposed Regulation	**Unit 8—Brown bear** *Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, ~~and~~ Port Lions,* ***and Ninilchik*** **Unit 15~~C~~—Brown bear** *Residents of Ninilchik* ~~**Unit 15 Remainder—Brown bear**~~ ~~*No Federal subsistence priority*~~
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Kodiak/Aleutians Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	A majority of the Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal and could support the Southcentral Regional Advisory Council's recommendation. A minority of the ISC felt that the information available in the analysis may not be sufficient to demonstrate a consistent pattern of use of brown bear for Ninilchik in Unit 15A. The information available that residents of Ninilchik "attempting to harvest brown bear at some point in their lifetime in Units 15A, B, and C" and one brown bear permit issued and no brown bears having been reported harvested over the past 25 years in Unit 15A does not appear to constitute a consistent pattern of use of brown bear from Unit 15A for the community of Ninilchik.
ADF&G Comments	**Support** ability to provide an open until closed status. **Oppose** C&T for Ninilchik residents in Unit 8 at this time.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-22a

ISSUES

Proposal WP12-22a, submitted by the Ninilchik Traditional Council, requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 8 and 15. A related analysis, WP12-22b, addresses hunting seasons and harvest limits for brown bear.

DISCUSSION

The Federal Subsistence Board previously recognized Ninilchik's customary and traditional uses of brown bear in Unit 15C in 2007. The proponent states that opportunity for residents of Ninilchik to harvest brown bear has been limited due to the small amount of Federal public lands in Unit 15C. The proponent requests that the Federal Subsistence Board recognize Ninilchik's customary and traditional uses of brown bear in Units 15A and 15B, as well as 15C. Further, the proponent requests the Board recognize their customary and traditional uses of brown bear in Unit 8, the Kodiak Archipelago.

Only Ninilchik's customary and traditional uses of brown bear in Units 8 and 15 are described below; when a proposal requests adding a community to an existing customary and traditional use determination, only the customary and traditional uses in the area indicated in the determination by that community are analyzed.

Since the implementation in 2007 of the Federal brown bear hunt, which is limited to the Federal public lands in Unit 15C, the opportunity for residents of Ninilchik to harvest brown bear in Unit 15 has decreased; in 2007, the State replaced a registration permit hunt with several drawing permit hunts in Unit 15. The draw rate for these permits is low, and it is difficult to get one.

The Board has previously recognized Ninilchik's customary and traditional uses of black bear and moose in Units 15A, 15B, and 15C, and all fish in the Kasilof River and Kenai River drainages located in Units 15A, 15B, and 15C.

Existing Federal Regulation

Unit 8—Brown bear

Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, and Port Lions

Unit 15C—Brown bear

Residents of Ninilchik

Unit 15 Remainder—Brown bear

No Federal subsistence priority

Proposed Federal Regulation

Unit 8—Brown bear

Rural residents of Old Harbor, Akhiok, Larsen Bay, Karluk, Ouzinkie, ~~and~~ Port Lions, ***and Ninilchik***

Unit 15 ~~C~~ —Brown bear

Residents of Ninilchik

~~**Unit 15 Remainder—Brown bear**~~

~~*No Federal subsistence priority*~~

Existing State Regulation

5 AAC 99.025. Customary and traditional uses of game populations

Unit 8—Brown bear

Negative

Unit 15C—Brown bear

Negative

Extent of Federal Public Land

Federal public lands comprise approximately 41% of Unit 8 and consist of U.S. Fish and Wildlife Service lands within the Kodiak National Wildlife Refuge.

In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% is Kenai Fjords National Park lands, which are not open to subsistence uses, and less than 1% is Forest Service lands. Kenai National Wildlife Refuge manages 67% of the lands in Unit 15A; 88% of the lands in Unit 15B; and 29% of the lands in Unit 15C.

Background

Unit 8

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the Federal Subsistence Board adopted the customary and traditional use determinations from the State. The State did not recognize customary and traditional uses of Unit 8 brown bear. As a consequence, the Federal Subsistence Board adopted a no Federal subsistence priority, customary and traditional use determination for brown bear in Unit 8 (72 FR 22959; May 29, 1992). This meant that no person was eligible to harvest brown bear in Unit 8 under Federal regulations; the harvest of brown bear was allowed under State regulations only.

In 1995, the Kodiak Aleutians Subsistence Regional Advisory Council submitted Proposals WP95-26 and WP95-27 to recognize the customary and traditional uses of brown bear in Unit 8 by residents of the

villages on the island and to adopt hunting seasons and harvest limits. However, the Kodiak Aleutians Council recommended that the Federal Subsistence Board defer Proposal WP95-27, the hunting seasons and harvest limits, allowing the Council time to evaluate the impacts of using a community harvest system versus an individual harvest system. The Federal Subsistence Board, at its meeting in April 1996, adopted Proposal WP95-26 (61 FR 39703; July 30, 1996). Subsequently in April 1997, the Board adopted hunting seasons and community harvest limits for Unit 8 brown bear (62 FR 29040; May 29, 1997).

Unit 15

In 1990, the majority of the Kenai Peninsula was in the Kenai Peninsula nonrural area established by the State. The State did not allow subsistence uses in nonrural areas. Further, the Alaska Board of Game did not recognize customary and traditional uses of brown bear in the areas that were deemed rural (the southern portion of Unit 15C). As a result, the Federal Subsistence Board established a no Federal subsistence priority for brown bear throughout the peninsula (72 FR 22959;May 29, 1992) (see **Appendix A**). This meant that no person was eligible to harvest brown bear in Unit 15 under Federal regulations; the harvest of brown bear was allowed under State regulations only.

In 2006, the Ninilchik Traditional Council submitted Proposal WP07-17a to recognize the customary and traditional uses of brown bear in Unit 15 by residents of Ninilchik, and to adopt hunting seasons and harvest limits (WP07-17b). At its March 2007 meeting, the Southcentral Alaska Subsistence Regional Advisory Council recommended that the Board support Proposal WP07-17a, recognizing Ninilchik's customary and traditional uses of brown bear in Unit 15 (SCRAC 2007).[1]

In April 2007, the Federal Subsistence Board adopted Proposal WP07-17a with modification to provide a customary and traditional use determination for brown bear for Ninilchik in Unit 15C only (72 FR 73433; December 27, 2007). The Board noted that opportunity to harvest brown bear by residents of Ninilchik had been limited by State regulatory restrictions. Ninilchik demonstrated long-term and regular uses of brown bear in Unit 15C in spite of decreased opportunities resulting from restrictive State harvest regulations. However, the Board did not recognize the customary and traditional uses of brown bear by Ninilchik in Units 15A and 15B because the Board viewed these uses as representing a sporadic and inconsistent pattern (FSB 2007:252–255).

About 24 instances of "no Federal subsistence priority" exist in Federal wildlife regulations. No Federal subsistence priority means that the Federal Subsistence Board has not recognized customary and traditional uses of a resource in an area, and therefore, no Federal seasons or harvest limits can be adopted. Hunting may be allowed under State regulations. Currently in Unit 15, the three instances of no Federal subsistence priority are: hunting brown bear in Units 15A and 15B, hunting sheep in Unit 15; and hunting ruffed grouse in Unit 15.

Since adopting State customary and traditional use determinations for wildlife in 1990, the Federal Subsistence Board has adopted or upheld a no Federal subsistence priority, customary and traditional use determinations for black bear in Units 15A and 15B (61 FR 39704; July 30, 1996) and brown bear in Units 15A and 15B (72 FR 73433; December 27, 2007). The Board subsequently adopted a customary and traditional use determination for black bear in Units 15A and 15B for Ninilchik (72 FR 73433; December 27, 2007).

[1] The Federal Subsistence Board book indicates that the Council recommended the Board recognize customary and traditional uses of brown bear in Unit 15A only and is in error (FWS 2007). The Council adopted a motion supporting "17A" referring to the proposal WP07-17a. This was erroneously interpreted as Unit 15A in the Council recommendation (SWRAC 2007:547).

Regulatory History

For Units 8 and 15, since 1967 harvest limits have been one brown bear every four regulatory years and the taking of cubs, or females accompanied by cubs, has been prohibited (Miller 1990).

Unit 8

In Unit 8, a subsistence season for brown bear hunting was first established by the Alaska Board of Game in 1985. In 1986, the Alaska Board of Game recognized customary and traditional uses of brown bear in Unit 8. In that year, however, ADF&G received no requests for permits. Subsequently in 1987, the Alaska Board of Game reversed its earlier findings and determined that there were no customary and traditional uses of brown bear in Unit 8 (FWS 1996: 32). Hunting in Unit 8 was conducted using State registration and State drawing permits until 1997 when a Federal hunt was added (**Tables 1 and 2**).

Unit 15

In Unit 15, prior to 1967 the brown bear hunting season was 10 months, September through June. Since then, brown bear hunting seasons in State wildlife regulations have been restricted to a fall, or a fall and a spring, hunting period of varying lengths between approximately 15 and 45 days (**Table 3**). However, for the 1995 and 1996 regulatory years only the spring hunting season opened and the fall season was closed because additional harvest would have exceeded management objectives, described below. In 1997, a registration permit hunt system was implemented. Then, because of high levels of nonhunting human-caused mortality, the fall season was closed for the 1997 and 1998 regulatory years as well as the spring season for the 1999 regulatory year, and no permits were issued for the 2002–2007 regulatory years. The major causes of known nonhunting brown bear deaths were from vehicle collisions, in defense of property at residences, in defense of life by recreationists, and mistaken identity while hunting other game (FWS 2007)

Beginning in 2007, a State drawing permit was required to hunt brown bear in Unit 15 under State regulations. Also in 2007, the Federal Subsistence Board adopted seasons and harvest limits in Unit 15C that copied State seasons and harvest limits, but with the use of a Federal registration permit (**Table 4**). In 2009, the State lengthened its fall regulatory season by 15 days; however, the Federal regulatory season has not changed since its inception in 2007, and therefore, the brown bear season begins 15 days later in Unit 15C for Federally qualified users (Ninilchik residents) using a Federal registration permit.

The Alaska Department of Fish and Game has used a quota system to aid in management of brown bear in Unit 15. For the 2010 regulatory year, the take of brown bear was not to exceed 10 reproductive-age females in the calendar year by all human causes. Hunting for brown bear under State and Federal regulations was allowed only if the number of nonhunting human caused brown bear deaths was below this quota (Selinger 2011, pers. comm.)

It should be noted that Ninilchik residents who harvest brown bear with a Federal registration permit must salvage the hide, skull, and edible meat (§____.25(a) and §____.25 (j)(2)(ii)).

Community Characteristics

The only community under consideration in this proposal is Ninilchik. For the purpose of the customary and traditional use determinations for Ninilchik, the designation “Ninilchik” includes the Ninilchik census designated place (CDP) and the adjacent Happy Valley CDP. According to the U.S. Census, Ninilchik had 883 residents and Happy Valley had 593 residents in 2010 (ADCCEDa 2011).

Table 1. State Unit 8 brown bear regulations.

State of Alaska Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1989–1992	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit.
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years. Residents may take bear by State drawing permit only; nonresidents guided by a commercial guide may take bear by State registration permit only.
1993	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit **available in person in Kodiak beginning Oct. [x]**. 1 brown bear every four regulatory years by State registration permit **available beginning March [x].**
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years. Residents may take bear by State drawing permit only; nonresidents guided by a commercial guide may take bear by State registration permit only.
1994–2011	Unit 8, northeastern portion of Kodiak Island	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 brown bear every four regulatory years by State registration permit available in person in Kodiak beginning Oct. [X]. 1 brown bear every four regulatory years by State registration permit available beginning March [X].
	Unit 8, remainder	Fall season (Oct. 25–Nov. 30) Spring season (Apr. 1–May 15)	1 bear every four regulatory years **by State drawing permit**

Note: changes are indicated in bold.
[x]=date varies.

Table 2. Federal Unit 8 brown bear regulations.

Federal Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1990–1996	Unit 8	No season	No harvest limit
1997–2012	Unit 8	**Dec. 1–Dec. 15** **Apr. 1–May 15**	**1 brown bear by Federal registration permit issued by the Kodiak National Wildlife Refuge Manager and per community as follows:** **Akhiok—1 permit** **Karluk—1 permit** **Larsen Bay—Up to 3 permits** **Old Harbor—Up to 2 permits** **Ouzinkie—Up to 2 permits** **Port Lions—Up to 2 permits**

Notes: changes are indicated in bold.

Happy Valley CDP is a census designated place created by the U.S. Census and also is considered a residential extension of Ninilchik. Happy Valley was first noted in 1950 by the U.S. Geological Survey and is simply noted as a "geographic location" (ADCCEDb 2011). There are no facilities, no schools, no post office, and no government. Students who reside in Happy Valley go to school in Ninilchik and Happy Valley residents primarily receive their mail in Ninilchik. The Ninilchik tribal government and the Kenai Peninsula Borough are the only local governments in the Ninilchik area; there is no local municipal government (Wolfe 2006a).

Long-term residents of Ninilchik trace their origins to the descendants of Alaska Natives (predominately Alutiiq from Kodiak Island) who married Russian American Company employees and settled on the Kenai Peninsula in the Ninilchik area in 1847 (Wolfe 2006a, 2006b; Arndt 1993: 40). The children of the marriages between Russians and Alutiiqs were referred to as "Creoles" by the Russians (Arndt 1993:40, 42; Fedorova 1973:33). The original inhabitants of Ninilchik came to the Kenai Peninsula and settled within the traditional territory of two Alaska Native groups: Dena'ina Athabascan and Alutiiq. The traditional territory of the Dena'ina extends from Kachemak Bay on the Kenai Peninsula, west across Cook Inlet to the Stony River and northeast to the Susitna Basin. The traditional territory of the Alutiiq includes the southern portion of the Kenai Peninsula, bridging the Alutiiq territories of Prince William Sound with Kodiak Island and the Alaska Peninsula (De Laguna 1934, Krauss 1982, and Stanek 1980).

The U.S. Census in 1880 enumerated the population at Ninilchik as 53 "Creoles" (Fall et al. 2004:33). The U.S. Census in 1890 described the population of Ninilchik as "inhabited by 50 Russian creoles and a small number of natives of the Tnaina tribe" (Porter 1893: 69). The population of Ninilchik was enumerated in 1890 as "12 White, 53 Mixed, 16 Indian" (Porter 1893: 4). Thereafter, the Ninilchik population increased naturally, through kinship relationships and intermarriage with Alutiiq and Dena'ina, and through the in-migration of people from Outside.

Table 3. State Unit 15 brown bear regulations.

State of Alaska Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1959–1966	Unit 15	Sept.–June	1 brown bear every year
1967–1977	Unit 15	**Fall season only**	1 brown bear **every four regulatory years**
1978–1996	Unit 15	Fall season[a] **Spring season**	1 brown bear every four regulatory years
1997–2003[b]	Unit 15	Fall season[a] Spring season[a]	1 brown bear every four regulatory years **by State registration permit**
2004[b]	Unit 15	Fall season	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage, or by mail from Homer, beginning Oct. 10**
2005–2006[b]	Unit 15	Fall season	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage beginning Oct. 10**
2007–2008[b]	Unit 15	Fall season (Oct. 1–Nov. 30) **Spring season (Apr. 1–June 15)**	1 brown bear every four regulatory years by **State draw permit**
2009–2010	Unit 15	Fall season (**Sept. 15**–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State draw permit

[a] Fall 1995–1998 and spring 1999 seasons closed by ADF&G emergency order. Additional seasons may have been closed by emergency order
[b] No permits issued 2002–2007.
Note: changes are indicated in bold.

Non-Native settlement on the Kenai Peninsula began in the 18th century with the Russians and the fur trade and later mining efforts in Kachemak Bay. At the end of the 19th century, commercial fishing, such as the herring saltery at Seldovia in 1896, brought about new settlements. The next major non-Native settlement period began during the Gold Rush era at the end of the 19th century. With the construction of roads and local oil development after 1950, the population of the Kenai Peninsula increased substantially through in-migration of people born outside Alaska. The Ninilchik area population grew through in-migration and became more demographically diverse (Wolfe 2006a).

Table 4. Federal Unit 15 brown bear regulations.

Federal Regulations, Brown Bear			
Regulatory Year	**Area**	**Season**	**Harvest Limit**
1990–2006	Unit 15	No season	No harvest limit
2007–2012	**Unit 15C**	**Oct. 1–Nov. 30 (Season to be announced) Apr. 1–June 15 (Season to be announced)**	**1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council**
	Unit 15 remainder	No season	No harvest limit

Note: changes are indicated in bold.

Eight Factors for Determining Customary and Traditional Uses

A community or area's customary and traditional use is generally exemplified through the following eight factors: (1) a long-term, consistent pattern of use, excluding interruptions beyond the control of the community or area; (2) 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) and 36 CFR 242.16(b)). In addition, the Board takes into consideration the reports and recommendations of any appropriate Regional Advisory Council regarding customary and traditional use of subsistence resources (50 CFR Part 100.16(b) and 36 CFR 242.16(b)). The Board makes customary and traditional use determinations for the sole purpose of recognizing the pool of users who meet 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 limitations or seasonal restrictions rather than by limiting the customary and traditional use finding.

Ninilchik residents have used a wide array of fish and wildlife resources since the founding of the community in 1847. The site was chosen so that retirees, who included Alutiiqs, Russians, and Creoles, from the Russian-American Company would be able to support themselves by harvesting wild resources and gardening (Arndt 1993:2).

It is important to understand the history of the Ninilchik subsistence economy in the context of the Russian colonial period. The success of the Russian-American Company depended entirely on the subsistence way of life of the indigenous inhabitants of Alaska (Fedorova 1975:10). The primary goal of the company was the harvest of fur, mainly sea otter. The specialized sea otter hunting techniques and capabilities of the Unangan (Aleuts) of the Aleutian Islands and the Alutiiq people, primarily of Kodiak, were exploited for the success of the Company. Beyond furs, however, the subsistence harvest was the primary food supply that sustained Company enterprises (Fedorova 1973). Importing supplies overland through Siberia and by sea was expensive, slow, and often unsuccessful. In addition to harvesting sea otters, the Native inhabitants of Alaska were required to provide the bulk of the food for the Russian colonists in addition to their own. The Russians attempted to supply the colonies with food through agriculture and cattle husbandry. These attempts provided some food but never the amounts the colony needed (Fedorova 1973, 1975; Tikhmenev 1978).

The Russian settlers adapted to the subsistence diet of Alaska. According to one Russian officer in a report on the state of the colonial settlements:

> The location and abundance of the pasturage would let them have any number of cattle, were it not for the difficulty of preparing winter fodder . . . . The ration of the Russian settler on Kodiak included mushrooms and berries . . . . Game and bear meat were of great help for the settlers . . . . The Kodiak promyshlenniks [Russian fur traders] kill many thousands of bears but they do not die out . . . . The most important food is fish (Fedorova 1973: 239).

There is not an abundance of ethnographic information about the "Creole" communities of Alaska because early anthropologists only wanted to study communities they believed had not had contact with other cultures. In writing about the Alutiiq of Kodiak, anthropologist Frederica de Laguna noted in 1964:

> In appraising cultural similarities and dissimilarities . . . we are bound to be subjective in our judgment because we can not help using those cultures with which we are most familiar as standards against which others are to be measured. Thus the northern Alaskan Eskimo are assumed, perhaps unconsciously, to constitute a norm of the typical Alaskan Eskimo from which the less familiar Pacific Eskimo appear divergent, or as intermediate between the "true Eskimo" and the Aleut (De Laguna 1964: 211).

There is not extensive documentation of Ninilchik's subsistence patterns because they were not considered a "norm" by early cultural anthropologists. In the information that is available, it is clear that brown bear is part of the subsistence diet of Ninilchik (cf. Elliot 1887, Fall et al. 2000, FWS 2007, Leman 1993, Ninilchik Parent Teacher Association nd [1951], NTC 1999, Oskolkoff 1992, Tikhmenev 1978) and of the Dena'ina and local Kenaitze (cf. Fall et al. 2000, Osgood 1966).

At the April 1995, meeting of the Federal Subsistence Board, Grassim Oskolkoff, past president of the Ninilchik Traditional Council, described the use of bear by Ninilchik residents:

> Just yesterday I came from my acreage in the woods there, and looking for bear tracks. And they all look at me and say—I know they're talking about me—how come you're looking for bear track? I am looking for bear track because it was traditional. It was what we did. In spring, people

> would look for young black bear especially, that was a delicacy. And we tried to get. And of course, the big brown bear for fur, for—'cause you could sell those things. Even at that time, you could sell those things for 2 or 3 hundred dollars which is a lot of money. . . . My dad did, him and Matsen (ph), another family there, and Marian's dad and whatnot. They used to go up in the hills—Caribou Hills is what we call—what you know about probably—and get that big—brownie and roll up—skin him and roll up the hide and carry that thing all the way from Caribou Hills down to Deep Creek, mouth of Deep Creek. That's where they would—where they're fishing now, what we're talking about. And cross over there with that bear hide and bring it to Ninilchik and hang it up. Of course, all of us kids, we'd go and turn that thing over and play on the fur, just like a bunk (FSB 1995: 594–595).

Most of the Caribou Hills is located within the boundaries of the Kenai National Wildlife Refuge. This story of walking to the Caribou Hills and probably floating back to the mouth of Deep Creek is not unusual for residents of Ninilchik prior to the construction of the highway in 1951. There are at least two references to long walks in Agrafena's Children that recount walks from Ninilchik to Kenai and Ninilchik to Homer (Leman 1993: 359, 362). The book, Agrafena's Children by Wayne Leman, is a "family history" or chronicle of the original inhabitants of Ninilchik.

Ninilchik is a coastal community, and fish are a large part of the local diet, as are moose, but plants, birds and other large land mammals, including brown bear, are part of the diversified subsistence repertoire.

There are at least five sources of data related to Ninilchik subsistence harvests. Sources include two studies completed by the ADF&G Division of Subsistence, and two completed by the Ninilchik Traditional Council. These studies have helped our understanding of the extent of the use of brown bear by residents of Ninilchik and other communities on the Kenai Peninsula. A fifth source is the ADF&G and FWS permit report database.

ADF&G Division of Subsistence Studies: 1982 and 1998

Two studies of Ninilchik subsistence uses are considered in this analysis. These include: 1) ADF&G, Division of Subsistence Technical Paper 106, which includes residents' harvest estimates for the calendar year 1982 (Reed 1985) and 2) ADF&G, Division of Subsistence Technical Paper 253, which includes residents' harvest estimates for the calendar year 1998 (Fall et al. 2000). These two studies differ in sample size and also in sample area. The 1982 study included only the Ninilchik CDP; the 1998 study included the "Ninilchik rural area" which included the Ninilchik CDP, the Happy Valley CDP, and Clam Gulch CDP (Fall et al. 2000: 26).

1982 ADF&G Division of Subsistence Technical Paper 106 "*The Role of Wild Resource Use in Communities of the Central Kenai Peninsula and Kachemak Bay, Alaska*" included subsistence harvest data from the communities of Kenai, Homer, Ninilchik and Seldovia for the calendar year 1982 (Reed 1985). There were an estimated 217 households in Ninilchik (CDP) at the time of the study (Reed 1985:8). Twenty-four households were interviewed as part of this study, 11% of the community (Reed 1985:8). The survey used for this research included most subsistence resources available on the Kenai Peninsula but did not include brown bear. It does not appear that participants were asked about subsistence uses of brown bear for the 1982 survey year (Reed 1985:202–210).

Reed noted that in the study communities, "There appeared to be no stable seasonal round and harvest quantities were relatively low. However, with such a large study population, the representativeness of the findings was difficult to ascertain" (Reed 1985:7). Reed observed that the harvest of large land mammals in Ninilchik was secondary to the harvest of fish and seafood, "Reasons given for this included

a perceived scarcity of game, excessive hunting competition, short seasons and the lack of the necessary skill and equipment" (Reed 1985:82).

1998 ADF&G Division of Subsistence Technical Paper 253 "*Wild Resource Harvests and Uses by Residents of Selected Communities of the Kenai Peninsula Borough*" included subsistence harvest data from Ninilchik, North Fork Road, Fritz Creek East, and Nikolaevsk for the calendar year 1998. Each was considered a separate community. Ninilchik was defined as the Happy Valley CDP, Ninilchik CDP, and almost all of the Clam Gulch CDP; about a 30-mile stretch along the Sterling Highway from Clam Gulch at about Milepost 121 to Stariski Creek at Milepost 151. In Ninilchik, there were an estimated 400 households at the time of the study (Fall et al. 2000:21). The sample size was 25% of the community or 101 households. Results from the sample were expanded to represent the entire community.

This study indicated that in 1998, 2% (8 households within the entire community of 400 households) of Ninilchik households tried to harvest brown bear and that none used, harvested, received or shared it (Fall et al. 2000: 93). In addition to harvest data, residents were asked about the location of their harvests. In table 64 (Fall et al. 2000:133), 1% (4 households of 400) reported hunting (not harvesting) brown bear in Unit 15B within the Kenai National Wildlife Refuge and 1% (4 households of 400) reported hunting brown bear elsewhere. There was no other brown bear hunt location noted in this table by residents of Ninilchik (Fall et al. 2000: 133).

In contrast to the other communities in this study it was noted, "Only in Ninilchik were there any brown bear hunters; this activity occurred within the refuge boundaries in Unit 15B and off the Kenai Peninsula" (Fall et al. 2000: 186).

Ninilchik Traditional Council

Two studies of Ninilchik subsistence uses conducted by the Ninilchik Traditional Council, funded by the Bureau of Indian Affairs, are considered in this analysis. These include a study conducted in 1994 and another conducted in 1999. These studies were not random samples of the community but were targeted specifically at long-term residents of the community. The purpose of these studies was to document the lifetime subsistence use areas of Ninilchik. The 1994 study included participant households' harvest estimates of lifetime use. The 1999 study included participant households' harvest estimates between 1994 and 1999 (NTC 2006). This was intentionally different from most ADF&G Division of Subsistence studies, which rely on a specific year of harvest information.

1994 A 1994 survey of 26 targeted Ninilchik households indicated that 5 households of 26 sampled households used brown bear, 4 of 26 households tried to harvest it, 5 of 26 households received brown bear, and 5 of 26 households shared brown bear. Respondents reported attempting to harvesting brown bear at some point in their lifetimes in Units 15A, 15B, 15C, and in Unit 8, Kodiak (NTC 2006:8).

1999 The targeted survey sample of Ninilchik households for the 1999 study included 21 households. Respondents were asked to describe their subsistence harvest from 1994 to 1999. Ninilchik Traditional Council staff used a baseline subsistence survey questionnaire modeled after, but not the same as, that used by ADF&G Division of Subsistence. This similarity is noted because beyond asking respondents how many of which resource they harvested, they were also asked about harvest effort and sharing.

According to the Ninilchik Traditional Council research in 1999, the 21 households surveyed reported that no Ninilchik households used, tried to harvest, harvested, received or shared brown bear from 1994 to 1999 (NTC 2006:8).

ADF&G and U.S. Fish and Wildlife Service Permit Report Database

In addition to the sources noted above, information exists concerning hunting brown bear by Ninilchik residents based on the combined ADF&G and U.S. Fish and Wildlife Service permit report database (FWS 2011).

Unit 8

Brown bear hunting in Unit 8 has been conducted with State registration permits and State drawing permits since at least 1989 (see **Table 1**). Hunter success rates are one measure of hunting opportunity. **Table 5** shows hunter success rates using State registration and State drawing permits. The number of applications received for drawing permits is not available at this time and therefore the ability of residents of Ninilchik to hunt using a drawing permit in Unit 8 could not be measured. The hunter success rates using a State drawing permit was generally over 50%, and the hunter success rates using State registration permits were lower, generally under 20%.

Residents of Ninilchik have hunted brown bear in Unit 8. **Table 6** shows brown bear hunting and harvest activity in Unit 8 by residents of Ninilchik. Since 1986, 17 permits have been issued to residents of Ninilchik to hunt brown bear in Unit 8, and 9 hunters reported harvesting 4 brown bear.

Unit 15

The ADF&G and U.S. Fish and Wildlife Service permit report database (FWS 2011) contains information describing Ninilchik's brown bear hunting efforts since 1997 only. This is because prior to 1997, brown bear hunting in Unit 15 was conducted through a general hunt. The general hunt provisions did not require hunters to report their hunting effort. Harvested brown bear were required to be sealed.

In 1997, a State registration hunt was implemented in Unit 15. Hunter success rates are one measure of hunting opportunity. **Table 7** shows that hunter success rates ranged from a high of 12% in 1997 to a low of 3% in 2001. In 2007, a State drawing permit hunt was implemented in Unit 15. The number of applications for a drawing permit is another measure of hunting opportunity. **Table 8** shows the percentage of applicants who were awarded a drawing permit has been less than 2% annually.

Concurrently in 2007, a Federal registration permit was implemented in Unit 15C, and **Table 9** shows the hunter success rates. In the three years since implementation the number of permits issued has increased from 8 in 2008 to 16 in 2009, and hunters success rates have varied from 17% 2009 to 50% in 2008, based on permits that were used.

It should be noted again that during some years, seasons were limited or closed because the ADF&G quota of brown bear was reached (see **Table 3**). The quota represents the number of brown bear that can safely be taken in one year and still provide for future uses. Brown bear also were taken in defense of life and property (DLP), in collisions with motorized vehicles, and through hunting. **Table 10** includes brown bears harvested through hunting only.

Table 10 shows that 1997–2009, 37 permits have been issued to residents of Ninilchik to hunt brown bear in Unit 15, and 17 hunters reported harvesting 2 brown bear. In Unit 15A, one hunter reported harvesting no brown bear; in Unit 15B, 2 hunters reported harvesting no brown bear; and in Unit 15C, 11 hunters reported harvesting 2 brown bear. Both brown bear harvests in Unit 15 were reported in Unit 15C in the Kasilof River drainage.

Table 5. Unit 8 brown bear harvest success rates for all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) using State registration and drawing permits (FWS 2011).

Unit 8 Brown Bear						
State Registration Permits				State Drawing Permits[a]		
Regulatory Year	Number of Hunters	Number of Brown Bear Harvested	Percentage of Hunters that were Successful	Number of Hunters	Number of Brown Bear Harvested	Percentage of Hunters that were Successful
2009	154	20	13%	350	181	52%
2008	187	33	18%	329	219	67%
2007	149	19	13%	341	165	48%
2006	168	20	12%	309	182	59%
2005	181	13	7%	319	195	61%
2004	166	12	7%	310	157	51%
2003	113	16	14%	303	147	49%
2002	75	14	19%	276	124	45%
2001	162	17	10%	278	140	50%
2000	0	0	0%	287	130	45%
1999	4	0	0%	321	149	46%
1998	3	0	0%	307	130	42%
1997	119	6	5%	342	158	46%
1996	100	12	12%	325	150	46%
1995	95	9	9%	326	142	44%
1994	98	5	5%	324	147	45%
1993	230	90	39%	192	73	38%
1992	285	112	39%	186	67	36%
1991	259	97	37%	193	57	30%
1990	217	94	43%	194	55	28%
1989	213	28	13%	205	18	9%
1988	214	95	44%	205	75	37%
1987	47	30	64%	75	18	24%
1986	275	31	11%	45	14	31%

[a] The number of applications received for drawing permits was not available.

Table 6. Ninilchik's Unit 8 brown bear harvest (FWS 2011).

Ninilchik Unit 8 Brown Bear			
Regulatory Year	**Permit**	**Hunt**	**Harvest**
2009	1	1	
2008			
2007	2	2	1
2006	1	1	
2005			
2004	4		
2003	1	1	
2002			
2001			
2000			
1999	1		
1998			
1997			
1996			
1995	1		
1994			
1993			
1992			
1991			
1990	2	2	2
1989			
1988	3	2	1
1987			
1986	1		
Total	17	9	4

Black cell=0

Table 7. Unit 15 brown bear harvest success rates for all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) using State registration permits (FWS 2011).

State Registration Permits, Unit 15			
Regulatory Year	**Number of Hunters**	**Number of Brown Bear Harvested**	**Percentage of Hunters that were Succussful**
2006	No permits issued		
2005	No permits issued		
2004	81	3	4%
2003	No permits issued		
2002	No permits issued		
2001	73	2	3%
2000	71	5	7%
1999	86	9	10%
1998	No permits issued		
1997	33	4	12%

Table 8. Unit 15 brown bear State drawing permits awarded to all hunters (Federally qualified, non-Federally qualified, and nonresidents of the state) (Kamletz 2011, pers. comm.).

State Drawing Permits, Unit 15			
Hunt Number	**Number of Applications Received**	**Number of Drawing Permits Awarded**	**Percentage Drawn**
2010	1,430	22	2%
2009	1,040	22	2%
2008	1,078	18	2%
2007	1,681	13	1%

Table 9. Unit 15 brown bear success rates for Federally qualified hunters (residents of Ninilchik only) using Federal registration permits (FWS 2011).

Federal Registration Permits, Unit 15				
Regulatory Year	**Number of Issued Permits**	**Number of Hunters**	**Number of Brown Bear Harvested**	**Percentage of Hunters that were Successful**
2009	16	6	1	17%
2008	8	2	1	50%
2007	0	0	0	0%

Table 10. Ninilchik's Unit 15 brown bear harvest (FWS 2011).[a]

Ninilchik Unit 15 Brown Bear															
Regulatory	**Unit 15A**			**Unit 15B**			**Unit 15C**			**Unit 15 Unknown**			**Unit 15 Total**		
Year	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**	**Permit**	**Hunt**	**Harv**
State Drawing Permit and Federal Registration Permit															
2009	State drawing permit required						16	6	1				16	6	1
2008	State drawing permit required						8	1	1				8	2	1
2007	State drawing permit required														
State Registration Permit															
2006															
2005															
2004															
2003															
2002															
2001										3	1		3	1	
2000							1	1		1			2	1	
1999	1	1		2	2					1	1		4	4	
1998															
1997							3	3		1			4	3	
State General Hunt															
1996	Prior to 1997, hunters were not required to report hunting effort. Harvested brown bears were														
1995	required to be sealed. See **Table 11** for sealing information.														
Total	1	1	0	2	2	0	28	11	2	6	2	0	37	17	2

[a] Fall 1995-1998 and spring 1999 seasons closed by ADF&G emergency order. Additional seasons may have been closed by emergency order. No permits issued 2002-2007.

Blank cell=0

=seasons closed or restricted

Table 11 shows the number of brown bears harvested by residents of Ninilchik prior to 1997. As mentioned above, in 1997 a State registration permit hunt was established in Unit 15 requiring hunters to report their hunting effort as well as harvest. Prior to 1997, brown bear harvests were recorded when harvested brown bears were sealed. **Table 11** shows that 1975–1996, residents of Ninilchik harvested 11 brown bear, all from Unit 15C. Of the 6 brown bear taken in "defense of life and property" (DLP) most were taken during an open hunting season, and the other 5 brown bear were taken while being hunted.

Ninilchik residents have hunted brown bear in other management units. **Table 12** shows the number of brown bears sealed in any management unit since 1962, cumulative. Most (40%) were harvested in Unit 15, then Unit 8 (11%) and Unit 16 (7%), and Units 6, 9, 18, and 20 (4% each).

Additional Information

Documentation exists describing bear hunting by Ninilchik residents. The letter from Grassim Oskolkoff (1992), above, indicates spears were used. This is consistent with other early ethnographic accounts about the Dena'ina and the Alutiiq, which also noted that in addition to spears, snares, deadfalls, and taking of bear in a den, and dogs to smell out the den were used (Osgood 1966: 32–33, Mishler 2001). Additionally, a successful harvest resulted in a feast in which part of the meat was shared with others (Osgood 1966:

Table 11. Ninilchik's Unit 15 sealed brown bear up to 1996 when a State registration permit hunt was established (FWS 2011).

Ninilchik, Sealed Brown Bear			
Regulatory Year	**Unit 15A**	**Unit 15B**	**Unit 15C**
1996			1
1995			1
1994			2
1993			1
1992			
1991			
1990			
1989			1
1988			
1987			
1986			1
1985			1
1984			
1983			
1982			
1981			
1980			
1979			
1978			1
1977			1
1976			
1975			1
Total			11

Blank cell=0

32–33). In Tikhmenev (1978), there is evidence that bears were trapped. The photograph from Leman (1993:416) indicates guns were/are used to harvest bears.

At the winter 2007 Southcentral Alaska Subsistence Regional Advisory Council meeting, a Council member made the following comments related to harvests of black bear and brown bear on the Kenai Peninsula:

> I have lived in the Kenai for about 60 years, we used to think nothing of shooting a brown bear or a black bear and, of course, you know, in the last 20 years they've literally taken the brown bear hunt away from people. And although right now I think last year's take of black bear was something like 450 or 420-something in 15 and 7, if they were to take that away like they did the brown bear, all of a sudden we would have no bear hunts. And so that's the part I'm kind of thinking about. And that's where the Federal priority would come in, you'd still have a chance to

Table 12. Ninilchik's harvest of brown bear based on the State sealing database, 1962-2009.

Ninilchik 1962-2009 Cumulative		
Management Unit	**Brown Bears Sealed**	**Percent of Total Statewide**
Unit 4	1	2%
Unit 6	2	4%
Unit 8	5	11%
Unit 9	2	4%
Unit 10	1	2%
Unit 11	1	2%
Unit 13	3	7%
Unit 15	18	40%
Unit 16	3	7%
Unit 17	1	2%
Unit 18	2	4%
Unit 19	1	2%
Unit 20	2	4%
Unit 23	1	2%
Unit 25	1	2%
Unknown	1	2%
Total	**45**	**100%**

> get a black bear . . . . And personal history, back in the early ‘50s, any black bear that I ever took was usually up behind Tustumena Lake, up on the bench where the blueberries were. I was sheep hunting and we’d take a black bear for camp meat. In more recent years I have not taken a black bear. I have never sealed a black bear. So that’s just personal history. The black bear that I have seen shot in the lower Kenai, in 15C, normally are shot above timberline in the Caribou Hills, it’s a berry crop (SCRAC 2007: 475).

The current subsistence harvest of brown bear and the history of brown bear harvest detailed above indicates this use and the knowledge of this use has been passed from the earliest days of the settlement of Ninilchik to the present.

At the fall 2011 Southcentral Alaska Subsistence Regional Advisory Council meeting, a Council member explained that some Council members probably were not aware of ties to the Kodiak area possessed by many Ninilchik residents, especially ties to extended family members (SCRAC 2011:70–71). At the Council meeting, Ivan Encelewski, of the Ninilchik Tribe, reminded Council members of the testimony given at the Council meeting in winter 2007, noted above. He added that many Ninilchik residents commercial fished in the Kodiak area, regularly traveled to the Kodiak Area, and that some Ninilchik residents had hunting cabins there. Additionally, concerning the Unit 15 brown bear hunt, he noted that “there is a long history of this hunt being closed down year after year or the restrictions continually being placed on it” (SCRAC 2011:71).

Like all rural communities, Ninilchik residents rely on a wide diversity of fish and wildlife resources. Ninilchik relies on a wide variety of subsistence foods affected by several factors such as abundance, weather, regulations and competition. The Alaska Department of Fish and Game, Division of Subsistence data collected in 1999 regarding 1998 Ninilchik harvests indicated the community used 86 different fish, wildlife, and plant species for subsistence. In 1998, Ninilchik residents harvested 164 pounds per person

of wild resources for home use (Fall et al. 2000:245). Ninilchik residents harvested more wild resources, by pounds usable weight, than were harvested by residents of other rural communities in the area, such as, Hope (111 pounds per person) and Cooper Landing (92 pounds per person) (Fall et al. 2000:242). In 1998, the Ninilchik subsistence harvest was dominated by large land mammals, with a harvest of 70,474 pounds. A large amount of fish was harvested including 45,460 pounds of salmon and 34,100 pounds of halibut. The third highest use category was 11,837 pounds of marine invertebrates. The average number of wild resources used by Ninilchik households was 8.6 in 1998. This is consistent with uses of other communities on the road system in the area such as Cooper Landing (8.3) and Hope (9.1), but is greater than in Kenai in 1991 (6.1) and 1993 (7.1). These uses are reflective of a heterogeneous community that is comprised of long-term residents and newcomers and a community that does not harvest marine mammals.

Brown bear is not the most widely used subsistence resource in Ninilchik, however, it is part of the diversified repertoire of subsistence resources harvested in this community.

Effects of the Proposal

If this proposal is adopted, Ninilchik residents would have their customary and traditional uses of brown bear recognized in Units 15A and 15B on the Kenai Peninsula and in the Kodiak Area, in Unit 8. Conservation concerns are addressed through implementation of seasons and harvest limits and are not part of the consideration in making customary and traditional use determinations.

OSM CONCLUSION

Support Proposal WP12-22a.

Justification

Customary and traditional uses of brown bear by residents of Ninilchik exemplify the eight factors used by the Federal Subsistence Management Program to describe customary and traditional uses. The Federal Subsistence Board acknowledged this when it recognized Ninilchik's customary and traditional uses of brown bear in 2007 and adopted hunting seasons and harvest limits for brown bear in Unit 15C.

Ninilchik's pattern of brown bear use in Units 15A and 15B has been affected by interruptions beyond the control of the community, including:

- in 1967 the harvest limit was reduced from one brown bear per year to one brown bear every four years (**Table 3**);
- in 1967 the hunting season was reduced from 10 months to much shorter fall and spring seasons (**Table 3**);
- in 1978 the State's new subsistence law recognized most of Unit 15 as a nonrural area in which subsistence regulations could not be promulgated; and
- in 1995 the quota of allowable brown bear deaths was reached and the fall hunting season was closed, the first of many closures occurring from 1995 to 2006 (see **Table 10**).

Due to interruptions by factors beyond its control, including restrictive hunting seasons and harvest limits, Ninilchik's brown bear pattern of use is not clear. This is demonstrated in **Table 10**. From 1995 to

2007, hunting seasons every year but two, 2000 and 2001, have either closed early or permits were not distributed, effectively closing the hunting season.

Additionally, since the new Federal hunt in Unit 15C was implemented, the Alaska Board of Game has effectively removed Ninilchik's opportunity to hunt brown bear in Units 15A and 15B by implementing State drawing permit hunts in Unit 15. These hunts have an award rate of 2% or less. Over 1,000 people apply for drawing permits annually (**Table 8**). The Federal hunt occurs on Federal public lands in Unit 15C, an area that is about 29% of Unit 15C. Recognizing Ninilchik's customary and traditional brown bear uses in other units would allow Ninilchik to hunt in Unit 15A, which is 67% Federal public lands, and Unit 15B, which is 88% Federal public lands.

According to subsistence use area maps described in the analysis (NTC 2006), Ninilchik residents have harvested moose and other resources in a wide area surrounding the community including Unit 15A and 15B. Consequently, the Federal Subsistence Board has recognized customary and traditional uses of resources such as moose, black bear, and fish in Units 15A and 15B as well as Unit 15C, the unit in which Ninilchik is located. Ninilchik residents have harvested brown bear in many management units of the state (**Table 12**), but it is requesting that the Board recognize its customary and traditional brown bear uses in Units 8 and 15 only. Ninilchik brown bear hunters have harvested more brown bear in Units 8 and 15 than in other management units.

Ninilchik residents have described harvesting brown bear on hunting trips targeting moose. Brown bear have been harvested as camp food, to eat while on extended camping trips to hunt, trap, and fish. Brown bear harvests parallel the harvest of other resources and occur when other resources are procured, in a wide area around the community including Units 15A and 15B.

Kodiak Island is also indicated as an area where a wide variety of resources have been harvested in the lifetime of long-time Ninilchik residents (NTC 2006). Kinship bonds continue to exist with Kodiak area families, and the Kodiak area is easily reached by boat-owning commercial fishers from Ninilchik. Kodiak Island is relatively close to the Kenai Peninsula in contrast to other areas of Alaska.

In conclusion, Ninilchik's brown bear pattern of use is not clear due to interruptions by factors beyond its control, including restrictive hunting seasons and harvest limits. It has been shown that other resources have been customarily and traditionally used in Units 15A and 15B. These resources have been harvested alongside the harvest of brown bear. Additionally, the opportunity for Ninilchik residents to hunt brown bear in their historical use areas under State regulations has diminished. Therefore, the Federal Subsistence Management Program supports the proposal to include Ninilchik in a customary and traditional brown bear use determination in Units 15A and 15B. Additionally, the customary and traditional brown bear uses of Ninilchik should be recognized in Unit 8 with which Ninilchik has kinship ties, is relatively close to Ninilchik, and is indicated in the historical use of Ninilchik for brown bear and other resources that are hunted in parallel to brown bear by Ninilchik residents.

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APPENDIX A

At the inception of the Federal Subsistence Management Program in Alaska in 1990, the majority of the Kenai Peninsula was in the Kenai Peninsula nonrural area established by the State. The State did not allow subsistence uses in nonrural areas.

At the conclusion of its rural/nonrural determination process, the Federal Subsistence Management Program deemed that large portions of the Kenai Peninsula were rural and many Kenai Peninsula communities went from a nonrural status to a rural status and were newly eligible to fish, hunt, and trap under Federal subsistence regulations (56 FR 238; January 3, 1991).

When the customary and traditional use determinations were adopted from State regulations in 1992 (72 FR 22959; May 29, 1992), in Unit 15 all rural residents of the state were eligible to hunt and fish under Federal subsistence regulations for many species of fish and wildlife. For some species, the Federal Subsistence Board adopted a no Federal subsistence priority ("no subsistence"). The use of the no Federal subsistence priority determination had the effect of avoiding conflicts between Federally qualified and non-Federally qualified users of these resources.

Subsequently, the Federal Subsistence Board implemented a systematic program for review of customary and traditional use determinations:

> As a priority consideration, the Board will focus its determinations on community or area uses of large mammals (ungulates and bears). Nevertheless, the Board recognizes that subsistence is in large part exemplified by reliance upon, and traditional use of, a multitude of fish and wildlife species, and consequently even the Board's initial large mammal assessments will examine information on subsistence uses of varied species. Furthermore, the Board retains the authority to initiate assessments and make eligibility determinations related to the customary and traditional use of any species as recommended by Regional Councils or as necessary for proper administration of the program. The Board will examine uses of species of large mammals by communities or areas rather than focus on individual herds (59 FR 36063–36064; July 15, 1994)

However, in 1995, based on the recommendation of regional council chairs, the Board revised its process for making customary and traditional use determinations. The Board would "entertain proposals to revise the customary and traditional use determinations at the same time as it accepts proposals for changes to the seasons and harvest limits" (60 FR 40460; August 9, 1995).

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council Recommendation

Support Proposal WP12-22a. The Council notes longstanding ties and kinship between residents of Units 8 and 15, which can exist even when not officially documented by government agency records. The Council cites the need to connect people to resources that they use in their areas. The Council finds no conservation concern for bears in the subject units, while predator control is a concern.

Kodiak/Aleutians Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-22a. There was a great deal of discussion in 1995 when C&T findings were developed for this area (Unit 8) and the Council sees no reason to change them. The data do not seem to support C&T uses for Ninilchik in Unit 8.

INTERAGENCY STAFF COMMITTEE COMMENT

A majority of the Interagency Staff Committee found the staff analysis to be a complete and accurate evaluation of the proposal and could support the Southcentral Regional Advisory Council's recommendation.

A minority of the ISC felt that the information available in the analysis may not be sufficient to demonstrate a consistent pattern of use of brown bear for Ninilchik in Unit 15A. The information available that residents of Ninilchik "attempting to harvest brown bear at some point in their lifetime in Units 15A, B, and C" and one brown bear permit issued and no brown bears having been reported harvested over the past 25 years in Unit 15A does not appear to constitute a consistent pattern of use of brown bear from Unit 15A for the community of Ninilchik.

ADF&G Comments WP12-22
11 Nov, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-22: This proposal requests a customary and traditional use determination for residents of Ninilchik for brown bears in Units 15A, 15B, and 8. The proposal also requests federal subsistence brown bear hunt management regulations be changed for Unit 15.

Introduction: This proposal was submitted to expand the current customary and traditional use determination for the residents of Ninilchik for brown bear in Units 15A and B on the Kenai Peninsula and in Unit 8 in the Kodiak Island archipelago. The proposal also requests modification of the current federal subsistence brown bear hunt management to establish a continuously open season in Unit 15 which may only be closed by the Kenai National Wildlife Refuge Manager in consultation with the Alaska Department of Fish and Game and the chair of the Southcentral Alaska federal subsistence Regional Advisory Council when necessary. This proposed change differs from existing regulation because the federal subsistence brown bear regulations for Unit 15 state the Refuge Manager may open or close the season by announcement.

Impact on Subsistence Users: Adoption of this proposal will provide a significant increase in opportunity for the residents of Ninilchik to harvest brown bears under federal subsistence regulations. Adoption of this proposal will provide opportunity for residents of Ninilchik to participate a federal subsistence brown bear hunt in Units 15A and B as well as in Unit 8, where the residents of Ninilchik currently do not have a customary and traditional use determination. Adoption of the portion of the proposal restricting the Refuge Manager's ability to open the season is not expected to impact federal subsistence users. A positive C&T finding only for those mentioned may unnecessarily exclude other users.

Opportunity Provided by State: The State brown bear hunt in **Unit 15** follows:

Residents and non-residents are allowed one brown bear every 4 regulatory years by drawing permit. The fall season is from September 15 through November 30 (DB303/305) and the spring season is from April 1 through June 15 (DB307/309).

Unit 8: (Nonresident hunters must be accompanied by a guide)

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:
One bear every four regulatory years by permit available in person in Kodiak beginning Oct 3: – Oct 25 – Nov 30
One bear every four regulatory years by permit available in person in Kodiak beginning March 12:– Apr 1 – May 15

Remainder: one bear every four regulatory years by permit either Oct 25-Nov 30 or Apr 1 – May 15

One bear every four regulatory years by permit

Conservation Issues: Yet to be determined.

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

Other Comments: The questions posed in this proposal should be bifurcated. Ability to provide an open until closed status should be determined independently of a Customary & Traditional determination for these populations. A positive C&T finding only for those mentioned may unnecessarily exclude other users. The State finds evidence lacking to support a positive C & T for Ninilchik residents in Unit 8 at this time. The state again notes that consistency of process is needed in making federal customary and traditional use determinations and reminds the board of the states previous request for rulemaking regarding this issue.

Recommendation: Support ability to provide an **open until closed status**. **Oppose C&T for** Ninilchik residents in **Unit 8** at this time.

WP12-22b Executive Summary	
General Description	Proposal WP12-22b requests a season be established for brown bear in Units 15A and 15B and that the ability of the in-season manager to open the season be rescinded. *Submitted by the Ninilchik Traditional Council*
Proposed Regulation	**Unit 15—Brown Bear** *~~Units 15C—~~1bear every four regulatory years by Federal registration permit. The season may be ~~opened or~~ closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — *Oct. 1 – Nov. 30* ***~~Season to be announced~~*** ; *Apr. 1 – June 15* ***~~Season to be announced~~***
OSM Conclusion	**Support** Proposal WP12-22b **with modification** to establish a season in Unit 15 – remainder (Units 15A and B), maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Units 15A, B and C, based on conservation concerns, and to align the state and Federal season dates. The modified regulation would read: **Unit 15A—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* ; *Apr. 1 – June 15 Season to be announced* **Unit 15B—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~– Nov. 30 Season to be announced* ; *Apr. 1 – June 15 Season to be announced*

continued on next page

WP12-22b Executive Summary *(continued)*	
OSM Conclusion (Continued)	**Unit 15C—Brown Bear** *1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.* — ***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced*; *Apr. 1 – June 15 Season to be announced*
Southcentral Regional Council Recommendation	**Support** Proposal WP12-22b **with modification** to establish a season in Unit 15 – remainder (Units 15A and B), maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Units 15A, B and C, based on conservation concerns, and to align the state and Federal season dates. See OSM Preliminary Conclusion for modified regulation.
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** ability to provide an open until closed status. **Oppose** C&T for Ninilchik residents in Unit 8 at this time. *See ADF&G comment following WP12-22a analysis.*
Written Public Comments	**None**

STAFF ANALYSIS
WP12-22b

ISSUES

Proposal WP12-22b, submitted by the Ninilchik Traditional Council, requests that a season be established for brown bear in Units 15A and 15B and that the ability of the in-season manager to open the season be rescinded.

DISCUSSION

Currently there is no Federal brown bear season in Units 15A or 15B, and the proponent requests the brown bear season for all of Unit 15C be expanded and established in all of Unit 15. The brown bear seasons for Unit 15C is opened by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council. The seasons are Oct. 1 – Nov. 30 and Apr. 1 – June 15. The proponent requests seasons be established for Units 15A and 15B which align with the changes requested for Unit 15C. A companion proposal WP12-22a, requests a positive customary and traditional use determination of brown bear in Unit 8, Unit 15A, and Unit 15B for residents of Ninilchik.

Existing Federal Regulations

Unit 15—Brown Bear	
Units 15C—1bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	*Oct. 1 – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15 remainder	*No Federal open season*

Proposed Federal Regulations

Unit 15—Brown Bear	
~~Units 15C—~~1bear every four regulatory years by Federal registration permit. The season may be ~~opened or~~ closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	*Oct. 1 – Nov. 30 ~~**Season to be announced**~~* *Apr. 1 – June 15 ~~**Season to be announced**~~*

Existing State Regulation

Unit 15—Brown bear

Unit 15 residents and nonresidents — One bear every 4 regulatory years by permit.	*Sept. 15 – Nov. 30* *Apr. 1 – June 15*

Extent of Federal Public Lands

In Unit 15, 52% of the lands are managed by the Kenai National Wildlife Refuge. Less than 1% of the unit lies within Kenai Fjords National Park, which are closed to subsistence uses (see **Unit 15** map)**.**

Customary and Traditional Use Determinations

Residents of Ninilchik have a positive and customary use determination for brown bear in Unit 15C. There is no Federal subsistence priority for Unit 15 remainder (See Staff Analysis WP12-22a).

Regulatory History

Brown bears in Alaska were first given game status in 1902 (Miller 1990) with liberal seasons and bag limits. By 1959, the harvest limit had been reduced to a single bear during a 10 month season (**Table 1**). In 1984, representatives of ADF&G, USFWS, and USFS formed an Interagency Brown Bear Study Team (IBBST) to discuss brown bear management and research needs on the Kenai Peninsula (Bevins et al. 1984). In 1990, the NPS joined that effort. Federal subsistence regulations enacted for the 1990 season did not allow hunting in Unit 15 (**Table 2**). More restrictive general hunting regulations were enacted by the State in 1989, reducing the fall season by 14 days to limit incidental take by moose hunters. In 1994, the Alaska Board of Game changed the fall season to October 1–25 in response to continued high harvests. In 1997, a registration permit general hunt system was implemented by the State, and the season was shortened and changed to October 15–31. Due to high levels of non-hunting human-caused mortality, the 1995–1998 fall seasons, and the 1999 spring season were closed by ADF&G emergency order. The major causes of known non-hunter brown bear deaths were from vehicle collisions; in defense of property at residences; in defense of life by recreationists; and mistaken identity while hunting other game. Any additional general harvest would have exceeded management objectives. Kenai Peninsula brown bears were listed as a 'Population of Special Concern' under Alaska's list of 'Species of Special Concern' in 1998. The Federal Subsistence Board adopted regulations in 2007 that reduced the season and take in Unit 15C.

Management Direction

The current ADF&G management objectives for Unit 15 are to maintain a healthy brown bear population and minimize negative brown bear/human interactions. Human-caused mortalities are not to exceed 10 reproductive age females (5-year old bears or those showing evidence of producing cubs) per calendar year, (Selinger 2006). Hunting for brown bear under State and Federal regulations is allowed only if the number of non-hunter human-caused brown bear deaths is below the maximum allowable mortality identified in management objectives.

Biological Background

Brown bears have the lowest reproductive rate of any land mammal in North America and cannot sustain high mortality pressures (Demarais and Krausman 2000). First parturition usually occurs after a female

Table 1. Selected State brown bear general hunting regulations in Unit 15, 1959–present.

Regulatory year	**Area**	**Season**	**Harvest limit**
1959–1966	Kenai Peninsula	Sept.–June	1 brown bear
1967–1977	Kenai Peninsula	**Fall season only**	**1 brown bear every four regulatory years**
1978–1996	**Unit 15**	Fall season[a] **Spring season**	1 brown bear every four regulatory years
1997–2005[b]	Unit 15	Fall season Spring season[a]	1 brown bear every four regulatory years **by State registration permit**
2006[b]	Unit 15	Fall season (Oct. 15–Oct. 31)	1 brown bear every four regulatory years by State registration permit **available in person in Homer, Soldotna, or Anchorage beginning Oct. 10**
2007–2008[b]	Unit 15	Fall season (Oct. 1–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State **draw** permit.
2009–2010	Unit 15	Fall season (**Sept. 15**–Nov. 30) Spring season (Apr. 1–June 15)	1 brown bear every four regulatory years by State draw permit.

[a] Fall 1995–1998 and spring 1999 seasons closed by ADF&G emergency order. Additional seasons may have been closed by emergency order
[b] No permits issued 2002–2007.

reaches 5 years of age, average litter of 2 cubs, and breeding intervals between litters may be 3 to 4 years (Aune et al. 1994).

In 1995, ADF&G and the IBBST initiated a research project to evaluate the cumulative effects model being used; assess brown bear habitat; estimate survival; and model the Kenai brown bear population (Schwartz and Arthur 1996). The IBBST investigated baseline inventories of salmon streams and other known high-use areas (Bevins et al. 1984, Risdahl et al. 1986, Schloeder et al. 1987, Jacobs et al. 1988). The IBBST also looked at brown bear dietary requirements (Jacoby et al. 1999; Hilderbrand et al. 1999a); importance of marine nitrogen (Hilderbrand 1999b); and the effects of diet on reproduction (Hilderbrand et al. 2000).

Brown bears are found throughout the remote lowland forests and intermountain valleys of the Kenai Peninsula. Field observations indicate brown bear densities are highest in the forested lowlands and subalpine areas west of the Kenai Mountains. In 1989, Jacobs (1989) provided an initial estimate of 150–250 bears on the Kenai Peninsula. With additional information, ADF&G biologists later increased that

Table 2. Federal brown bear subsistence hunting regulations in Unit 15, 1990–present.

Regulatory year	Area	Season	Harvest limit
1990–2006	Unit 15	No Federal open season	No harvest allowed
2007–2012	**Unit 15C**	**Oct. 1–Nov. 30 (Season to be announced) Apr. 1–June 15 (Season to be announced)**	**1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.**
	Unit 15 **remainder**	No Federal open season	No harvest allowed

Brown bear harvested during a Federal subsistence season must have the skull and hide salvaged, as well as all edible meat. In addition, brown bear skins and skulls must be sealed as per § __.26(j). Handicraft articles may not be sold from the skin, hide, pelt, fur, bones, teeth, sinew, claws or skulls of brown bear taken in Unit 15.

estimate of 250–300 brown bears (Del Frate 1993). Because of concern about the long term conservation of Kenai brown bear, the ADF&G designated the Kenai Peninsula brown bear population as a "Species of Special Concern" in 1998 due to the small population size, potential isolation from mainland brown bear populations, and increasing loss of habitat due to human development (Del Frate 1999). Although the Kenai Peninsula is a large geographic area (approximately 9,000 mi^2), the amount of suitable habitat on the Peninsula has been reduced by approximately 70% due to the cumulative effects of human activities (Suring et al. 1998). Increasing land development and human activity which results in non-hunting mortality of brown bear on the Kenai Peninsula has generated concern about potential impacts to the population since 1998.

Studies of the Kenai brown bear population have continued because of concern that the population may be at risk due to the cumulative impacts of hunting harvest; genetic isolation; illegal killing; defense of life or property; loss of habitat from development and logging; and displacement of bears from salmon streams by recreational fishing (Farley 2005). Also female brown bear immigration to the Kenai Peninsula is believed to be low (Jackson 2003) which makes the population more susceptible to declines from catastrophic events or stochastic variation in vital rates (Hanski and Gilpin 1991). Suring et al. (2006) found that female brown bears on the Kenai Peninsula heavily use areas within 2 km of salmon spawning areas which is predominately where roads, residences, and recreation sites have been constructed because of human demand for access to salmon streams. Minimizing the potential of bears being killed in defense of life and property would require proactive management of development within the Kenai Peninsula. In 2010, the Kenai National Wildlife Refuge and Chugach National Forest managers identified landscape-scale movement corridors for wildlife along the Sterling Highway west of Cooper Landing to help mitigate conflicts between humans and wildlife and maintain connectivity between the northern and southern portions of the Kenai Peninsula (Morton et al. 2010).

Although the IBBST has not been active in the past few years, ADF&G biologists are continuing their efforts to determine the population parameters (e.g. birth and death rates) influencing the Kenai Peninsula brown bear population. Additional data is also being gathered and analyzed to determine the genetic

health of the brown bear population on the peninsula (Farley 2010). The current study effort is to continue through the 2012 field season with results available following conclusion of the study.

In 2010, Kenai NWR and Chugach NF conducted a DNA-based mark recapture study in an effort to determine a statistically reliable estimation of the brown bear population on the Refuge and Forest. These data are currently being analyzed and a population estimate is not expected until 2012.

Harvest History

Annual sustainable harvests of brown bears on the Kenai Peninsula are related to reproductive output and natural mortality rates. Hunting opportunities are dependent on levels of non-hunting mortality prior to October 15. Non-hunter mortality taken from ADF&G sealing records database includes defense of life and property (DLP), research kills, illegally harvested, natural mortality, vehicle collisions, and agency kills. The average non-hunting mortality in Unit 15 from 2006–2010 has been 21 brown bears/year, with an average of 5 bears/per year harvested via hunting 2008–2010 (**Table 3**). The predominant non-hunting mortality (52%) occurs in Unit 15A (**Figure 1**) and as a consequence, no State and Federal brown bear harvest permits were issued in Unit 15 until 2007 (FWS 2011). Since 2007, Anchorage has been the predominate community being issued permits to harvest brown bear within Unit 15A (**Figure 2**).

Table 3. Federal and State brown bear mortality in Unit 15. FWS 2011.

	Unit 15A		Unit 15B		Unit 15C		TOTAL Mortality
	Hunter	Non-hunter**	Hunter	Non-hunter**	Hunter	Non-hunter**	
2006		8		2		2	12
2007		16		2		6	24
2008		11		9	1	7	28
2009	4	16		1	1	3	25
2010		7	3	4	2	7	23

** Non-hunter mortality taken from ADF&G sealing records database includes DLP, research kills, illegally harvested, natural mortality, vehicle collisions, and agency kills

Currently there is no Federal subsistence season for brown bear on the Kenai Peninsula for Unit 15A and Unit 15B.

Effects of the Proposal

If this proposal is adopted, it would provide for a brown bear season in Units 15A and 15B, eliminate the requirement for announcing the season in Unit 15C, and not require announcing the season in either Unit 15A or 15B. Future hunting opportunities will likely continue to be severely restricted because of high levels of non-hunting human-caused mortality; the isolation of the Kenai Peninsula brown bear population from mainland populations; and increasing human development. Establishing a Federal season within Unit 15 remainder (Units 15A and B) would give a meaningful subsistence opportunity for residents of Ninilchik (provided WP12-22a is adopted) by issuing a Federal permit rather than Federally qualified users applying for a limited number of state permits. Most state permits for these units are currently being issued to Alaska residents living outside of Unit 15. Federal subsistence hunters would be required to report brown bears harvested under Federal regulations through registration permit reports, and managers already have the ability to close the seasons to keep the take within sustainable limits.

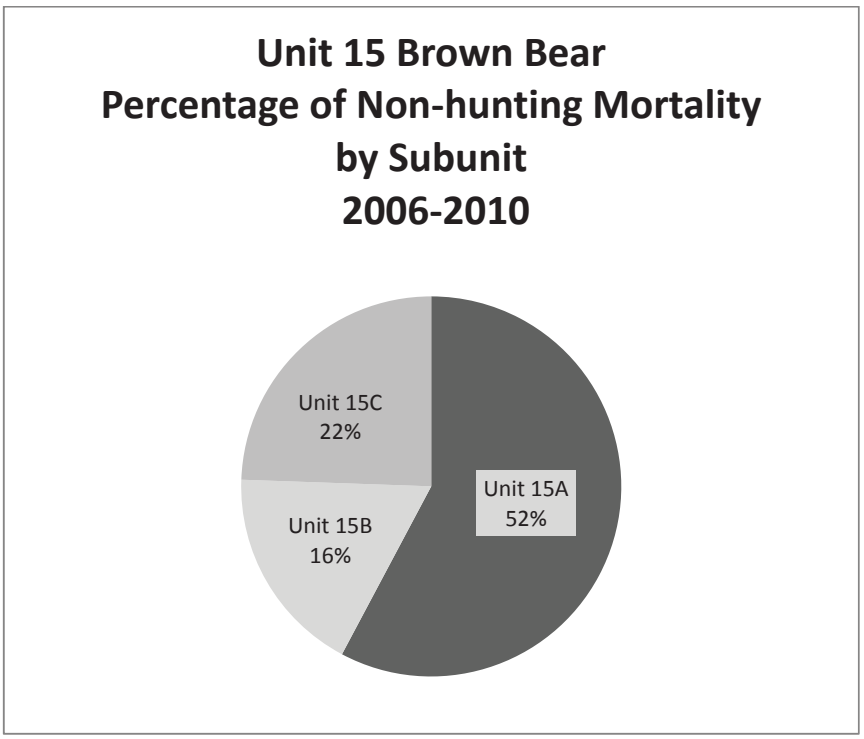

Figure 1. Percentage of non-hunting mortality for brown bear by Subunit in Unit 15. FWS 2011.

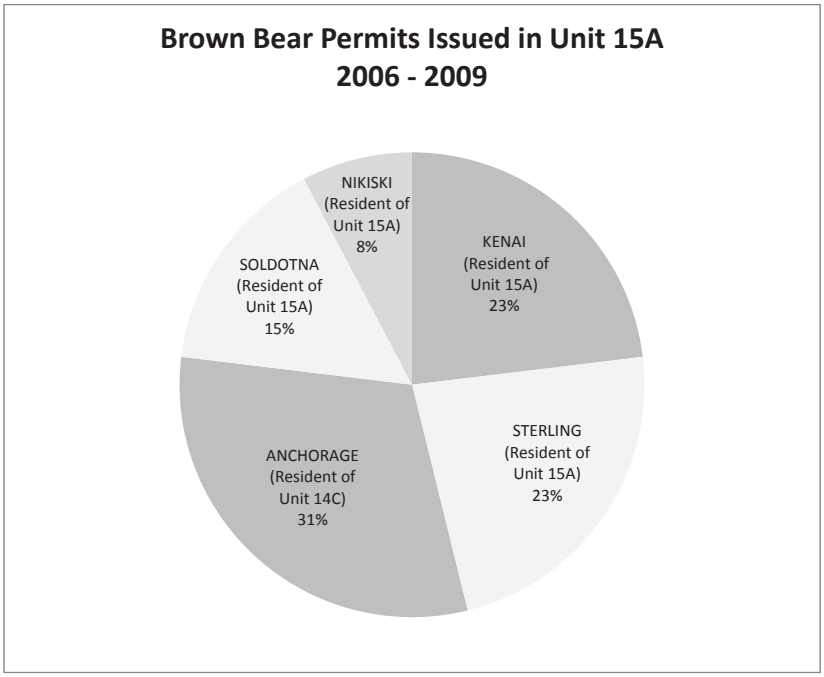

Figure 2. Percentage of permits issued for brown bear in Unit 15A from 2006–2009. FWS 2011.

OSM CONCLUSION

Support Proposal WP12-22b **with modification** to establish a season in Unit 15 – remainder (Units 15A and B), maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Units 15A, B and C, based on conservation concerns, and to align the state and Federal season dates.

The modified regulation would read:

Unit 15A—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADG&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15B—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*
Unit 15C—Brown Bear	
1 bear every four regulatory years by Federal registration permit. The season may be opened or closed by announcement of the Kenai National Wildlife Refuge manager in consultation with ADF&G and the chair of the Southcentral Alaska Subsistence Regional Advisory Council.	***Sept. 15*** *~~Oct. 1~~ – Nov. 30 Season to be announced* *Apr. 1 – June 15 Season to be announced*

Justification

Population modeling has been used to calculate sustainable harvest levels that include non-hunting human causes of mortality. Due to high levels of non-hunting human-caused mortality, legal harvesting of brown bears has been limited in recent years. The primary subunit with non-hunting mortality is Unit 15A and residents living outside Unit 15 have been issued State permits to harvest a brown bear within Unit 15A. Currently there is not a Federal brown bear season in 15A and if permits are issued, Federally qualified subsistence users should have the priority to harvest a brown bear on Kenai Peninsula on Federal public lands prior to issuing to non-Federally qualified users.

Wildlife managers have very little control over the number of brown bear killed due to defense of life and property and other non-hunting mortality. To assure the continued viability of the Kenai Peninsula brown

bear population, hunting, including Federal subsistence opportunities should be provided only after other human-caused mortality is assessed. Aligning the state and federal seasons and maintaining the ability of the Federal manager to announce the season within Units 15, where there is a predominance of non-hunting mortality, would give biologists and managers the opportunity to determine whether a harvestable surplus exists before authorizing the opening of a Federal subsistence hunting season.

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SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-22b **with modification** to establish a season in Unit 15 – remainder (Units 15A and B), maintain the authority of the Kenai National Wildlife Refuge manager to open and close the season in Units 15A, B and C, based on conservation concerns, and to align the state and Federal season dates. See OSM Conclusion for modified regulation.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

WP12-32 Executive Summary	
General Description	Proposal WP12-32 requests the season dates for the elder hunt and the joint minor/elder sheep hunts in Units 11 and 12 be changed from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9. *Submitted by the Cheesh-na Tribal Council*
Proposed Regulation	**Units 11 and 12 — Sheep** *Unit 11 — 1 sheep.* — *Aug. 10 – Sept. 20* *Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.* — *~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 9*** *__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~* ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply: . . .* *Unit 12 — 1 ram with full curl or larger horn.* — *Aug. 10 – Sept. 20* *Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.* — *~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 9*** *__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~* ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply: . . .*
OSM Preliminary Conclusion	**Support** Proposal WP12-32 **with modification** to change the season and amend the harvest limits. The modified regulation would read: *Unit 11 — 1 sheep.* — *Aug. 10 – Sept. 20* *Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.* ***Ewes accompanied by lambs or lambs may not be taken.*** — *~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 30*** *__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~* ***Aug. 1 – Aug. 30*** *hunt. The following conditions apply: . . .* *Unit 12 — 1 ram with full curl or larger horn.* — *Aug. 10 – Sept. 20*

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WP12-32 Executive Summary *(continued)*		
OSM Preliminary Conclusion (Continued)	*Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.*	~~*Sept. 21 – Oct. 20*~~ ***Aug. 1 – Aug. 30***
	__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 30*** *hunt. The following conditions apply: . . .*	
OSM Conclusion	**Support** Proposal WP12-32 **with modification** to change the season and amend the harvest limits The modified regulation would read:	
	Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
	Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older. ***Ewes accompanied by lambs or lambs may not be taken.***	***Aug. 1*** ~~*Sept. 21*~~ *– Oct. 20*
	__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ***Aug. 1*** ~~*Sept. 21–*~~*Oct. 20 hunt. The following conditions apply: . . .*	
	Unit 12 — 1 ram with full curl or larger horn.	
	Unit 12 Elder Hunt, that portion of Wrangell-St. Elias National Park and Preserve – 1 ram with full curl horn or larger by Federal registration permit only, by persons 60 years of age or older	***Aug. 1*** ~~*Sept. 21*~~ *– Oct. 20*
	__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ***Aug. 1*** ~~*Sept. 21–*~~*Oct. 20 hunt. The following conditions apply: . . .*	
Southcentral Regional Council Recommendation	**Support** Proposal WP12-32 **with modifications** setting the season dates to 8/1 – 8/30 and stipulating that the harvest of ewes accompanied by lambs be prohibited. See OSM Preliminary Conclusion for the regulation language.	
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-32 **with modification** to change the season dates to 8/1 – 10/20 in Units 11 and 12 and limit the harvest to one sheep, and prohibit harvest of lambs and ewes with lambs in Unit 11. The modified regulation would read:	

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WP12-32 Executive Summary *(continued)*		
	Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
	Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older. ***Ewes accompanied by lambs or lambs may not be taken.***	*~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 20***
	__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 20*** *hunt. The following conditions apply: . . .*	
	Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*
	Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 20***
	__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 20*** *hunt. The following conditions apply: . . .*	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Support** Proposal WP12-32 **with modification**. The department supports liberalizing the Elder Hunt by advancing the season start date from to September 21 to August 10 and retaining the established season closure date of October 20 for the described federal public lands in Units 11 and 12. Adoption of this modification will provide federal subsistence users who qualify and choose to participate in the Elders Hunt an additional 41 days of opportunity to harvest a sheep during an unprecedented 70 day August 10 through October 20 summer/fall sheep hunting season. The department also recommends further defining the Unit 11 Elder Hunt harvest limit be to one sheep, lambs and ewes accompanied by lambs may not be taken.	
Written Public Comments	**Support** Proposal WP12-32 **with modified** season dates of August 1 to October 20.	

STAFF ANALYSIS
WP12-32

ISSUES

Proposal WP12-32, submitted by the Cheesh-na Tribal Council, Chistochina, Alaska, requests the season dates for the elder hunt and the joint minor/elder sheep hunts in Units 11 and 12 be changed from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9.

DISCUSSION

The proponent states that the elder hunt provisions were intended to provide a hunting opportunity that is accessible to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth. The current season has snow conditions that make it difficult for elders to travel, and the proposed time changes would be during a time of year when travel conditions are less difficult. The proponent also felt that the shorter recommended season would offset any increase in participation in the hunt. The season would be shortened from 27 days to 9 days.

Existing Federal Regulations

Units 11 and 12 — Sheep

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.	*Sept. 21 – Oct. 20*
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the Sept. 21–Oct. 20 hunt. The following conditions apply:	
(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;	
(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;	
(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;	
(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.	
Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*

Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*Sept. 21 – Oct. 20*

__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the Sept. 21–Oct. 20 hunt. The following conditions apply:

(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;

(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;

(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;

(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.

Proposed Federal Regulations

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 9***

__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:*

(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;

(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;

(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;

(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.

Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*

Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 9***

__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 9*** *hunt. The following conditions apply:*

(A) The permittees must be a minor aged 8 to 15 years old and an accompanying adult 60 years of age or older;

(B) Both the elder and the minor must be Federally qualified subsistence users with a positive customary and traditional use determination for the area they want to hunt;

(C) The minor must hunt under the direct immediate supervision of the accompanying adult, who is responsible for ensuring that all legal requirements are met;

(D) Only one animal may be harvested with this permit. The sheep harvested will count against the harvest limits of both the minor and accompanying adult.

Existing State Regulations

Residents and non-residents

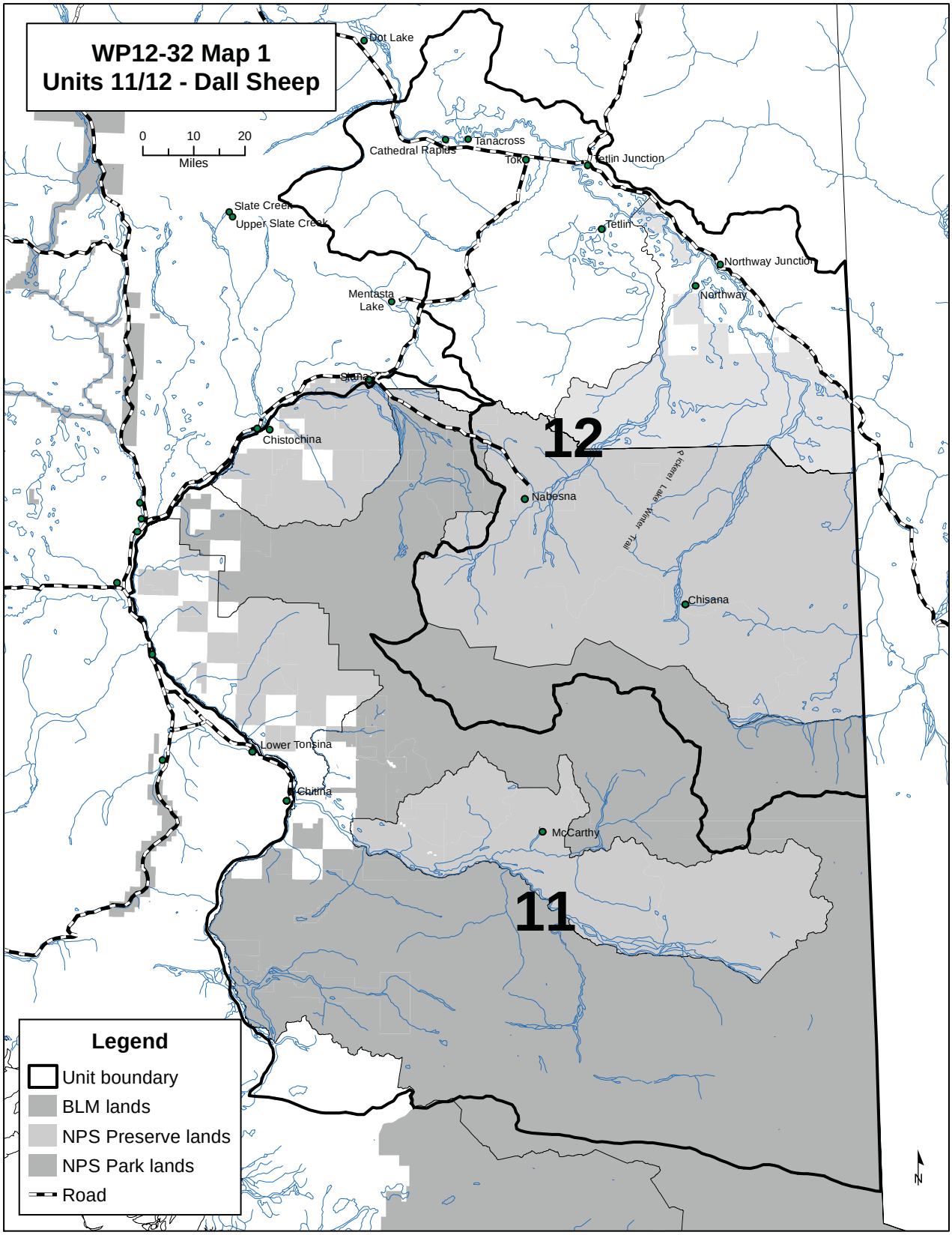
Unit 11 — One ram with full curl or larger horn.	*Aug. 10 – Sept. 20*
Unit 12 — within Tok Management area	*Aug. 10 – Aug. 25*
One ram with full-curl horn or larger every four regulatory years by permit (Drawing)	*Aug. 26 – Sept. 20*
Unit 12 — remainder	
One ram with full-curl horn or larger	*Aug. 10 – Sept. 20*

Extent of Federal Public Lands

Federal public lands in Unit 11 are comprised of Wrangell-St. Elias National Park/Preserve (78.9%) and a small portion of the Chugach National Forest (2.1%). Approximately 70% of the sheep are found on lands of the Wrangell-St. Elias National Preserve. Federal public lands in Unit 12 are comprised of Wrangell-St. Elias National Park/Preserve (47.7%) and the Tetlin National Wildlife Refuge (10.7%). In Unit 12, this proposal would only apply to Federal public lands within the Wrangell-St. Elias National Park and Preserve (**Map 1**).

Special Requirements for Park Service Lands

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


WP12-32 Map 1
Units 11/12 - Dall Sheep
0
10
20
Miles
Dot Lake
Tanacross
Cathedral Rapids
Tok
Tetlin Junction
Slate Creek
Upper Slate Creek
Tetlin
Northway Junction
Northway
Mentasta Lake
Slana
Chistochina
12
Nabesna
Chisana
Lower Tonsina
Chitina
McCarthy
11
Legend
Unit boundary
BLM lands
NPS Preserve lands
NPS Park lands
Road
N

resources on park lands; and 2) identifying and issuing subsistence use permits to individuals residing outside of the resident zone communities who have a personal or family history of subsistence use.

Customary and Traditional Use Determinations

In Unit 11, north of the Sanford River, residents of Unit 12 and the communities and areas of Chistochina, Chitina, Copper Center, Dot Lake, Gakona, Glennallen, Gulkana, Healy Lake, Kenny Lake, Mentasta Lake, Slana, McCarthy/South Wrangell/South Park, Tazlina, and Tonsina; also residents along the Nabesna Road — milepost 0–46; and residents along the McCarthy Road — milepost 0–62 have a positive customary and traditional use determination for sheep. Communities and areas having customary and traditional use of sheep in the remainder of Unit 11 are Chistochina, Chitina, Copper Center, Gakona, Glennallen, Gulkana, Kenny Lake, Mentasta Lake, Slana, McCarthy/South Wrangell/South Park, Tazlina, and Tonsina; also residents along Tok Cutoff Road (mileposts 79–110 Mentasta Pass); the Nabesna Road (milepost 0–46); and residents along the McCarthy Road (milepost 0–62).

In Unit 12, residents of Unit 12 and the communities of Chistochina, Mentasta Lake, Dot Lake, and Healy Lake have a positive customary and traditional use determination for sheep.

Regulatory History

In 1998, the Federal Subsistence Board created a late sheep season in Unit 11 for persons 60 years of age or older. This 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 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 Alaska and Eastern Interior Regional Advisory Councils and rejected by the Federal Subsistence Board (FSB 2004). It was felt that the season was established to allow elders the opportunity to hunt and pass on their knowledge. During consideration of Proposal WP04-24, there was discussion during both Council meetings regarding the opportunity for youth to accompany the elders, but it was realized that the proposal under consideration dealt only with designated hunting provisions and there was a lack of detail about the provisions for allowing youth to accompany elders during the late sheep season. WP04-80 requested a new season that paralleled the Unit 11, late season hunt for elders. During Council deliberations on the proposal it was suggested by some that the youth provisions also be included for Unit 12. The eventual recommendation from both Councils was to support the late season hunt in Unit 12 for elders only, as originally proposed, and consider the youth provisions when more details were available (EIRAC 2004, SCRAC 2004). In May 2004, the Federal Subsistence Board adopted proposal WP04-80 for the late sheep season for elders only in Unit 12, consistent with the Councils' recommendation (FSB 2004).

The Cheesh'na Tribal Council submitted WP05-06 with the goal of allowing elders "to resume their traditional practices of teaching their grandchildren how to hunt sheep." The proponent acknowledged that WP04-80 established the late season to allow only elders to hunt when the sheep would be more accessible to the elders, but they also want to allow grandchildren and similar younger relatives to accompany the elders for educational purposes. They stated that current regulation "neglects 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 current elder hunt with the season of Sept. 21 – Oct. 20.

Customary and Traditional Practices

The transmission of hunting knowledge and skills from one generation to another is listed as one of the factors used to make customary and traditional use determinations. Written documentation of the special relationships between elders and youth and the teaching of hunting and fishing skills is provided in the summaries prepared by the National Park Service (NPS 1994, 1995). Current examples of these practices are provided in the curriculum guide materials prepared by the Mt. Sanford Tribal Consortium. This curriculum guide provides guidance to teachers about the role of elders in traditional learning and identifies areas where elders can be consulted for traditional knowledge on the local resources and customs (MSTC 2004).

Biological Background

In July 2001, an aerial population composition count was conducted between the Nabesna and Chisana Rivers north of Cooper and Notch Creek (count area 6) and east of Snag and Carl Creeks to the Canadian border north of Beaver Creek (count area 7), the Wrangell-St. Elias Preserve portions of Unit 12. The total number of sheep for these two count areas was estimated at 1,166. This count represents a decline from the 1997 and 1998 composition counts, which may be due to adverse weather conditions during the 1999 and 2000 winters. The Alaska Department of Fish and Game management report for this period concluded that the State's goals and objectives for Dall sheep in Unit 12 were met (Gardner 2002).

In 2003 and 2007, ADF&G flew aerial surveys within Wrangell-St Elias Park and Preserve and survey data was separated into different count areas (CA) within the Preserve and Park based on the different hunting regulations for these areas. The CA3 West lies in the north Wrangell Mountains within the Upper Copper River drainage and is within Park boundaries and is utilized by local subsistence hunters using 4 – wheelers for access making it a popular area to hunt. During the last survey within this area (CA3) in 2007, there were 32 rams:100 ewes (Schwanke 2011, pers. comm.).

In areas within the Wrangell-St Elias Park and Preserve that are more difficult to access for subsistence users, Becky Schwanke reported in the 2004–2007 Dall Sheep Management Report that "In the Preserve (CA 23 West), the ram to ewe ratios are consistently low to moderate, averaging 25 rams:100 ewes since 2001. The Park (CA 23 East) receives less hunting pressure due to aircraft and residency restrictions, and is reflected in the average 64 rams:100 ewes since 2001. The percentage of rams classified as full-curl or greater follow a similar pattern with 23% in the Preserve and 41% in the Park for the same time period" (Schwanke 2008). Hunting in the National Preserve (CA 23 West) occurs under both Federal subsistence and State of Alaska general hunting regulations. The Park area (CA 23 East) is managed under Federal Subsistence hunting regulations. Fixed wing aircraft may be used to access the preserve for the purpose of harvesting wildlife, but not the park. ORVs may be used for access in both the park and preserve, however, non-Federally qualified subsistence users are restricted to established ORV trails and must obtain a permit.

Harvest History

The harvest of sheep on National Park lands is limited to Federal subsistence hunting by rural residents of designated communities in Units 11, 13, and a portion of 12 and 20D. Rural residents can also hunt in the National Preserve under Federal subsistence regulations and any resident can hunt under State regulations. On National Preserve lands, non-residents can hunt under State regulations if accompanied by an Alaska licensed guide or an Alaska resident 19 years or older who is within the second degree of kindred.

From 2004–2010, 132 permits were issued for the Unit 11 elder only and elder/minor hunts; 44 people reported hunting and two sheep were harvested. During the same time period, 68 permits were issued for the Unit 12 elder only and elder/minor sheep hunts and 23 individuals reported hunting and no sheep were reported harvested (FWS 2011).

Effects of the Proposal

If this proposal is adopted, the season for the Elder hunt would be shortened by 21 days and the season dates would change from Sept. 21 – Oct. 20 to Aug. 1 – Aug. 9. The earlier timing of the hunt would be 9 days prior to the opening of the hunt for other users and should provide greater accessibility to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth with less competition from other users. Although the season would be shifted earlier, which may make it more desirable and possibly increase the number of permittees, the proposed shorter season should offset the potential increase of hunters and limit an increase to harvest. In addition, the weather would have little effect of having a wanton waste of harvesting the meat from the animal, since the average high and low temperatures from 2008–2010 are similar between the first week (60° high, 47° low) and second week (62° high, 51° low) of August (Weather Underground 2011: Nabesna (PABN) weather station). In 1998, this season was extended one month beyond the regular sheep season, when sheep were 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. Therefore, while there might not be snow conditions that make it difficult for elders to hunt, the sheep may be at the higher elevations and require strenuous activity by elders to access sheep.

OSM PRELIMINARY CONCLUSION

Support Proposal WP12-32 **with modification** to change the season and amend the harvest limits.

The modified regulation would read:

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older. ***Ewes accompanied by lambs or lambs may not be taken.***	*~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 30***
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 30*** *hunt. The following conditions apply: . . .*	
Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*
Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 30***

__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 30*** *hunt. The following conditions apply: . . .*

Justification

The Elder hunt allows a person 60 years of age or older to harvest a sheep by Federal Registration permit. The unit-specific regulation also allows a joint Elder/Minor hunt by Federal permit and provides a hunting opportunity that is accessible to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth is also available for this time period. Reducing the Elder hunt season, and the subsequent unit-specific regulation associated with the joint Elder/Minor hunt, would allow elders and minors to travel during a time of year when travel conditions are less difficult. In addition, the earlier timing of the hunt would be 9 days prior to the opening of the hunt for other users and should provide greater accessibility to elders so they can pass their knowledge of traditional sheep hunting customs and practices on to local youth with less competition from other users.

ANALYSIS ADDENDUM

OSM CONCLUSION

Support Proposal WP12-32 **with modification** to change the season and amend the harvest limits

The modified regulation would read:

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older. ***Ewes accompanied by lambs or lambs may not be taken.***	***Aug. 1*** *~~Sept. 21~~ – Oct. 20*
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ***Aug. 1*** *~~Sept. 21–~~Oct. 20 hunt. The following conditions apply: . . .*	
Unit 12 — 1 ram with full curl or larger horn.	
Unit 12 Elder Hunt, that portion of Wrangell-St. Elias National Park and Preserve – 1 ram with full curl horn or larger by Federal registration permit only, by persons 60 years of age or older	***Aug. 1*** *~~Sept. 21~~ – Oct. 20*
__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ***Aug. 1*** *~~Sept. 21–~~Oct. 20 hunt. The following conditions apply: . . .*	

Justification

WP12-32, submitted by the Cheesh-na Tribal Council, requests the season dates for the elder hunt and the joint minor/elder sheep hunts in Units 11 and 12 be changed from Sept. 21 – Oct. 20 to Aug. 1 – Aug.

9. The proponent requested the season to open nine days prior to the opening of the hunt for other users to minimize competition and requested a reduced season to offset any potential negative reaction to the request. Unit 11 is part of the Southcentral Region and Unit 12 is part of the Eastern Interior Region. The Southcentral Regional Advisory Council met first and heard testimony from the proponent and supported Proposal WP12-32 with modification to change the season to Aug. 1 – Aug. 30. The Wrangell-St. Elias Subsistence Resource Commission and Eastern Interior Regional Advisory Council subsequently met and supported the change of season to Aug. 1 – Oct. 20. There are no conservation concerns if the season ends on Oct. 20.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support Proposal WP12-32 **with modifications** setting the season dates to 8/1 – 8/30 and stipulating that the harvest of ewes accompanied by lambs be prohibited. The Council feels that elders will be provided with more flexibility and more harvest opportunity in better weather conditions by adjusting the season dates. See the OSM Preliminary Conclusion for the regulation language.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-32 **with modification** to change the season dates to 8/1 – 10/20 in Units 11 and 12 and limit the harvest to one sheep, and prohibit harvest of lambs and ewes with lambs in Unit 11. The Council does not find a conservation concern and feels that the extended season provides improved flexibility for both youth and elders, particularly when the animals are lower in the mountains during the latter part of the proposed season.

The modified regulation would read:

Unit 11 — 1 sheep.	*Aug. 10 – Sept. 20*
Unit 11 Elder Hunt — 1 sheep by Federal registration permit only by persons 60 years of age or older. ***Ewes accompanied by lambs or lambs may not be taken.***	*~~Sept. 21 – Oct. 20.~~* ***Aug. 1 – Aug. 20***
__.26(n)(11)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 20*** *hunt. The following conditions apply: . . .*	
Unit 12 — 1 ram with full curl or larger horn.	*Aug. 10 – Sept. 20*
Unit 12 Elder Hunt — that portion within Wrangell-St. Elias National Park and Preserve — 1 ram with full curl horn or larger by Federal registration permit only by persons 60 years of age or older.	*~~Sept. 21 – Oct. 20~~* ***Aug. 1 – Aug. 20***
__.26(n)(12)(ii) A joint permit may be issued to a pair of a minor and an elder to hunt sheep during the ~~Sept. 21–Oct. 20~~ ***Aug. 1 – Aug. 20*** *hunt. The following conditions apply: . . . .*	

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-32: Change the season dates for the four federal subsistence elder sheep hunts in Units 11 and 12.

Introduction: This proposal requests moving the four federal subsistence "Elder Hunt" sheep hunting seasons in Unit 11 and that portion of Unit 12 within Wrangell-St. Elias National Park and Preserve from September 21 through October 20 to August 1 through 9. The proponent indicates the opportunity provided by the Federal Subsistence Board is insufficient because snow conditions impede elder access to the hunting ground in the late season. The proponent indicates an early August season will likely increase harvest success but the request shorter season will offset any increases in harvest.

Impact on Subsistence Users: If adopted, federally qualified subsistence hunters participating in the Elder Hunt will be allowed to access the hunting ground prior to all other user groups during early August. If adopted, federally qualified subsistence users who hunt sheep in the same areas might have fewer sheep to choose from depending upon participation in the Elder Hunt. If adopted, federally qualified subsistence hunters participating in the Elder Hunt with the enhanced access (ATV, jet boat, horse, or airplane) could see harvest success rates significantly increase due to availability of undisturbed/unhunted sheep in early August. If adopted, federally qualified subsistence hunters without enhanced access who plan participating in the Elder Hunt could be disadvantaged because sheep tend to inhabit higher elevations during the summer months and migrate to lower elevations as snow accumulates and as fall progresses.

Opportunity Provided by State: State sheep hunting regulations follow:

> Unit 11 – One ram with three-quarter curl horn or larger with a harvest ticket between August 10 and September 20. Nonresident hunters must be accompanied by a registered guide.
>
> Unit 12 Remainder – One ram with a full curl horn or larger with a harvest ticket between August 10 and September 20. Nonresident hunters must be accompanied by a registered guide.

Conservation Issues: Information from surveys and public observations indicate the sheep population in Unit 12 has declined since the late 1990s. However, since this is a full curl ram bag limit in Unit 12 there is no conservation issue in that unit.

Enforcement Concerns: Differences in state and federal regulations create enforcement problems in areas of mixed land ownership. If this proposal is adopted as written, both state and federal enforcement resources may be expended contacting Elder Hunt participants in response to reports "out of season hunting activities" from other hunters in the area.

Other Comments: One of the original intents impacting the development of the "Elder Hunt" was to provide an opportunity for less mobile elders to hunt more accessible sheep. Advancing the "Elder Hunt" season hunt by 52 days will result in requiring elders to climb to significantly higher elevations to access sheep defeating one of the original intents of this hunt.

This proposal affects two types of Elder Hunts in both Units 11 and 12. The first type of Elder Hunt was established to accommodate a hunt with an elder and a youth with the goal of facilitating the transfer of knowledge between generations. The second type of Elder Hunt was established to allow federally qualified hunter age 60 or older the ability to hunt without competition from all user groups during time of year when the sheep might be more easily accessible at lower elevations.

The department opposes any sheep hunting before August 10 for several reasons. The warm weather during the first 10 days of August can be detrimental to proper care of harvested meat. The access trails into the park are normally still saturated from summer moisture and usage of the trails during the period may result in significant habitat damage.

If adopted as proposed, federally qualified elders participating in the Elder Hunt could unnecessarily impact other user groups by preempting harvest potential through harvesting all legal rams from an area or "scaring" off sheep herds with the preseason hunting activities disturbances.

Recommendation: Support with modification. The department supports liberalizing the Elder Hunt by advancing the season start date from to September 21 to August 10 and retaining the established season closure date of October 20 for the described federal public lands in Units 11 and 12. Adoption of this modification will provide federal subsistence users who qualify and choose to participate in the Elders Hunt an additional 41 days of opportunity to harvest a sheep during an unprecedented 70 day August 10 through October 20 summer/fall sheep hunting season. The department also recommends further defining the Unit 11 Elder Hunt harvest limit be to one sheep, lambs and ewes accompanied by lambs may not be taken.

WRITTEN PUBLIC COMMENTS

Support Proposal WP12-32 **with modification**. The commission recommends modified season dates of August 1 to October 20. While the commission supports the proponent's interest an early August elder season when travel conditions are easier and kids are out of school, it suggests also keeping the late season, when the sheep are lower down. With only two sheep taken in the elder season in the last six years, there does not appear to be a conservation concern with this hunt. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-70/73 Executive Summary	
General Description	Proposal WP12-70 requests dividing Unit 11 into two hunt areas, changing the harvest limits and dates of the fall moose season in Unit 12 remainder, and creating a single, joint Federal/State registration permit to administer the hunt area along the Nabesna Road in Unit 11 and Unit 12 remainder. *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee* Proposal WP12-73 requests changing the dates of the fall moose harvest season in Unit 12 remainder and removing the spike-fork antler harvest restriction during August 15–23. *Submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission*
Proposed Regulation	**WP12-70** **Unit 11 — Moose** ~~*Unit 11—1 antlered bull by Federal registration permit only.*~~ ~~*Aug. 20–Sept. 20*~~ ***Unit 11–that portion draining into the east bank of the Copper River upstream from and including the Slana River drainage—1 bull by joint Federal/State registration permit only.*** ***Aug. 20–Sept. 20*** ***Unit 11 remainder—1 antlered bull by Federal registration permit only.*** ***Aug. 20–Sept. 20*** **Unit 12 — Moose** *Unit 12 remainder—1 ~~antlered~~ bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~* ***by joint Federal/State registration permit only***. ***Aug. 20–Sept. 20*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~ **WP12-73** **Unit 12 — Moose** *Unit 12 remainder—1 antlered bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~.* ***Aug. 25–Sept. 25*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~
OSM Conclusion	**Support** Proposals WP12-70 and WP-12-73 **with modification** to retain a harvest limit of 1 antlered bull in all of Unit 11, and to make the season dates the same (August 20–September 20) in Units 11 and 12. The modified regulation should read:

continued on next page

WP12-70/73 Executive Summary *(continued)*	
OSM Conclusion (Continued)	**Unit 11 — Moose** ~~*Unit 11—1 antlered bull by Federal registration permit only.*~~ ~~*Aug. 20–Sept. 20*~~
	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*** Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2013. If not endorsed, then by Federal registration permit only. ***Unit 11 remainder—****1 antlered bull* ***by Federal registration permit only.*** ***Aug. 20–Sept. 20*** **Unit 12 — Moose** *Unit 12 remainder—1 antlered bull*~~*; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken*~~ ***by joint Federal/State registration permit only****.* ***Aug. 20–Sept. 20*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~ Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.
Southcentral Regional Council Recommendation	**Support** Proposal WP12-70/73 **with modifications** suggested by the OSM.
Eastern Interior Regional Council Recommendation	**Support** Proposal WP12-70/73 **with modifications** suggested by the OSM.
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Defer**
Written Public Comments	**Support** Proposal WP12-70/73 **as modified** by the OSM staff recommendation.

STAFF ANALYSIS
WP12-70/73

ISSUE

Proposal WP12-70, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests dividing Unit 11 into two hunt areas, changing the harvest limits and dates of the fall moose season in Unit 12 remainder, and creating a single, joint Federal/State registration permit to administer the hunt area along the Nabesna Road in Unit 11 and Unit 12 remainder.

Proposal WP12-73, submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission, requests changing the dates of the fall moose harvest season in Unit 12 remainder and removing the spike-fork antler harvest restriction during August 15–23.

DISCUSSION

The "remainder" portion of Unit 12 is different under Federal and State regulations. Under Federal regulations, the "remainder" only includes National Park Service lands lying to the west of the Nabesna River and Glacier to the boundary of Unit 11.

Currently there are two different sets of moose season dates and harvest limits along the Nabesna Road (Units 11 and 12) and two permits/tags required for Federally qualified users hunting under Federal regulations; Unit 11 requires a Federal Registration Permit and Unit 12 remainder requires a State (green) harvest ticket. Milepost 25.2 along the Nabesna road is the boundary between Units 11 and 12.

WP12-70 would change the harvest limit to 1 bull in a proposed, newly designated portion of Unit 11 along and near the Nabesna Road and in Unit 12 remainder. It would also change the dates of the fall moose harvest season in Unit 12 remainder to August 20–September 20, to match the current season dates in Unit 11. The proponent requests the creation of a joint Federal/State permit, modeled after the joint state/federal registration moose permit RM865 utilized in Unit 20E off the Taylor Highway, which has had much better reporting compliance than the State green harvest ticket (Gross, 2011).

WP12-73 would change the fall moose harvest season in the Federal Unit 12 remainder to August 25–September 25 and would liberalize the harvest limit to 1 antlered bull for the entire season, by eliminating a spike-fork restriction during part of the current fall season.

Note: Proposals WP12-71 and -72 are related to proposals in WP12-70/73 as they request changes to the dates of the fall and winter season dates in an adjacent portion of Unit 12; that portion on Federal lands within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake.

Existing Federal Regulations

Unit 11 — Moose

Unit 11 —1 antlered bull by Federal registration permit only.	*Aug. 20–Sept. 20*

Unit 12 — Moose

Unit 12 remainder—1 antlered bull; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken.	*Aug. 15–Aug. 28* *Sept. 1–Sept. 17*

Proposed Federal Regulations

WP12-70

Unit 11 — Moose

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

Unit 12 — Moose

Unit 12 remainder—1 ~~antlered~~ bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~ ***by joint Federal/State registration permit only****.*	***Aug. 20–Sept. 20*** *~~Aug. 15–Aug. 28~~* *~~Sept. 1–Sept. 17~~*

WP12-73

Unit 12 — Moose

Unit 12 remainder—1 antlered bull~~; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken~~.	***Aug. 25–Sept. 25*** *~~Aug. 15–Aug. 28~~* *~~Sept. 1–Sept. 17~~*

Existing State Regulations

Unit 11 — Moose

Unit 11	*Resident: One bull*	*CM300 Harvest permit*	*Aug. 10–Sept. 20*
	Nonresident: One bull with spike fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side		*Aug. 20–Sept. 20*

Unit 12 — Moose

Unit 12—that portion including all drainages into the west bank of the Little Tok River, from its headwaters in Bear Valley at the intersection of the unit boundaries of Unit 12 and 13 to its junction with the Tok River, and all drainages into the south bank of the Tok River from its junction with the Little Tok River to the Tok Glacier.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side	*CM300*	*Aug. 24–Aug. 28 Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12— remainder of that portion in the Tok River drainage upstream from the Tok Cutoff Bridge, including the Little Tok River drainage.	*Resident: One bull with spike fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*
Unit 12—that portion east of the Nabesna River, and south of the winter trail running southeast from Pickerel Lake to the Canadian border.	*Both residents and nonresidents: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.*	*Harvest permit*	*Sept. 1–Sept. 30*
Unit 12—remainder	*Resident: One bull*	*Harvest permit*	*Aug. 24–Aug. 28 OR Sept. 8–Sept. 17*
	Nonresident: One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side.	*Harvest permit*	*Sept. 8–Sept. 17*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11; 2% U.S. Forest Service managed lands and 79% National Park Service managed lands (see **Unit 11 Map**).

Federal public lands comprise approximately 59% of Unit 12; 11% U.S. Fish and Wildlife Service managed lands and 48% National Park Service managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determinations

Unit 11 north of the Sanford River – Rural residents of Units 11, 12, 13A, 13B, 13C, and 13D, and Healy Lake, Chickaloon and Dot Lake.

Unit 11 remainder – Rural residents of Units 11, 13A, 13B, 13C, 13D, and Chickaloon.

Unit 12, that portion within the Tetlin National Wildlife Refuge and those lands within the Wrangell-St. Elias National Preserve north and east of a line formed by the Pickerel Lake Winter Trail from the Canadian border to Pickerel Lake – Residents of Units 12, 13C, Dot Lake and Healy Lake.

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 – Residents of Units 12, 13C and Healy Lake.

Unit 12 remainder – Residents of Units 11 north of the 62nd parallel, 12, 13A, 13B, 13C, 13D, and the residents of Chickaloon, Dot Lake and Healy Lake.

Regulatory History

Unit 11

In 1992, the Federal Subsistence Board added 10 days to the moose season in Unit 11, aligning it with the seasons in adjoining units. In 1999, the Board revised the customary and traditional use determinations and added five days to the start of the Unit 11 moose season. In May 2007, the Board rejected proposal WP07-20 to change the season dates to September 1–30 (FWS 2007).

Unit 12

For the regulatory history of Unit 12, see the analysis for proposals WP12-71 and -72.

State Management Goals and Objectives for moose (Tobey 2008)

Unit 11

Population Objective

- Allow the population to fluctuate as dictated by available habitat and predation rates.
- Maintain a minimum post hunting ratio of at least 30 bulls:100 cows, with 10–15 adult bulls:100 cows.

Human Use Objective

- Allow human harvest of bulls when it does not conflict with management goals for the unit or population objectives for the herd.

Unit 12

Management Goals

- Protect, maintain and enhance the moose population in concert with other components of the ecosystem.
- Continue sustained opportunities for subsistence use of moose
- Maximize sustained opportunities to participate in hunting moose.
- Maximize opportunities for the non-consumptive use of moose.

Management Objective

- Maintain a minimum post hunting ratio of at least 40 bulls:100 cows east of the Nabesna River, and a minimum of 20 bulls:100 cows in the remainder of the unit.

Intensive Management Objectives

- Population: 4000–6000 moose.
- Harvest: 250–450 moose annually.

Biological Background

Unit 11

A moose population census for all of Unit 11 has never been conducted; although density estimates have been extrapolated from trend counts beginning in the 1950s. Density estimates have ranged from 0.3 to 0.6 moose/mi^2, or between 2,500 and 3,000 moose in all of Unit 11 (**Table 1a**) between 1999 and 2009 (Tobey 2004; Schwanke 2011).

Sex and age composition trend surveys are conducted regularly in Unit 11 by the ADF&G on the western slopes of the Mount Drum Count Area 11 (CA11), an aircraft-accessible, lightly hunted moose population. The total number of moose counted in CA11 averaged 112 moose annually between 1998 and 2004. Though Unit 11 calf:cow ratios have been chronically low, the 2003–2004 calf:cow ratio in CA11 increased 67 percent from 2001 to 15 calves:100 cows (Tobey 2004). From 1998 through 2004, on average, 17 calves:100 cows were observed in CA11. Calves made up approximately 7 percent of the population during this time period. Interestingly, the bull:cow ratio averaged 117 bulls:100 cows from 1998 through 2004, which is among the highest ever observed (Tobey 2004). During this period, the bull:cow ratio greatly exceeded the ADF&G management objective of maintaining a minimum of at least 30 total bulls and 15 adult bulls:100 cows post hunting season.

In 2007 and 2010, National Park Service staff at the Wrangell-St. Elias National Park and Preserve (WRST) conducted GeoSpatial Population Estimator (GSPE) surveys in Unit 11, which covered much larger areas than previous surveys. For the Mt. Drum area, the ratios of bulls per 100 cows continued to remain high at 118:100 in 2007 and 55:100 in 2010 (**Table 1b**). Moose density increased slightly in 2010 from the 2008 survey.

Moose population information is also collected by 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. A portion of this survey area is accessible using all-terrain vehicles from the Nabesna Road, but the western portion of the survey area is accessible only by aircraft. No moose survey data is collected along the Nabesna Road, where a majority of the moose hunting occurs (Schwanke, 2011). Between 2003 and 2008 (excluding 2007), an average of 297 moose were counted annually in the UCR moose survey area (**Table 1c**) (Reid 2007). The calf:cow ratio was fairly stable, averaging 12 calves:100 cows. Calves made up 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.

Results of the 2007 and 2010 GSPE surveys for the UCR are consistent with previous surveys, with 2–3 times more moose observed than the other two survey areas. The ratios of calves per 100 cows and bulls per 100 cows were both slightly higher in 2010 (**Table 1c**) than the previous survey conducted in 2008 (**Table 1b**).

Table 1a. Unit 11 moose population demographics on the western slopes of Mount Drum, WRST, AK, 1998–2009 — a lightly hunted population (Tobey 2004, 2008; Schwanke 2011).

Year	Number of Bulls	Number of Cows	Number of Calves	Total Moose	Bulls:100 Cows	Calves/ 100 Cows	% Calves	Moose /Hour	Density Moose/ mi²
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
Total	399	390	85	874					
Mean	57	56	12	112	125	21	9	28	0.4

Table 1b. Unit 11 moose population demographics in the Upper Copper River survey area, Boulder Creek to Copper Lake,WRST, AK, 2003–2008 — a relatively heavily hunted population accessible by aircraft and all-terrain vehicles (Reid 2007, 2008; Putera 2011).

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 1c. Moose Population Estimates for selected areas of Unit 11, from surveys conducted in 2007 and 2010 (Reid 2008; Putera 2011).

Area	Year	Population Estimate	Moose Observed	Calf: 100 Cow	Bull: 100 Cow	No. Units Surveyed	Density (mi²)
Total Survey 3170 mi²	2007	1576 ± 244	500	19	52	87	0.50
	2010	1584 ± 214	623	17	50	94	0.50
Upper Copper 524 mi²	2007	403 ± 70	170	16	38	25	0.77
	2010	506 ± 97	193	14	51	19	0.97
Mt. Drum 349 km²	2007	232 ± 65	82	11	118	8	0.66
	2010	186 ± 51	66	35	55	11	0.53
Crystalline Hills 349 km²	2007	260 ± 93	63	29	42	9	0.74
	2010	259 ± 55	134	17	50	16	0.74

Predation on moose calves by bears and wolves has been shown to be an important limiting factor in some moose populations. 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 population (Tobey 2008).

Unit 12

The Unit 12 moose population is considered to be of low density and relatively stable. However, in the Nabesna Road area, the density of moose is extremely low and hunting pressure has been increasing the past 5–7 years (Gross, 2011).

The ADF&G conducted moose population estimation surveys in southern Unit 12, within the Tok West and Tok Central survey areas during 1998—2006, using the geospatial population estimator (GSPE) moose survey technique (Ver Hoef 2001, Kellie and DeLong 2006). The data collected were utilized to determine population trends, herd composition in the survey areas and to estimate moose numbers in the entire unit by extrapolation (**Table 2**).

The amount of moose observed has ranged from 150 to 1,317 animals. The ratio of bulls per 100 cows has ranged from 22 to 97.The long term (1988–2006)average has been above the management objective of 40 bulls per 100 cows.

Harvest History

Unit 11

From 2000 to 2009, an annual average of 118 hunters harvested an average of 29 moose per year under State regulations (**Table 3**). On Federal lands, an annual average of 142 Federally qualified users harvested an average of 20 moose under the Federal Subsistence permit (**Table 4**) (FWS 2011). Some of the moose harvested under State regulations were likely taken on Federal lands.

Unit 12

Between 1990 and 2007, there was an annual average of 473 hunters (**Table 5**) that reported an average harvest of 115 moose per year, with a range of 71–149 (**Table 6**). However the total annual estimated harvest is higher based on estimates of unreported legal harvest, illegal harvest and accidental deaths, which averaged between 143 and 174 moose per year (Gross 2008).

Alternative for Consideration

Expand the current Federal registration permit for Unit 11 to include Unit 12 remainder on Federal lands, instead of breaking out Unit 11 into two portions. Should the Federal Subsistence Board authorize, and the Alaska Board of Game concur with, a joint State/Federal registration permit, the joint permit could be valid for all of Unit 11 and Unit 12 remainder on Federal lands.

Current Events

The proponent for WP12-70 also submitted a companion proposal to the Alaska Board of Game. The earliest the Alaska Board of Game could take up the companion proposal is March 2012 for Unit 12 (Region III). For Unit 11 (Region IV), the Alaska Board of Game is scheduled to meet in March 2013. If the proposed joint permit were adopted by the Federal Subsistence Board at its scheduled January 2012

Table 2. Unit 12 aerial moose composition counts, fall 1988—2006 (Gross 2008).

Year	Bulls: 100 Cows	Yearling bulls:100 Cows	Calves: 100 Cows	Moose observed	Adults observed	Calves observed	Percent Calves
1988	64	18	33	1133	943	189	17
1989[a]	50	13	30	1317	1094	223	17
1990	47	12	25	1256	1071	185	15
1991	49	12	24	1472	1264	200	14
1992	45	10	26	1071	906	165	15
1993[b]	26	7	36	850	662	187	22
1994[c]	38	16	39	414	327	87	21
1994[d]	97	13	25	421	374	47	11
1995[d]	82	12	26	526	461	65	12
1996	39	9	32	1258	1022	236	19
1997[c]	36	11	41	596	458	138	23
1997[d]	87	22	31	512	439	73	14
1998[e]	65	14	34	277	229	48	17
1998[f]	38	7	29	150	124	26	17
1999[b]	22	8	17	823	721	102	12
2000[g,h]	40	9	18	630	558	72	11
2000[h,i]	84	10	34	268	229	39	15
2001[g,h]	40	11	27	672	566	106	16
2001[h,i]	64	18	33	466	400	66	14
2002[g,h]	42	12	15	350	305	45	13
2003[g,h]	25	7	32	575	464	111	19
2003[h,i]	89	15	33	564	475	89	15
2004[h,i]	70	16	48	437	351	89	22
2005[g,h]	22	11	30	384	315	69	20
2006[g,h]	37	7	41	873	688	185	21

[a] Tok and Dry Tok not surveyed.
[b] Cheslina and the northern face of the Nutzotin Mountains not surveyed.
[c] Based on population estimation results from northwestern Unit 12.
[d] Cheslina, Kalukna, Nabesna and Chisana count areas were sampled using contour survey techniques.
[e] Based on population estimation results from the Chisana area, southwest Unit 12 using the “No stratification” technique.
[f] Only the north face of the Alaska Range sampled using the contour survey technique.
[g] Survey area includes state and private lands in western and northern Unit 12. Survey conducted by ADF&G.
[h] Ratios and percentages determined using weighted contributions from high and low sample areas. Actual counts of cows, calves and bulls were not used in estimates.
[i] Survey area includes Federal and private lands in eastern and southern Unit 12. Survey conducted by USFWS.

Table 3. Unit 11 Moose Harvest data, State only, 2000–2009 (FWS, 2011)

Regulatory Year	Permits issued	Permits hunted	Number harvested	Male	Female	Unkn sex	Percent Success	Days hunted	CPUE*
2000–01	110	110	30	30	0	0	27.3	763	3.9
2001–02	119	119	31	31	0	0	26.1	893	3.5
2002–03	123	123	33	33	0	0	26.8	883	3.7
2003–04	127	127	30	30	0	0	23.6	854	3.5
2004–05	111	111	30	29	0	1	27	751	4
2005–06	122	122	24	24	0	0	19.7	845	2.8
2006–07	96	96	22	22	0	0	22.9	633	3.5
2007–08	124	124	24	23	1	0	19.4	862	2.8
2008–09	128	128	30	30	0	0	23.4	890	3.4
2009–10	117	117	37	35	0	2	31.6	870	4.3
Total	1,177	1,177	291	287	1	3		8,244	

* No. of moose harvested per 100 days of effort

Table 4. Unit 11 Moose Harvest, FM1106, Federal only, 2000–2009 (FWS, 2011)

Regulatory Year	Permits issued	Permits hunted	Number harvested	Male	Female	Unkn sex	Percent Success	Days hunted	CPUE*
2000	155	116	23	22	0	1	19.8	769	3
2001	176	122	13	11	1	1	10.7	854	1.5
2002	93	56	8	7	0	1	14.3	323	2.5
2003	244	156	15	15	0	0	9.6	1,066	1.4
2004	259	150	26	26	0	0	17.3	891	2.9
2005	228	146	23	23	0	0	15.8	820	2.8
2006	251	169	19	18	0	1	11.2	1,049	1.8
2007	282	184	24	24	0	0	13	1,134	2.1
2008	277	179	28	28	0	0	15.6	1,132	2.5
2009	253	137	19	19	0	0	13.9	853	2.2
Total	2,218	1,415	198	193	1	4		8,891	

* No. of moose harvested per 100 days of effort

Table 5. Unit 12 reported moose hunter residency and success, regulatory years 1990–1991 through 2006–2007 (Gross 2008)

	Successful hunters					Unsuccessful hunters					
Regulatory Year	Local[a] Res	Non Local Res	Non Res and Uknwn	Total	(%)	Local[a] Res	Non Local Res	Non resident and Unkwn	Total	(%)	Total Hunters
1990–1991	45	26	27	98	(23)	186	131	15	332	(77)	430
1991–1992	48	49	13	110	(27)	160	132	13	305	(73)	415
1992–1993	23	35	13	71	(15)	222	164	22	408	(85)	479
1993–1994	38	33	20	91	(24)	186	90	13	289	(76)	380
1994–1995	43	28	17	88	(19)	240	118	16	374	(81)	462
1995–1996	55	34	29	118	(24)	249	113	16	378	(76)	496
1996–1997	62	41	21	124	(24)	251	119	14	384	(75)	508
1997–1998	43	29	30	102	(21)	245	125	14	384	(79)	486
1998–1999	68	46	35	149	(29)	232	110	19	361	(71)	510
1999–2000	69	41	29	139	(25)	240	155	23	418	(75)	557
2000–2001	49	41	22	112	(21)	241	144	24	409	(79)	521
2001–2002	49	27	24	101	(19)	242	155	22	419	(81)	520
2002–2003	53	43	28	124	(23)	212	170	25	407	(770	531
2003–2004	54	44	36	134	(24)	230	164	39	433	(76)	567
2004–2005	49	53	35	137	(25)	204	167	30	401	(75)	538
2005–2006	53	51	32	136	(24)	234	167	37	438	(76)	574
2006–2007	48	42	28	118	(20)	255	178	43	476	(80)	594

[a] Residents of Unit 12, 20E and eastern 20D are considered local residents. Major population centers are Eagle, Chicken, Boundary, Northway, Tetlin, Tok, Tanacross, Slana and Dot Lake.

meeting, it would likely need to be contingent upon positive action (concurrence) by the Alaska Board of Game. The proponent for WP12-73 has also submitted a proposal to Alaska Board of Game to address the "overcrowding, high hunting pressure on a low density moose population" along the Nabesna Road in Units 11 and 12 (Celleraius, 2011). Its proposal calls for changing the harvest limit for residents in the State's Unit 12 remainder from "1 bull" to "1 bull with spike-fork antlers or 50-inch antlers with 3 or more brow tines on at least one side", which would align the harvest limit with the harvest limit in Unit 11.

Effects of the Proposals

If Proposal WP12-70 were adopted:

- The Federal moose seasons, harvest limits and permit requirements along the Nabesna Road and along the trail systems off the Nabesna Road in Unit 11 and adjacent Unit 12 remainder would be aligned to simplify regulations and to improve harvest reporting.
- The requirements will be more complicated for those who also hunt elsewhere in Units 11 or 12. For the remainder of Unit 11, hunters would need a separate Federal registration permit.
- The current split season in Unit 12 remainder would be eliminated and the September portion of the season would be extended, which would result in one additional day of harvest opportunity.

Table 6. Unit 12 reported and estimated moose harvest, regulatory years 1990–1991 through 2006–2007 (Gross 2008)

Regulatory	Reported				Estimated	TOTAL
Year	Bulls	Cows	Unk	Total	Unreported, Illegal and Accidental deaths	
1990–1991	94	0	4	98	49–65	147–183
1991–1992	109	0	1	110	49–65	159–175
1992–1993	71	0	0	71	49–65	120–136
1993–1994	91	0	0	91	50–72	141–163
1994–1995	87	0	1	88	52–72	140–160
1995–1996	117	0	1	118	28–40	146–158
1996–1997	124	0	0	124	26–40	150–164
1997–1998	102	0	0	102	26–40	128–142
1998–1999	148	1	0	149	26–40	175–189
1999–2000	137	0	2	139	26–65	165–204
2000–2001	112	0	0	112	26–65	138–177
2001–2002	99	0	2	101	26–65	127–166
2002–2003	124	0	0	124	26–65	150–189
2003–2004	132	1	1	134	26–65	160–199
2004–2005	137	0	0	137	26–65	163–202
2005–2006	134	0	2	136	28–45	164–181
2006–2007	118	0	0	118	28–45	146–163

- Harvest by Federally qualified users would likely increase due to the harvest limit being liberalized to 1 bull in the affected area with a road-accessible moose population. This vulnerability necessitates improved harvest reporting to accurately determine the amount of harvest and to closely monitor the population for conservation purposes.
- The affected management agencies, ADF&G and the NPS, would need to work out the details of permit administration; how and where the joint permits are issued, how screening for (Federal) eligibility will be conducted, which agency will be the recipient of the harvest reports and how and when the results will be shared.

If Proposal WP12-73 were adopted,

- The fall season dates of August 25–September 25 in Unit 12 remainder would be different than the season dates for Unit 11 and the other two portions of Unit 12
- Harvest by Federal hunters would likely increase due to the harvest limit being liberalized and the season extending even further into the rut than the dates proposed in WP12-70.

OSM CONCLUSION

Support Proposals WP12-70 and WP-12-73 **with modification** to retain a harvest limit of 1 antlered bull in all of Unit 11, and to make the season dates the same (August 20–September 20) in Units 11 and 12.

The proposed regulations would read:

Unit 11 — Moose

~~*Unit 11—1 antlered bull by Federal registration permit only.*~~	~~*Aug. 20–Sept. 20*~~
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***

Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2013. If not endorsed, then by Federal registration permit only.

Unit 11 remainder—*1 antlered bull* ***by Federal registration permit only.***	***Aug. 20–Sept. 20***

Unit 12 — Moose

Unit 12 remainder—1 antlered bull~~*; however, during Aug. 15–Aug. 23 season, only bulls with spike fork antlers may be taken*~~ ***by joint Federal/State registration permit only****.*	***Aug. 20–Sept. 20*** ~~*Aug. 15–Aug. 28*~~ ~~*Sept. 1–Sept. 17*~~

Note: Permit requirement contingent on Alaska Board of Game endorsing a joint permit in March 2012. If not endorsed, then by Federal registration permit only.

Justification

The Federal moose seasons, harvest limits and permit requirements along the Nabesna Road and along the trail systems off the Nabesna Road in Unit 11 and adjacent Unit 12 remainder would be aligned to simplify regulations. The use of a joint Federal/State registration permit should improve harvest reporting.

The population appears healthy enough to allow for a few more bulls to be harvested. However, adopting the harvest limit of 1 antlered bull proposed in WP12-73 should lessen the increase in harvest and is consistent with the harvest limit in the rest of Units 11 and 12.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council

Support WP12-70/73 **with modifications** suggested by the OSM. The Council feels that these proposals will reduce confusion among hunters.

Eastern Interior Subsistence Regional Advisory Council

Support WP12-70/73 **with modifications** suggested by the OSM. The Council feels that this proposal will benefit subsistence users by providing a more generous season, reducing the number of permits that they will need to obtain, and by aligning the seasons and harvest limits along the Nabesna Road.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Comments WP12-70/73
25 November, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-70 / 73:
WP12-70 was submitted by the Upper Tanana Fortymile Fish and Game Committee and seeks to divide Unit 11 into two hunt areas along with changing the harvest limits and dates for the fall moose season in GMU12 remainder, and creating a single, joint Federal/State registration permit to administer the hunt area along the Nabesna Road in GMU11 and 12 remainder.

WP12-73 was submitted by the Wrangell-St. Elias National Park Subsistence Resource Commission and seeks to change the dates of the fall moose harvest season in Unit 12 remainder along with removing the spike-fork antler harvest restriction during August 14-23.

Introduction: These proposals were submitted to change the federal subsistence moose hunting fall season dates in Unit 12 Remainder by changing the current two separate seasons into one longer season. If adopted, the Unit 12 remainder federal subsistence fall hunting season would change from August 15 through August 28 and September 1 through September 17 to August 25 through September 25. The proponent indicates the current federal subsistence split season and antler restrictions are unnecessarily complex and caused undue burden on subsistence users. The proponent states the warm weather in mid-August is prohibits the proper care for meat and delaying the hunting season will address this concern. The proponent indicates changing the current split season into one continuous season and adding liberalizing the hunting season by an additional 6 days would provide additional subsistence opportunity. The proposal also requests eliminating the spike fork antler configuration requirement for the entire proposed season. The proponent indicates the antler configuration restriction is an undue burden on subsistence users and removal of the restriction will make it easier for federal subsistence users to comply with regulation.

Impact on Subsistence Users: Adoption of these proposals will result in a combination of 6 additional days of hunting opportunity for federal subsistence users by opening the currently closed 3-day period between seasons and extending the season end date by three days. Adoption of the proposal will shift the hunt later into the rut which may result in higher success rates for federal subsistence hunters. Adoption of this proposal will require federal subsistence users to obtain a federal registration permit for the three days the state hunting season is closed because state issue permits are only not valid during closed seasons. Adoption of this proposal will allow federal subsistence hunters to harvest any bull moose for the entire season instead of the current August 15 through August 28 season which potential could significantly increase federal subsistence harvest success.

Opportunity Provided by State: State regulations for that identified area of Unit 12 Remainder follow:

> Resident hunters are allowed one bull by harvest ticket from September 8 through September 17 or one bull by harvest ticket between August 24 through 28.

Non-resident hunters are allowed one bull with spike-fork or 50-inch antlers or antlers with 4 or more brow tines on at least one side by harvest ticket from September 8 through September 17.

Conservation Issues: Only a limited information is available at this time for the Nabesna area. The current proposals will include the Memorial Day Weekend which is expected to significantly increase hunter harvest. More importantly, a season extention through September 25 would be expected to significantly increase vulnerability of bulls during the rut. This is a conservation concern for the state, which therefore can only support, at the latest, end date of September 20 to address conservation concerns. Furthermore this proposal should be modified to implement a bag limit of only one antlered bull to avoid harvest of calves or cows.

Enforcement Issues: Adoption of this proposal will currently create divergent federal and state moose hunting season dates which will increase enforcement issues in areas with mixed land ownership. Adoption of this proposal will require federal land managers to provide a Unit 12 Remainder federal subsistence moose hunting permit during the dates the State's hunt is closed by regulation and the State's harvest ticket is not valid. Additionally, the department recommends federal land managers issue detailed maps to federal subsistence hunters depiction the boundaries of federal public lands located in Unit 12 Remainder to ensure hunters are not hunting out of season on non-federal public lands.

Other Comments: This issue will also be before the Board of Game at the March 2012 meeting. More information regarding recent herd surveys will be available at that time.

Recommendation: Defer both proposals to follow March 2012 meeting of the Alaska Board of Game

WRITTEN PUBLIC COMMENTS

Support Proposal WP12-70/73 as **modified** by the OSM staff recommendation. The proposals will benefit subsistence users by reducing the number of permits that they need to obtain and by aligning the seasons and harvest limits along the Nabesna Road. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-83 Executive Summary	
General Description	Proposal WP12-83 seeks to shorten the Unit 26 wolf hunting season and lower the harvest limit. *Submitted by Defenders of Wildlife*
Proposed Regulation	**Unit 26—Wolf** ***5*** *~~15 Wolves~~* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*
OSM Conclusion	**Oppose**
North Slope Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the 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
WP12-83

ISSUES

Proposal WP12-83 was submitted by Defenders of Wildlife and seeks to shorten the Unit 26 wolf hunting season and lower the harvest limit.

DISCUSSION

The proposal would close the Unit 26 wolf hunting season in August, September, October and April and would reduce the harvest limit from 15 to 5 wolves. The proponent notes that wolf pups are dependent upon adults at the start of the current wolf hunting season and that hides are of no value at that time of year. The proponent notes that in late April hides are rubbed and that pregnant females are approaching full term.

Existing Federal Hunting Regulation

Unit 26—Wolf

15 Wolves	*Aug. 10–April 30*

Existing Federal Trapping Regulation

Unit 26—Wolf

No Limit	*Nov. 1–April 30*

Proposed Federal Hunting Regulation

Unit 26—Wolf

5 *~~15 Wolves~~*	***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*

Existing State Hunting Regulation

Unit 26—Wolf

10 Wolves	*Aug. 10–April 30*

Existing State Trapping Regulation

Unit 26—Wolf

No Limit	*Nov. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 67% of Unit 26 and consist of 68% Bureau of Land Management (BLM), 19% U.S. Fish and Wildlife Service (FWS), and 13% National Park Service (NPS) lands (see **Unit 26 Map)**

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 26.

Regulatory History

The Federal Subsistence Management Program Unit 26 wolf hunting season has been from August 10–April 30 since the start of the program. There was no harvest limit for wolves from regulatory year 1990/01 to 1993/94. Federal Subsistence Board action taken on a proposal submitted by ADF&G (Proposal 2) to align harvest limits, and supported by the North Slope Subsistence Regional Advisory Council, resulted in change to the Unit 26 wolf hunting limit to 10 wolves for regulatory year 1994/95. In regulatory year 1995/96, the harvest limit was raised to 15 wolves based on a proposal from Kuukpikmiut Village (Proposal 68). The Unit 26 wolf hunting harvest limit has remained at 15 wolves since that time.

On BLM and FWS public lands trappers may shoot a free ranging wolf during trapping season. The Federal wolf trapping season in Unit 26 is November 1–April 30. Hunters and trappers may harvest wolves under State regulations on BLM, FWS, and Gates of the Arctic National Preserve public lands in Unit 26.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 not be open until September 15. The North Slope Subsistence Regional Advisory Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02.

Defenders of Wildlife submitted a proposal (Proposal 29) to the Alaska Board of Game requesting a November 1–March 31 wolf hunting season for Unit 26A. At its 2009 meeting, the Alaska Board of Game did not support this proposal, noting that there are no wolf conservation concerns in Unit 26A, the proposal would decrease opportunity for harvest, and public testimony did not support proposal (Ardizzone 2009, pers. comm.).

The Alaska Wildlife Alliance submitted proposals (WP10-106 and 107) requesting this same regulatory change during the last wildlife cycle. Proposals WP10-106 and 107 were opposed by the North Slope Regional Advisory Council and rejected by the Federal Subsistence Board.

Biological Background

Wolves (*Canis lupus)* are found throughout Unit 26 and are well adapted to living in the mountains of the Brooks Range, and the tundra of the Arctic Slope. Unit 26 contains extensive open habitat and a large seasonal prey base is available to wolves. Their main prey in the central Brooks Range and Arctic Slope is caribou; wolves often move toward areas of high caribou concentrations. Other prey species may be used; principally sheep, small mammals, moose, snowshoe hare, and beaver.

Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. In the central Brooks Range study, pups constituted about half of the wolf population each August; these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008).

Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time; a fight to the death can occur during such encounters (Adams et al. 2008).

Predation by other wolves and rabies are probably the major causes of natural mortality among adult wolves (Stephenson 2006, Zarnke and Ballard 1987). Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in northern Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

Unit 26 wolf populations appear to be stable or increasing (Stephenson 2006, Carroll 2006), but data on population trends are limited. In 1992 and 1993, estimates from surveys, hunter observations, and harvest data indicated that 390–605 wolves in 166–342 packs were present in Unit 26 (Stephenson 2006, Carroll 2006). These estimates were still considered representative. Wolf population density estimates ranged from 4–11 wolves/1000 mi^2 in parts of Units 26 (Stephenson 2006, Carroll 2006). Within Unit 26A, the wolf population is estimated using wolf track surveys, and wolf sightings recorded during aerial surveys for moose. Densities there have doubled in a study area since 1998 when 5.7 wolves/1000 mi^2 were observed compared to 11.4 wolves/1000 mi^2 in 2008 (ADF&G 2010a, Carroll 2009). Resident packs are rare on the coastal plain in the northern portion of these subunits (Garner and Reynolds 1986). Garner and Reynolds (1986) reported that 8 of 11 packs studied in the Arctic National Wildlife Refuge included 5 or fewer wolves, with low pup production and survival. Summer pup survival rates for packs of <5 wolves were 23–25%, while larger packs had nearly 100% pup survival.

Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) provided evidence that wolf populations compensate for human exploitation <29% via adjustments in dispersal (i.e., local dispersal, emigration, and immigration). ADF&G's management objectives for Units 26B and 26C include providing a sustained annual harvest rate of no more than 30% of the combined wolf population and accommodating nonconsumptive uses (Stephenson 2006). Creel and Rotella (2010) provide additional information concerning human offtake and total mortality rates across North American wolf populations.

Harvest History

Wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. Harvest data are summarized by regulatory year. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

From regulatory year 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 26 ranged from 10 to 55 wolves/year (**Table 1**). Among Federal subsistence hunters/trappers taking wolves, no individual has reached the total harvest limit of 15 wolves per season (ADF&G 2010a). A significant amount of the harvest in Unit 26 comes from the western subunit (26A). Carroll (2006) noted that pelts of most wolves harvested in Unit 26A are used locally for manufacture of parka ruffs or handicrafts, and many of the wolves taken in that subunit are not sealed. Carroll (2000) observed that the actual Unit 26C wolf harvest is two or more times the number reported and that there is a need to develop a harvest reporting system that is more acceptable to local residents. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

Table 1. Reported wolf harvest and method of take for Unit 26, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory Year	Reported Total Harvest	Aug.–Oct. & April Harvest	Method of Take				
			Trap/ Snare	(%)	Shot	%	Unknown
1999/2000	33	9	15	45	16	48	2
2000/01	55	21	16	29	39	71	0
2001/02	21	4	6	29	15	71	0
2002/03	14	6	4	29	10	71	0
2003/04	29	1	12	41	17	59	0
2004/05	10	4	0	0	6	60	4
2005/06	19	7	1	5	18	95	0
2006/07	35	15	6	17	29	83	0
2007/08	34	17	5	15	27	79	2
2008/09	41	25	4	10	35	85	2
2009/10	18	7	4	22	14	88	0

Some harvest occurs from August 10 through October 31 when only hunting season is open. Hunters occasionally take wolves opportunistically in the fall when they are hunting caribou, moose, or sheep (Adams et al. 2008). During much of this period, snow cover and rivers or lake ice conditions are inadequate for snow-machine travel or tracking wolves. Once snow-cover and ice are adequate for travel, trappers began establishing and maintaining trap lines. Because of limited day-length from November through January, little effort is expended hunting wolves though some are taken opportunistically in conjunction with trapping-related activities. Travel conditions begin improving in February with increasing day-length and there is a shift to wolf hunting activities reaching a peak in March. In April, subsistence users have the opportunity to take wolves when milder weather, daylight, and snow conditions allow for safer travel. Wolf harvest declines through April as the trapping season is closed and snow and ice conditions deteriorate with the spring melt (Adams et al. 2008, Ballard et al. 1997). Most of the wolves harvested in Unit 26 are shot; a lesser number are taken with traps and snares (**Table 1**).

Stephenson (2006) estimated that the harvest was 7–11% of the wolf population in Units 26B and 26C. In Unit 26A, Carroll (2006) noted that much of the wolf population inhabiting the Brooks Range is probably not heavily hunted or trapped, except for the area within 50–70 miles of Anaktuvuk Pass. Carroll (2006)

observed that hunters from other North Slope villages range over much of the coastal plain. Adams et al. (2008) observed an annual harvest rate of 11.6% in a Central Brooks range study area.

Adams et al. (2008) observed that wolf harvests in and adjacent to Gates of the Arctic National Park and Preserve are largely unaffected by changes in the hunting harvest limits because there are environmental constraints and most hunters take few wolves. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008). The dynamics of the wolf population is regulated more by natural factors than by the harvest by hunters and trappers. Adams et al. (2008) observed that wolves are prolific and survival of young is generally high; thus, surplus individuals are abundant and available to be harvested. The number of wolves harvested in Unit 26 is low relative to the wolf population size. Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that the wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Brower (2009 pers. comm.) said that village residents don't start hunting wolves until the quality of wolf hides improves when the weather gets cold, usually in late October or November. He observed that they often have good snow cover, good wolf hunting conditions, and good wolf fur through early May. He indicated that incidental take of a sick or harassing animal may happen at any time of year.

Effects of the Proposal

The proponent states that wolf pups are still totally dependent on adults for food and protection from predators in early fall and that if the adults are shot the pups would die an inhumane death due to starvation. The proponent feels that harvesting late-term pregnant females is not an acceptable wildlife management practice. ADF&G (2010) observed that adult wolves learn to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable to harvest. They conclude that wolf populations can sustain a small reduction in pups born by taking of a few pregnant females and that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. ADF&G (2010) reported that it is the mature adults, including pregnant and lactating females that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

If WP12-83 is adopted, it would shorten the Unit 26 Federal wolf hunting season by 113 days and reduce the harvest limit from 15 to 5 wolves. This would decrease opportunity for subsistence hunters to harvest wolves in Unit 26. Between 1999–2010, 38% of the reported Unit 26 wolf harvest occurred in August, September, October, and April (**Table 1)**. If the proposal is adopted, the opportunity for subsistence users to harvest wolves during the fall when they are hunting caribou, moose, or sheep would be eliminated.

If the proposal is adopted, it would make the Federal subsistence wolf hunting season shorter than the State season and the Federal harvest limit would be lower than the State limit.

Even if this proposal is adopted by the Federal Subsistence Board, hunters would still be able to take wolves on FWS, BLM, and Gates of the Arctic National Preserve public lands during August, September, October, and April under State regulations. Adoption of proposal WP12-83 would not have the effect sought by the proponent.

OSM CONCLUSION

Oppose Proposal WP12-83

Justification

The Alaska Wildlife Alliance submitted proposals requesting this same regulatory change two years ago. Those proposals were opposed by the North Slope Regional Advisory Council and rejected by the Federal Subsistence Board.

The wolf population in Unit 26 is thought to be healthy. The current harvest rate for Unit 26 wolves is thought to be low, though reporting may be significantly underestimating actual harvest. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and two-year-olds; these individuals are abundant and available to be harvested. The population of wolves in Unit 26 is regulated more by natural factors than by the harvest by hunters and trappers.

Federal and State wolf hunting seasons in Unit 26 are the same.

Wolves are a very important subsistence resource in Unit 26. The harvest of wolves and the use, barter, and sale of pelts has long been a part of the subsistence economy. Over the past decade, approximately one-third of the reported wolf harvest in Unit 26 has occurred in the months of August, September, October, and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use to make clothing and handicrafts. Wolves are a highly prized and valued subsistence resource in Unit 26.

Even if this proposal is adopted by the Federal Subsistence Board, hunters would still be able to take wolves on FWS, BLM, and Gates of the Arctic National Preserve public lands during August, September, October, and April under State regulations. Adoption of proposal WP12-83 would not have the effect sought by the proponent.

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NORTH SLOPE SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal **WP12-83**. Wolves are important subsistence resource in Unit 26 and are valued for personal use to make clothing and handicrafts. There are no conservation concerns supporting adopting of this proposed regulation.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP83
December 5, 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-83: This proposal requests reducing the federal subsistence Unit 26 wolf hunting season from August 10 through April 30 to November 1 through March 31 and the bag limit reduced from 15 to 5 wolves.

Introduction: The proponent requests the federal subsistence wolf hunting season be reduced by 113 days and the bag limit be reduced by 66% in order to maintain a sustainable population, result in higher wolf populations, and produce higher quality hide harvests. The proposer wants to shorten the wolf hunting season because of concern about population numbers, harvesting technique, harvesting wolves when hides are low quality, harvesting females during late pregnancy in spring, and harvesting females before pups are weaned in fall. Spring seasons allow subsistence users the opportunity to take wolves when milder weather, daylight, and snow conditions allow for safer travel. Hide value depends on use intended for the wolf hide. Hides of wolves taken in early fall and late spring are suitable for home use and for sale, consistent with subsistence use of wolves.

Opportunity Provided by State: In Unit 26, the following wolf hunting regulations were effective in 2010-2011 and 2011-2012: Ten wolves; residents and nonresidents; season August 10 through April 30; tag required for nonresidents; hide must be sealed within 30 days of kill.

Conservation Issues: None. Within Unit 26A, wolf populations are estimated using wolf track surveys, and wolf sightings are recorded during aerial surveys for moose. Densities have doubled in the study area since 1998 when 2.2 wolves per 1,000km^2 were observed compared to 4.4 wolves per 1,000km^2 in 2008. Wolf sighting rates have changed from 0.11 wolves per hour in 2002 to 1.78 wolves per hour in 2008. The current federal subsistence season (August 10 through April 30) allows for maximum opportunity within areas that do not have predator management programs. Among federal subsistence hunters/trappers taking wolves, no individual has reached the total bag limit of 15 wolves per season. In November 2009, the Alaska Board of Game rejected a similar proposal to change the hunting season.

Other Comments: Adult wolves have learned to avoid humans through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable pack members. These populations can sustain the small reduction in pups born by the taking of a few pregnant females. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the mature adult wolves, including pregnant and lactating females, that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose.

WP10-91 Executive Summary	
General Description	Proposal WP10-91 requests that the Unit 25 brown bear (*Ursus arctos*) harvest limit be increased from one to three bears. This proposal was deferred by the Federal Subsistence Board at its May 2010 meeting. *Submitted by Phillip Solomon of Fort Yukon*
Proposed Regulation	**Unit 25—Brown Bear** *Unit 25A and 25B—~~1~~ **3** bears* — *Aug. 10–Jun. 30* *Unit 25C—~~1~~ **3** bears* — *Sept. 1–May 31* *Unit 25D—~~1~~ **3** bears* — *July 1–Jun. 30* *Note: The hide and edible meat of a brown bear must be salvaged.* *__.25(j)(2) If you take wildlife for subsistence, you must salvage the following parts for human use:* * * * *(ii) The hide and edible meat of a brown bear…* *__.26(f) Harvest limits.* * * * *(2) A brown/grizzly bear taken in a Unit or portion of a Unit having a harvest limit of "one brown/grizzly bear per year" counts against a "one brown/grizzly bear every four regulatory years" harvest limit in other Units. You may not take more than one brown/grizzly bear in a regulatory year.*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal. Additionally, the Interagency Staff Committee would like to point out that the Regional Council opposed this proposal preferring to address brown bear harvest limits in Unit 25 via proposal WP12-62, which it supported with modification to change the harvest limit to 2 bears every regulatory year in Unit 25D only.
ADF&G Comments	**Neutral**
Written Public Comments	**None**

STAFF ANALYSIS
WP10-91 (DEFERRED)

ISSUES

Proposal WP10-91, submitted by Phillip Solomon of Fort Yukon, requests that the Unit 25 brown bear (*Ursus arctos*) harvest limit be increased from one to three bears. This proposal was deferred by the Federal Subsistence Board at its May 2010 meeting, until the Yukon Flats Moose Management Planning Committee (Yukon Flats National Wildlife Refuge , Alaska Department of Fish and Game (ADF&G), Council of Athabascan Tribal Governments (CATG), and Yukon Flats villages) was able to address this issue for Unit 25. The focus of the planning committee is to protect, maintain, and enhance the moose population and habitat, maintain traditional lifestyles and provide opportunities for the use of the moose resources. Aligning hunting season dates and harvest limits for both State and Federal managed lands in Unit 25D is desired by the committee whenever possible.

DISCUSSION

The proponent claims that the current harvest limit of one bear is too low to meet needs for traditional subsistence uses and that there are a high number of brown bears in the unit. The proponent advocates that an increase in the harvest limit to three bears will also help compensate for low moose and salmon numbers while trying to meet subsistence needs.

Note: Clarification was provided by the proponent as to exactly how many brown bears should be proposed for the harvest limit after the proposal was distributed for public comment. The proponent would like the harvest limit to be set at three bears for Unit 25.

Existing Federal Regulations

Unit 25—Brown Bear

Unit 25A and 25B—1 bear	*Aug. 10–Jun. 30*
Unit 25C—1 bear	*Sept. 1–May 31*
Unit 25D—1 bear	*Jul. 1–Jun. 30*

__.25(j)(2) If you take wildlife for subsistence, you must salvage the following parts for human use:
** * **

(ii) The hide and edible meat of a brown bear…

__.26(f) Harvest limits.
** * **
(2) A brown/grizzly bear taken in a Unit or portion of a Unit having a harvest limit of "one brown/grizzly bear per year" counts against a "one brown/grizzly bear every four regulatory years" harvest limit in other Units. You may not take more than one brown/grizzly bear in a regulatory year.

__.26(j) Sealing of bear skins and skulls.
(1) Sealing requirements for bear apply to brown bears taken in all Units, except as specified in this paragraph…
(2) You may not possess or transport from Alaska the untanned skin or skull of a bear unless the skin and skull have been sealed by an authorized representative of ADF&G in accordance with State or Federal regulations…

Proposed Federal Regulations

Unit 25—Brown Bear

*Unit 25A and 25B—~~1~~ **3** bears*	*Aug. 10–Jun. 30*
*Unit 25C—~~1~~ **3** bears*	*Sept. 1–May 31*
*Unit 25D—~~1~~ **3** bears*	*July 1–Jun. 30*

Note: The hide and edible meat of a brown bear must be salvaged.

__.25(j)(2) If you take wildlife for subsistence, you must salvage the following parts for human use:
* * *

(ii) The hide and edible meat of a brown bear…

__.26(f) Harvest limits.
* * *
(2) A brown/grizzly bear taken in a Unit or portion of a Unit having a harvest limit of "one brown/grizzly bear per year" counts against a "one brown/grizzly bear every four regulatory years" harvest limit in other Units. You may not take more than one brown/grizzly bear in a regulatory year.

Existing State Regulations

Units 25A and 25B—Brown/Grizzly Bear

Residents and Nonresidents—1 bear every regulatory year	*Aug. 10–June 30*

Unit 25C—Brown/Grizzly Bear

Residents and Nonresidents—1 bear every regulatory year	*Sept. 1–May 31*

Unit 25D—Brown/Grizzly Bear

Resident—1 bear every regulatory year	*July 1–Nov. 30*
Or	
Resident—1 bear every regulatory year	*Mar. 1–June 30*
Nonresident—1 bear every regulatory year	*Sept. 1–Nov. 30*
Or	

Nonresident—1 bear every regulatory year *Mar. 1–June 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 25 and consists of U.S. Fish and Wildlife Service (37%), Bureau of Land Management (16%), and National Park Service (2%) managed lands (**Map 1**).

Customary and Traditional Use Determinations

Residents of Unit 25D have a positive customary and traditional use determination for hunting brown bear in Unit 25D.

Residents of Unit 25 and Eagle have a positive customary and traditional use determination for hunting brown bear in Unit 25 Remainder.

Regulatory History

State regulations have allowed for a brown bear harvest for Unit 25 before the inception of the Federal Subsistence program in 1990. Until the 1998/99 regulatory year under State regulations, harvest limits were set at one brown bear every four years for Unit 25D. In 2004/05, the State harvest limit was increased to one brown bear every regulatory year for all of Unit 25.

There was no Federal open season for brown bears in Unit 25 during the Regulatory Year 1990/91 through 1998/99 regulatory years. In 1999, the Federal Subsistence Board (Board) adopted Proposal WP99-57 and Proposal WP99-58 to open a year-round brown bear season with a one bear harvest limit in Unit 25D due to adequate abundance and expected low harvest levels. In 2001, the Board adopted WP01-36 to open a September 1–May 31 brown bear season with a one bear harvest limit in Unit 25 Remainder. Brown bear abundance was determined to be adequate, anticipated harvest was expected to be minimal, and harvest limits were not being met under the State regulations.

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 2007).

The current population estimate of brown bears in Units 25A, 25B, and 25D is based on the 1993 estimate of approximately 1,200 brown bears (2.4 bears/100 mi^2) (Lenart 2007) and estimated densities and population size slightly varies between the units (**Table 1**). In the mountainous portion of Unit 25C, Eagan (1995) (*cited* in Young 2007) determined that there was a medium density (1.3–2.6 bears/100 mi^2).

In northern Alaska, female brown bears do not successfully reproduce until they are older than 5 years (Reynolds 1987). The delay in reproduction, as well as small litter sizes (1.6 cubs/litter), long intervals between successful reproductive events and short potential reproductive periods cause the low rates of successful production in brown bears in northern Alaska (USFWS 1982). In addition, female brown bears

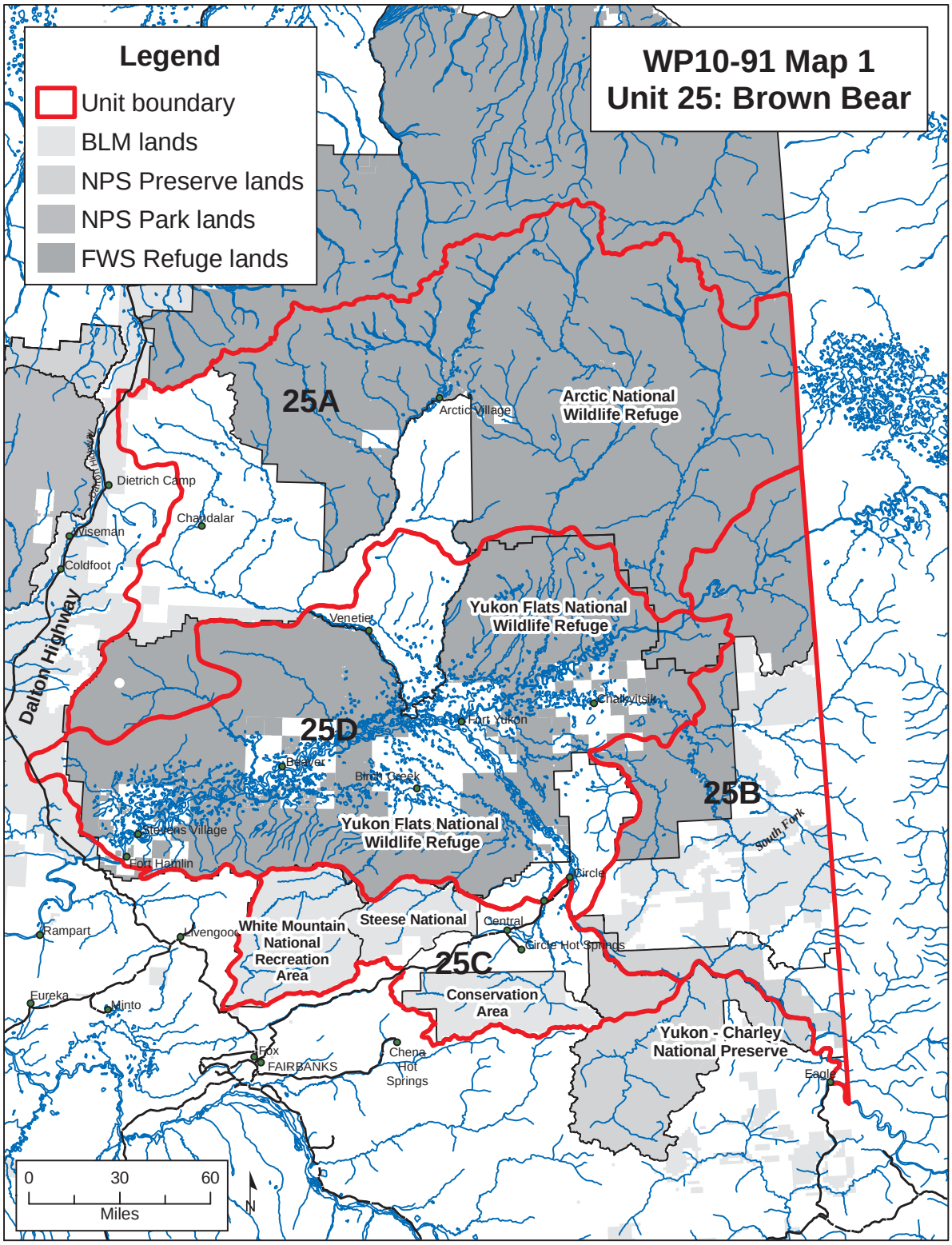
Legend
Unit boundary
BLM lands
NPS Preserve lands
NPS Park lands
FWS Refuge lands
WP10-91 Map 1
Unit 25: Brown Bear
25A
25B
25C
25D
Arctic National Wildlife Refuge
Arctic Village
Dietrich Camp
Chandalar
Wiseman
Coldfoot
Dalton Highway
Yukon Flats National Wildlife Refuge
Venetie
Chalkyitsik
Fort Yukon
Beaver
Birch Creek
Stevens Village
Fort Hamlin
Circle
South Fork
Rampart
Livengood
White Mountain National Recreation Area
Steese National Conservation Area
Central
Circle Hot Springs
Eureka
Minto
Fox
FAIRBANKS
Chena Hot Springs
Yukon - Charley National Preserve
Eagle
0
30
60
Miles
N

Table 1. Units 25A, 25B, 25C, and 25D estimated brown bear population and allowable sustainable harvest (Lenart 2007, Young 2007).

Unit	Area (mi^2)	Estimated Density/100 mi^2	Estimated Population Size	Allowable Harvest
25A	21,280	2.8	596	30
25B and 25D	26,660	2.2	587	29
25C	-	medium (1.3-2.6)	-	6

exhibit high fidelity to home ranges and little emigration or immigration (Reynolds 1993 *cited* in Lenart 2007). Therefore, brown bears are often managed conservatively.

Brown bears in Unit 25D have been identified as a significant predator on moose calves that contributes to maintaining a low density of moose. In their moose mortality study, Bertram and Vivion (2002) found that predation was responsible for 97% of known calf mortality, with brown bears causing 39% of it, second only to black bear at 45%. As a result, the *Yukon Flats Cooperative Moose Management Plan* (ADF&G 2002) prescribes increasing brown bear harvest.

Harvest History

Brown bear harvest is tracked in Unit 25 using the harvest reporting system administered by ADF&G. A supplemental household survey is also conducted by CATG in Units 25 B and 25D to track brown bear harvest.

The ADF&G management objectives for Unit 25 brown bear includes: Managing a population capable of sustaining mean annual harvest of 30 bears in Unit 25A and a total of 29 bears in all of Units 25B and 25D combined, with a minimum of 60% males in the harvest (Lenart 2007), and manage for a 3-year mean annual human-caused bear (≥2 years of age) mortality of 6 from Unit 25C (Young 2007). The harvestable surpluses for Unit 25A, 25B and 25D are based on the conservative assumption that 5% of the total population can be harvested on a sustainable basis. The ADF&G also wants to manage for a temporary reduction in brown bear numbers and predation on moose in Unit 25D until moose populations recover (Lenart 2007).

Unlike Units 25A and 25C (which have road access and a majority of harvest by nonlocal hunters), Units 25B and 25D have a majority of harvest by local residents, poor road access, a household bear harvest survey, and a moose harvest management plan. With the exception of 2006 (n=37) the annual harvestable surplus of brown bears in Units 25B and 25D as reported through household surveys has not been exceeded (range 0–22). Because the use of Units 25B and 25D by nonlocal hunters is low (primarily due to lack of road access and limited guided brown bear hunt opportunities) an increase of the brown bear harvest limit from one to two bears is unlikely to cause harvest to exceed the harvestable surplus of 29 bears (Bertram 2011, pers. comm.). However, increasing the harvest limit to three bears may cause the harvestable surplus to be exceeded (Bertram 2011, pers. comm.).

Based on ADF&G harvest reports, brown bear management objectives were generally met in Unit 25 (Lenart 2007, Young 2007). Each year, the total reported harvest was below the harvest objective for each unit and most often the ratio of harvest was 60+% male for each year (**Tables 1 and 2**). Non-Federally qualified subsistence users and nonresidents account for the majority of the reported harvest, while Federally qualified subsistence users often account for less than 8% of the reported harvest each year for Unit 25A (**Table 3**). In addition, more than 60% of brown bears harvested by non-Federally qualified

Table 2. Unit 25A, 25B, 25C, and 25D brown bear mortality (Lenart 2007, Thomas 2006, Young 2007).

Regulatory Year	Unit 25A		Unit 25B and 25D			Unit 25C	
	Mortality	% Male	Mortality	% Male	[a]Household Survey Data Mortality	Mortality	% Male
1995-1996	15	67	2	100	1	2	100
1996-1997	21	55	4	75	0	3	33
1997-1998	15	47	0	0	1	1	100
1998-1999	13	67	2	100	0	1	0
1999-2000	13	85	6	67	-	1	100
2000-2001	7	57	1	100	-	3	67
2001-2002	14	79	1	100	-	5	60
2002-2003	23	65	11	64	5	3	0
2003-2004	26	48	2	100	-	1	0
2004-2005	24	50	3	100	22	5	100
2005-2006	24	50	1	100	-	6	80
2006-2007	-	-	-	-	37	-	-
2007-2008	-	-	-	-	17	-	-
2008-2009	-	-	-	-	22	-	-

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

Table 3. Unit 25A residency of successful brown bear hunters, regulatory years 1995-2006 (Lenart 2007).

Regulatory Year	Local resident (%)	Nonlocal resident (%)	Nonresident (%)	Total Successful Hunters
1995-1996	0 (0)	4 (29)	10 (71)	14
1996-1997	0 (0)	2 (10)	18 (90)	20
1997-1998	0 (0)	3 (23)	10 (77)	13
1998-1999	1 (8)	3 (23)	9 (69)	13
1999-2000	0 (0)	4 (29)	10 (71)	14
2000-2001	0 (0)	1 (14)	6 (86)	7
2001-2002	0 (0)	6 (50)	6 (50)	12
2002-2003	1 (4)	11 (48)	11 (48)	23
2003-2004	1 (4)	5 (20)	19 (76)	25
2004-2005	0 (0)	12 (50)	12 (50)	24
2005-2006	0 (0)	7 (29)	17 (71)	24

hunters in 25A since 1996 have been female (Voss 2011, pers. comm.). In Units 25B and 25D, reported harvest is usually less than 7 bears each year for all hunter groups (**Table 4**). However, household surveys indicate a disparity with reported harvest and show that local harvest of brown bears has increased since 2004/05, indicating that the actual harvest may be much higher for Unit 25 (**Table 2**).

There is no requirement for a resident brown bear tag for Units 25B and 25D, thus household surveys provide the best means to monitor harvest. Household surveys conducted in 2005, 2007, 2008, and 2009 indicate brown bear harvests by Federally qualified subsistence users as 22, 37, 17 and 22 brown bears, respectively (**Table 2**). CATG conducted bear harvest interviews with local hunters in villages within Unit 25D and found that 37 brown bears were taken in 2006 (Thomas 2008). It is suspected that many bears were not reported because of the difficulty of sealing a bear in remote areas (Lenart 2007). Household

Table 4. Units 25B and 25D residency of successful brown bear hunters, regulatory years 1995-2006 (Lenart 2007).

Regulatory Year	Local resident (%)	Nonlocal resident (%)	Nonresident (%)	Total Successful Hunters
1995-1996	0 (0)	1 (50)	1 (50)	2
1996-1997	1 (33)	0 (0)	2 (67)	3
1997-1998	0 (0)	0 (0)	0 (0)	0
1998-1999	1 (50)	0 (0)	1 (50)	2
1999-2000	4 (80)	0 (0)	1 (20)	5
2000-2001	1 (100)	0 (0)	0 (0)	1
2001-2002	0 (0)	1 (100)	0 (0)	1
2002-2003	7 (70)	1 (30)	0 (0)	10
2003-2004	1 (100)	0 (0)	0 (0)	1
2004-2005	2 (100)	0 (0)	0 (0)	2
2005-2006	0 (0)	1 (100)	0 (0)	1

survey harvest data for all other years has been below the ADF&G harvest objective of 29 bears, but only considered Federally qualified subsistence users and did not take into account other hunter groups (**Table 2**).

Effects of the Proposal

If the brown bear harvest limit were increased from one to three per regulatory year in Unit 25, overall harvest is likely to increase. Such an increase may exceed the ADF&G allowable harvest objective of 30 bears in Unit 25A and 29 bears in Units 25B and 25D.

The wildlife regulations on the Yukon Flats (Units 25B and 25D) are complicated by the diverse land ownership patterns (**Map 1**) and divergent Federal and State regulations. Adoption of this proposal will further complicate regulations, and enforcement of them, by misaligning the Federal and State brown bear harvest limit.

Adoption of this proposal will also complicate current planning actions that are underway by the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, ADF&G, CATG and Yukon Flats villages). One objective of the committee is to align seasons for wildlife between State and Federal managed lands in Unit 25D. However, the committee did not address this issue at its October 2010 meeting.

Of concern to the refuges is the resulting misalignment of Federal and State regulations and the potential to overharvest if the brown bear harvest limit is increased to three bears. It is unlikely that the State will, in the future, increase the harvest limit to three brown bears on State managed lands in Unit 25. Without a companion State regulation authorizing a three brown bear harvest on State lands, local hunters will be at risk of violation when hunting on State managed lands and enforcement will become more complicated. Currently the State has increased brown bear harvest limits to two bears per year in regions of the State that are intensively managed (Units 16, 19, 20E and 22A). Unit 25 is not intensively managed at this time (Bertram 2011, pers. comm.).

OSM CONCLUSION

Oppose Proposal WP10-91.

Justification

Federally qualified subsistence users account for a small amount of the reported annual brown bear harvest in Unit 25. Harvest data indicates that non-Federally qualified subsistence users and nonresidents account for the majority of the reported harvest, while Federally qualified subsistence users often account for less than 8% of brown bears reported harvested annually in Unit 25A. In addition, more than 60% of brown bears harvested by non-Federally qualified hunters have been female since 1996 in 25A. In Units 25B and 25D, reported harvest is usually less than 7 bears annually for all user groups. However, household surveys indicate a disparity with reported harvest and show that local harvest of brown bears has increased since 2004/05, indicating that the actual harvest may be higher for Unit 25 (**Table 2**). If the brown bear harvest limit were increased from one to three bears per regulatory year in Unit 25, overall harvest is likely to increase. Such an increase may lead to exceeding the ADF&G allowable harvest limits. The low reproductive rate for the species, coupled with a high proportion of females harvested in some areas in recent years, makes increasing the harvest limit for the species unwarranted at this time.

An increase in the allowable harvest would misalign Federal and State regulations and adoption of this proposal will also complicate current planning actions that are underway by the Yukon Flats Moose Management Planning Committee (Yukon Flats National Wildlife Refuge, ADF&G, CATG and Yukon Flats villages). One objective of the committee is to align seasons for wildlife between State and Federal managed lands in Unit 25D. However, the committee did not address this issue at its October 2010 meeting.

It is unlikely that the State will increase the harvest limit from one to three brown bears in Unit 25 because the State has only authorized an increase to two bears in areas that are intensively managed (Units 16, 19, 20E and 22A). Unit 25 is not intensively managed at this time. Without a companion State regulation authorizing a three brown bear harvest on State lands, local hunters will be at risk of violation when hunting on State managed lands and enforcement will become more complicated.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP10-91 in favor of WP12-62.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Additionally, the Interagency Staff Committee would like to point out that the Regional Council opposed this proposal preferring to address brown bear harvest limits in Unit 25 via proposal WP12-62, which it supported with modification to change the harvest limit to 2 bears every regulatory year in Unit 25D only.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP10-91 (Deferred): Increase the bag limit for grizzly bears in Unit 25 from 1 bear to 2–3 bears.

Introduction: The proponent requests the harvest limit for grizzly bear be raised because the current federal subsistence harvest limit of one bear per year does not meet the traditional subsistence uses and user needs. Residents of Unit 25D have previously requested higher grizzly bear bag limits in state proposals for 2 reasons: 1) to help reduce predation on moose and 2) some hunters would take and utilize more than 1 bear annually.

Impact on Subsistence Users: Adoption of this proposal will provide the opportunity for federal subsistence grizzly bear hunters to harvest more animals per year. Communities in Unit 25 engage in "primary hunter" practices, where specific community hunters often harvest for multiple families.

Opportunity Provided by State: The current state bag limit Unit 25 is 1 grizzly bear every regulatory year, and no resident tag fee is required although sealing is required.

Conservation Issues: None. The additional harvest would be low because only federally qualified subsistence users would be able to take more than 1 grizzly bear per year and only on federal public land. In Unit 25D, grizzly bears are abundant and their population and distribution has increased in the last 30 years, judging from traditional knowledge and observations by department biologists. One to 5 bears are reported harvested in Unit 25D annually. Harvest by local residents is not reported, and they may take an estimated additional 5–8 bears annually. Increasing harvest of bears on the Yukon Flats to improve moose calf survival is consistent with the Yukon Flats Cooperative Moose Management Plan.

Enforcement Issues: This regulation could cause enforcement issues because of land ownership patterns. Hunters would need to know that they are on federal land if they intend to take more than 1 grizzly bear annually. Unit 25 has a complicated patchwork of land ownership making it difficult for hunters to know when they are on federal public lands or on non-federal lands. If the Federal Subsistence Board approves this regulation, the department will recommend to the Alaska Board of Game to adopt the increased bag limit for Game Management Unit 25D at a future board meeting to alleviate enforcement problems.

Recommendation: Neutral.

WP10-92 Executive Summary	
General Description	Proposal WP10-92 requests that the annual harvest limit for black bear (*Ursus americanus*) in Unit 25 be increased from three to three to five bears per year. This proposal was deferred by the Federal Subsistence Board at its May 2010 meeting, until the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, Alaska Department of Fish and Game (ADF&G), Council of Athabascan Tribal Governments (CATG), and Yukon Flats villages) was able to address this issue for Unit 25. The focus of the planning committee was to align hunting season dates and harvest limits for both State and Federal managed lands in Unit 25D. *Submitted by Phillip Solomon of Fort Yukon*
Proposed Regulation	**Unit 25—Black Bear** *Unit 25—~~3~~ **5** bears* — *Jul. 1 – Jun. 30* *Or 3 bears by State community harvest permit* — *Jul. 1 – Jun. 30*
OSM Conclusion	**Support** Proposal WP10-92 **with modification** to pertain to Unit 25D only. **Unit 25—Black Bear** *Unit 25**A, B, C**—3 bears* — *Jul. 1 – Jun. 30* *Or 3 bears by State community harvest permit* — *Jul. 1 – Jun. 30* ***Unit 25D—5 bears*** — *Jul. 1 – Jun. 30*
Eastern Interior Regional Council Recommendation	**Support** Proposal WP10-92 **with modification** to pertain to Unit 25D only. The Council finds no conservation concern and notes that the proposal provides increased subsistence opportunity. The modified regulation should read: **Unit 25—Black Bear** *Unit 25**A, B, C**—3 bears* — *Jul. 1 – Jun. 30* *Or 3 bears by State community harvest permit* — *Jul. 1 – Jun. 30* ***Unit 25D—5 bears*** — *Jul. 1 – Jun. 30*
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	
Written Public Comments	**None**

STAFF ANALYSIS
WP10-92 (DEFERRED)

ISSUE

Proposal WP10-92, submitted by Phillip Solomon of Fort Yukon, requests that the annual harvest limit for black bear (*Ursus americanus*) in Unit 25 be increased from three to three to five bears per year. This proposal was deferred by the Federal Subsistence Board at its May 2010 meeting, until the Yukon Flats Moose Management Planning Committee (Yukon Flats Refuge, Alaska Department of Fish and Game (ADF&G), Council of Athabascan Tribal Governments (CATG), and Yukon Flats villages) was able to address this issue for Unit 25. The focus of the planning committee was to align hunting season dates and harvest limits for both State and Federal managed lands in Unit 25D.

DISCUSSION

The proponent states that residents of the Yukon Flats area eat a lot of black bears and that there are enough black bears to support increasing the harvest limit, which would not hurt the population. The proponent states that an increase in the harvest limit will also help compensate for low moose and salmon numbers along with a changing climate when trying to meet subsistence needs.

Note: Clarification was provided by the proponent as to exactly how many black bears should be proposed for the harvest limit after the proposal was distributed for public comment. The proponent would like the harvest limit to be set at 5 bears for Unit 25.

Existing Federal Regulation

Unit 25—Black Bear

Unit 25—3 bears[*]	*Jul. 1 – Jun. 30*
Or 3 bears by State community harvest permit	*Jul. 1 – Jun. 30*

[*]Note that existing federal regulations as stated in this analysis are correct under current CFR's, but they are stated incorrectly in the public booklet of Federal subsistence management regulations.

Proposed Federal Regulation

Unit 25—Black Bear

*Unit 25—~~3~~ **5** bears*	*Jul. 1 – Jun. 30*
Or 3 bears by State community harvest permit	*Jul. 1 – Jun. 30*

Existing State Regulations

Units 25A, 25B, 25C—Black Bear

Residents and Nonresidents—3 bears	*No closed season*

Unit 25D—Black Bear

Resident—3 bears	*No closed season*
Or	
*Resident—3 bears by Community permit**	*No closed season*
Nonresident—3 bears	*No closed season*

* See Regulatory History

Extent of Federal Public Lands

Federal public lands comprise approximately 55% of Unit 25 and consist of U.S. Fish and Wildlife Service (37%), Bureau of Land Management (16%), and National Park Service (2%) managed lands (**See Unit 25 Map**).

Customary and Traditional Use Determinations

Residents of Unit 25D have a positive customary and traditional use determination for hunting black bears in Unit 25D.

All rural residents have a positive customary and traditional use determination for hunting black bears in Unit 25 remainder.

Regulatory History

The harvest limit for black bear in Unit 25 has been three bears since the inception of the Federal Subsistence Program in 1990. State regulations have also allowed the harvest of three black bears since 1990.

In 2003, the Federal Subsistence Board (Board) adopted WP03-42 to allow fall baiting of black bear and to establish a community harvest limit of 3 bears. These changes also aligned Federal regulations and State regulations.

In March 2002, the Alaska Board of Game established a community harvest permit program for black bear in Unit 25. The program allows people in a community or other group to pool their individual harvest limits (3 bears) so that one hunter may harvest more than 3 bears each year for use by the community or group. The program requires a hunt administrator who signs up participants, distributes harvest permits to participating hunters and monitors and reports harvest to the ADF&G. The program is not likely to increase harvest, and is intended to better accommodate traditional hunting and sharing practices and improve harvest reporting. Participants are required to have a valid community harvest permit for each bear taken (ADF&G 2002). To date, local users have not utilized this program for black bear (Lenart 2010, pers. comm.).

This proposal (WP10-92) was deferred by the Federal Subsistence Board at its May 2010 meeting, until the Yukon Flats Moose Management Committee (Yukon Flats Refuge, ADF&G, CATG and Yukon Flats villages) was able to address this issue for Unit 25. The focus of the committee was to address the low moose population with one of the objectives to align hunting season dates and harvest limits for both State and Federal managed lands in Unit 25D while recognizing the subsistence priority in Federal and State law. During the Board meeting, the Eastern Interior Subsistence Regional Advisory Council Chair

noted that the Council recommended this proposal be deferred, stating that local residents were not well aware of the option to participate in a community harvest program for black bears in Unit 25.

Current Events Involving the Species

Preliminary data collected by the State in 2010 indicates that black bear density in the region of Beaver Village (Unit 25D) is approximately one bear every two square miles. There are currently no black bear density estimates for Units 25A, 25B or 25C. Assuming a more moderate density range of 1 black bear/2–5 mi^2 across the whole of Unit 25D, the estimated black bear population for Unit 25D would range from 3,500 to 8,750 black bears (Bertram 2011, pers. comm.).

A similar proposal to WP10-92 has been submitted to the Alaska Board of Game (Proposal 182) for consideration during the Boards 2011/2012 cycle. This proposal requests an increase in the annual harvest limit for black bear in Unit 25D to five bears or five bears per community harvest permit in an established community harvest area. No closed season is proposed.

Biological Background

Black bears are abundant in Unit 25 (ADF&G 2002, Bertram and Vivion 2002), but there is uncertainty over accurate population numbers for much of the unit. Based on high capture rates and low hunting pressure, black bear densities are thought to be within the range of 0.2–0.7/mi^2 (86–265/1,000 km^2), which has been previously reported in Alaska (Hechtel 1991, Schwartz and Franzmann 1991, Miller 1994 *cited in* Bertram and Vivion 2002). The total population of black bear in Unit 25D, based on an assumed density of 1 black bear per 5–10 square miles, is 1,750–3,500 black bears (ADF&G 2002).

Black bears have low productive rates. The age of first reproduction for black bears has been documented at 5–7 years of age (Miller 1994), recruitment interval (time taken for separation of cubs from female) 2.0–2.7 years, and a reproductive interval of 1–4 years (Bertram and Vivion 2002, Miller 1994). Although, black bears often have 2 cubs (Miller 1994), cub survival has been documented to be 0.45–0.50 (Bertram and Vivion 2002, Miller 1994). Annual recruitment for Unit 25D is estimated at 175–350 black bears (ADF&G 2002).

Black bears were monitored on the western Yukon Flats between 1995 and 2001. Five female bears produced 10 litters between 1996 and 2001 and the survival rate estimate for cubs weaned to one year was 0.45 (Bertram and Vivion 2002). One adult female was documented giving birth to cubs during three consecutive years and losing her first 2 litters, but successfully raising the third litter to one year of age. Although mortality sources were largely unknown, Bertram and Vivion (2002) documented brown bear predation on two denned female black bears with cubs. An adult male black bear was also found to be killed by a brown bear (Bertram and Vivion 2002).

Harvest History

The black bear has traditionally been an important part of Athabascan culture. The black bear's meat is an important food, and its fat is considered a delicacy. The fat, rendered into lard, is eaten with dried fish. The meat is also mixed with berries and fish to make *akutaq*.

Household survey data indicates that annual black bear harvest for the Yukon Flats area (Unit 25D) has been between 32 and 68 animals for years 2003–2008, representing 1–2% of the harvestable population. (Thomas 2008). Current harvests are lower than the estimated annual recruitment of 175–350 bears

(ADF&G 2002). Unit 25D could sustain a higher annual harvest approaching 5% which would range from 175 to 437 black bears (Bertram 2011, pers. comm.).

Effects of the Proposal

If this proposal were adopted, it would increase the Federal black bear harvest limit from three to five in Unit 25, which may lead to an increased harvest of bears in the unit. Currently there is ample opportunity for Federally qualified subsistence users to harvest black bears as current regulations allow an annual harvest limit of three bears per individual. In addition, managers lack density and population trend data on black bears for Units 25A, 25B, and 25C and therefore an increase in harvest limits for all of Unit 25 is unwarranted without additional biological data. If this proposal were adopted, it would cause State and Federal regulations to fall out of alignment, which will add to the regulatory complexity in the unit.

OSM CONCLUSION

Support Proposal WP10-92 **with modification** to pertain to Unit 25D only.

The modified regulation should read:

Unit 25 — Black Bear	
*Unit 25***A, B, C** *— 3 bears*	*Jul. 1 – Jun. 30*
Or 3 bears by State community harvest permit	*Jul. 1 – Jun. 30*
Unit 25D — ***5 bears***	*Jul. 1 – Jun. 30*

Justification

There is ample opportunity for local residents to harvest black bears, as current regulations allow an annual harvest limit of three bears for individuals. Community harvest permits under State regulations provide additional harvest opportunities in Unit 25. Local users have yet to fully utilize community harvest permits for this species and therefore, a further increase in the harvest limit is not warranted at this time. Furthermore, there are currently no density and population trend estimates for black bears in Unit 25A, Unit 25B and Unit 25C. As a result, managers should be cautious about increasing the annual harvest limit in these areas. However, the black bear population in Unit 25D appears to be healthy and data indicates that the population in this subunit could sustain a higher annual harvest.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP10-92 **with modification** to pertain to Unit 25D only. The Council finds no conservation concern and notes that the proposal provides increased subsistence opportunity.

The modified regulation should read:

Unit 25—Black Bear	
*Unit 25**A, B, C**—3 bears*	*Jul. 1 – Jun. 30*
Or 3 bears by State community harvest permit	*Jul. 1 – Jun. 30*
Unit 25D—5 bears	*Jul. 1 – Jun. 30*

INTERAGENCY STAFF COMMITTEE COMMENT

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.

WP12-63 Executive Summary	
General Description	Proposal WP12-63 would require that all edible meat of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 25 remain on the bones until the meat is removed from the field or is processed for human consumption. *Submitted by the Eastern Interior Regional Advisory Council*
Proposed Regulation	**§__.25(a) Definitions** *Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.* **§__.25(j) Utilization of fish, wildlife, or shellfish**. *(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan . . . .* *(5) Failure to salvage the edible meat may not be a violation if such failure is caused by circumstances beyond the control of a person, including theft of the harvested fish, wildlife, or shellfish, unanticipated weather conditions, or unavoidable loss to another animal.* **§__.26(h) Removing harvest from the field** *You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.* ***You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 25 until you remove the meat from the field or process it for human consumption***.

continued on next page

WP12-63 Executive Summary *(continued)*	
OSM Conclusion	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**No recommendation**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-63

ISSUES

Proposal WP12-63, submitted by the Eastern Interior Regional Advisory Council, would require that all edible meat of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 25 remain on the bones until the meat is removed from the field or is processed for human consumption.

DISCUSSION

The Council is requesting this action because it believes there is a need to reduce the spoilage and waste of the meat of caribou and moose harvested in Unit 25.

The Council submitted parallel proposals to the Alaska Board of Game to consider at its March 2–11, 2012, meeting in Fairbanks. Four proposals were submitted for each of Units 25A, 25B, 25C, and 25D (Board of Game Proposals 171, 172, 173, and 234, respectively) (ADF&G 2011). The Board of Game proposals concern moose only.

Existing Federal Regulation

§__.25(a) Definitions

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

§__.25(j) Utilization of fish, wildlife, or shellfish.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan . . . .

(5) Failure to salvage the edible meat may not be a violation if such failure is caused by circumstances beyond the control of a person, including theft of the harvested fish, wildlife, or shellfish, unanticipated weather conditions, or unavoidable loss to another animal.

§__.26(h) Removing harvest from the field

You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field.

Proposed Federal Regulation

§__.25(a) Definitions

Salvage means to transport the edible meat, skull, or hide, as required by regulation, of a regulated fish, wildlife, or shellfish to the location where the edible meat will be consumed by humans or processed for human consumption in a manner which saves or prevents the edible meat from waste, and preserves the skull or hide for human use.

§__.25(j) Utilization of fish, wildlife, or shellfish.

(3) You must salvage the edible meat of ungulates, bear, grouse, and ptarmigan . . . .

(5) Failure to salvage the edible meat may not be a violation if such failure is caused by circumstances beyond the control of a person, including theft of the harvested fish, wildlife, or shellfish, unanticipated weather conditions, or unavoidable loss to another animal.

§__.26(h) Removing harvest from the field

You must leave all edible meat on the bones of the front quarters and hind quarters of caribou and moose harvested in Units 9, 17, 18, and 19B prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of moose harvested in Unit 21 prior to October 1 until you remove the meat from the field or process it for human consumption. You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 24 prior to October 1 until you remove the meat from the field or process it for human consumption. Meat of the front quarters, hind quarters, or ribs from a harvested moose or caribou may be processed for human consumption and consumed in the field; however, meat may not be removed from the bones for purposes of transport out of the field. ***You must leave all edible meat on the bones of the front quarters, hind quarters, and ribs of caribou and moose harvested in Unit 25 until you remove the meat from the field or process it for human consumption***.

Existing State Regulation

5 AAC 92.220. Salvage of game meat, furs, and hides

(d) A person taking game not listed in (a) of this section shall salvage for human consumption all edible meat, as defined in 5 AAC 92.990. In addition,

(1) for moose and caribou taken before October 1 in Unit 9(B), Unit 17, Unit 18, those portions of Unit 19(A) within the Holitna/Hoholitna Controlled Use Area, Unit 19(B), and Unit 23, the edible meat of the front quarters and hindquarters must remain naturally attached to the bone until the meat is transported from the field or is processed for human consumption;

(2) for caribou taken before October 1 in Unit 21(A), the edible meat of the front quarters and hindquarters must remain naturally attached to the bone until the meat has been transported from the field or is processed for human consumption;

(3) for moose taken before October 1 in Units 21 and 24, and for caribou taken before October 1 in Unit 24, the edible meat of the front quarters, hindquarters, and ribs must remain naturally attached to the bone until the meat has been transported from the field or is processed for human consumption.

5 AAC 92.990. Definitions

(17) "edible meat" means, in the case of a big game animal, except a black bear, the meat of the ribs, neck, brisket, front quarters as far as the distal joint of the radius-ulna (knee), hindquarters as far as the distal joint of the tibia-fibula (hock), and the meat along the backbone between the front and hindquarters . . . ; however, "edible meat" of big game or wild fowl does not include meat of the head, meat that has been damaged and made inedible by the method of taking, bones, sinew, incidental meat reasonably lost as a result of boning or a close trimming of the bones, or viscera.

Table 1 further presents the State and Federal regulations, above, and clearly shows the management units in which similar regulations exist.

Table 1. Management units where State or Federal regulations require hunters to leave edible meat on the bone of caribou or moose until it is removed from the field or is processed for human consumption, 2011.

Authority	Species	Management Units
State of Alaska	Caribou	9B, 17, 18, 19A, 19B, 21A, 23
Federal Subsistence Management Program	Caribou	9, 17, 18, 19B, 24
State of Alaska	Moose	17, 18, 19A, 19B, 21, 23, 24
Federal Subsistence Management Program	Moose	9, 17, 18, 19B, 21, 24

Extent of Federal Public Land

Federal public land comprises approximately 55% of Unit 25 and consists of 68% U.S. Fish and Wildlife Service, 29% Bureau of Land Management, and less than 4% National Park Service lands. Federal public lands exist primarily within the Arctic National Wildlife Refuge, Yukon Flats National Wildlife Refuge, White Mountains National Recreation Area, and Steese National Conservation Area.

Customary and Traditional Use Determination

The customary and traditional use determination for caribou in Unit 25D is residents of Units 20F, 25D, and Manley; and in the remainder area of Unit 25, all rural residents.

The customary and traditional use determination for moose in Unit 25A is residents of Units 25A and 25D; in Units 25B and 25C, all rural residents; in Unit 25D west, residents of Unit 25D west; and in Unit 25D remainder, residents of the remainder of Unit 25.

Background

At the winter and fall 2009 Council meetings, the Council heard that spoilage of moose meat in the field is a problem. At these meetings, Council members talked extensively about the need to educate hunters

to properly cut and process meat of harvested animals, and about the effects on rural communities of nonrural residents hunting in the traditional hunting territories of Athabascan villages.

The Council drafted a proposal to the Alaska Board of Game requesting that all edible meat of the front quarters, hind quarters, and ribs from moose harvested in Unit 25 must remain on the bone until the meat is removed from the field or is processed for human consumption. The Council indicated that the proposed regulation to the Alaska Board of Game would make enforcement of the salvage statutes easier (EISRAC 2009a:220 and 2009b:327). Several Council members suggested submitting a parallel proposal to the Federal Subsistence Board because much of the land in Unit 25 is within the boundaries of U.S. Fish and Wildlife Service national wildlife refuges. Subsequently, the Council submitted a proposal to the Federal Subsistence Board, Proposal WP10-88.

At their meeting in February 2010, Council members commenting on Proposal WP10-88 indicated that the problem addressed by Proposal WP10-88 was created primarily by people that fly into the area and hunt by themselves. In conversations with pilots it was found that these were the hunters most likely to skin their harvest and remove meat without adequate care given to preventing spoilage and sand getting on the meat. These hunters then tried to give their harvest away, described as a "big bag of mystery meat covered in sand" (EISRAC 2010:79). The proposed regulation:

> . . . promotes better quality meat. A lot of people, I don't know what's wrong with them sometimes, they aren't thinking well or something, but I see lots of meat that ends up getting lots of dirt on it and hair. And especially if it's boned out when that happens. Then it's practically impossible to really salvage the meat properly. You lose an awful lot of it. And so this promotes better care of the meat and less spoilage and waste (EISRAC 2010:80).

Leaving the hide and meat on the bone promotes preservation of the meat. "I don't pull the hide off until I get it home and hang it . . . . It cools with the hide on. And I never lost any meat yet" (EISRAC 2010:81).

At the October 2011 meeting of the Council, a Council member said that in his experience, when a moose or caribou was harvested, the animal was brought to the village whole, hide and all, unless it was absolutely necessary to divide the animal in order to haul it a long distance. Also, sometimes the meat was dried in order to lessen the weight of the animal and thereby making it easier to haul a long distance (EIRAC 2011: 295). Another Council member observed that hauling whole animals to the village was a standard practice for most people in rural areas. Animals were sometimes quartered and hung for a while to allow the meat to cool before transporting (EIRAC 2011: 297).

However, according to testimony at the October 2011 Council meeting, the same was not true of many non-local hunters using commercial transporters or privately-owned airplanes to access the area. Non-local hunters often stayed in the field as long as possible, in rafts and at fixed camps with air support. Ten to 14 day trips were not unusual. In this time, unprocessed or unpreserved meat removed from the bone largely spoiled (EIRAC 2011: 19). The following passage generally summarizes the issues raised by the proposal.

> A great deal of animosity is generated between local and non-local hunters. I think we all understand the root of that. I think these groups come from different places and they come from different perspectives . . . . It's very well understood that these are trophy hunters. Very few of them are primarily hunting for meat. They will take the meat, they will salvage it, they will comply with the law, but they do it not necessarily in the most gracious way. The most gracious way would be that you would return with a piece of

> meat that was not covered in gravel and sand and hair, but rather that it was apparently cared for and valued as meat. It will be salvaged by the law, but it won't necessarily be done well. When that meat is then donated to a village, it represents more of an insult than it does represent a donation or a gift (EIRAC 2011: 19–20)

Regulatory History

The Council submitted a proposal identical to Proposal WP10-88 to the Alaska Board of Game and to the Federal Subsistence Board. At its February 2010 meeting, the State Board of Game did not adopt the proposed regulation change (Ardizzone 2010, pers. comm.). Subsequently, in May 2010, the Federal Subsistence Board did not adopt the proposed regulation change either (Proposal WP10-88). If the Federal Subsistence Board had adopted the proposal, Federal wildlife regulations would have been made more restrictive than State regulations concerning removing moose meat from the field.

At its meeting in March 2011, the Council again submitted similar proposals to both the Federal Subsistence Board (Proposal WP12-63) and the Alaska Board of Game (Proposals 171, 172, 173, and 234) . In contrast to its earlier proposal (WP10-88), the Council included caribou as well as moose in this proposal to the Federal Subsistence Board (WP12-63).

Recent Events Involving Species

At the March 2001 Council meeting, Council members were aware that this regulation would apply to Federally qualified subsistence users hunting on Federal public lands under Federal regulations (i.e., using a Federal permit). Council members were aware that the Alaska Board of Game may not adopt similar regulations at its Interior Region meeting in March 2012, and that if this proposal is adopted, Federal regulations may be more restrictive than State regulations on this issue. Given this, Council members were clear that they continued to support adoption of the regulation. They indicated that Federal subsistence users generally adhere to the proposed regulation and therefore adoption of the proposed regulation would not create an unnecessary burden on subsistence users and might provide the necessary impetus for the Alaska Board of Game to adopt similar regulations (EIRAC 2011:295–303).

Effects of the Proposal

If this proposal is adopted, subsistence users harvesting moose or caribou in Unit 25D under Federal wildlife regulations would be required to leave the edible meat of the front quarters, hind quarters, and ribs on the bones until the meat was removed from the field or was processed for human consumption. Federal wildlife regulations would be more restrictive than State regulations concerning a hunter's responsibility to remove moose and caribou meat from the field in Unit 25D.

Currently, there is one hunt for which a Federal permit can be obtained to hunt caribou or moose in Unit 25: for moose in Unit 25D west by Federal registration permit, available to residents of Unit 25D west only, including the communities of Beaver, Birch Creek, and Stevens Village. (Residents of these communities may be eligible to receive a State Tier II permit for this hunt.)

No effects on wildlife populations are anticipated, and no effects on other users are anticipated.

If this proposal is not adopted, no effects on subsistence uses, other uses, or wildlife populations are anticipated.

OSM CONCLUSION

Support Proposal WP12-63.

Justification

The proposed regulation represents an on-going practice of subsistence users in Unit 25 and promotes non-wasteful processing of caribou and moose meat. The proposed regulation would apply to only Federally qualified subsistence users harvesting moose and caribou on Federal public lands under Federal wildlife regulations, and it would not affect non-Federally qualified users. Federal wildlife regulations would be more restrictive than State regulations concerning a hunters' responsibility to remove moose and caribou meat from the field.

While, when making its recommendation, the Council indicated its intent was to address the problem of the spoilage of meat largely by non-Federally qualified hunters, information provided at Council meetings clarified that the proposed regulation represents a highly valued conservation practice that the Council, and others living in the region, wish to promote and protect. Further, most Federal subsistence users would not be affected if this proposal is adopted because it represents what is already a traditional practice. The regulation would further promote the practice amongst subsistence users and may provide an example for the Alaska Board of Game to follow.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-63. The Council does not find a conservation concern nor that the proposal places an undue burden on users, as most Federally qualified subsistence users typically practice it voluntarily. The Council hopes that success of this proposal will lead to similar proposals in other units and by the State of Alaska, as well.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-63: This proposal would require that all edible meat of the front quarters, hind quarters, and ribs from caribou and moose harvested under federal subsistence regulations in Unit 25 remain on the bones until meat is removed from the field or processed for human consumption.

Introduction: Leaving moose meat on the bones until it is removed from the field and/or until it is consumed by humans is widely-practiced by state and federal subsistence users in Unit 25. However, many other hunters, including some federal subsistence users, remove the meat from the bone at the kill site. The meat can be successively salvaged for human consumption if proper procedures are followed when using the "boning" technique. The State has no quantifiable data from Unit 25 concerning the incidence of wasted meat resulting from improperly "boning" moose meat and suggests it rarely occurs. The proposal offers the alternative of adopting state meat-on-the-bone salvage requirement regulations for moose taken in Unit 25 under federal subsistence regulation, and federal subsistence regulations already adopt nonconflicting state regulations by reference**.**

Impact on Subsistence Users: If this proposal is adopted, successful federally qualified subsistence moose hunters in Unit 25 will be required to transport the meat attached to the bones out of the field, resulting in more trips or heavier loads per trip.

Opportunity Provided by State: State regulations currently do not require that moose or caribou meat remain on the bone in Unit 25. The department assumes the proponent intended to reference other nearby Game Management Units with meat-on-the-bone state regulation requirements (Units 9B, 13, 17, 18, 19A, 19B, 21, 23, and 24).

Conservation Issues: None.

Enforcement Issues: State enforcement officials generally acknowledge that meat-on-the-bone requirements make it easier to enforce meat salvage requirements. Adoption of this proposal may introduce confusion in Unit 25 because the state hunting regulations do not presently require meat on bone salvage requirements for moose or caribou.

Other Comments: The Eastern Interior Regional Advisory Council submitted a similar proposal (WP10-88) to the Federal Subsistence Board and a parallel proposal (#106) to the Alaska Board of Game in 2010; both proposals were respectively rejected. Proposal 106 was voted down by the Alaska Board of Game on March 2, 2010, because there was no supporting evidence to indicate a problem with wanton waste and adoption would place an unnecessary burden on users. WP12-63 differs from the previously rejected proposals by requesting meat-on-the-bone salvage requirement also include caribou. Three similar proposals will come before the Alaska Board of Game in March 2012. The department will make a recommendation on these proposals following public testimony.

Recommendation: No Recommendation.

WP12-67/74 Executive Summary	
General Description	Proposal WP12–67 requests the caribou season start date for the fall hunt in Unit 20E be changed from Aug. 10 to Aug. 1. Submitted by Danny Grangaard Proposal WP12–74 requests expanding the joint State-Federal registration permit to include Unit 20F east of the Dalton Highway and south of the Yukon River and Unit 25C. Season dates would be aligned across Units 20E, a portion of 20F east of the Dalton Highway and south of the Yukon River and 25C. The proponent further request that Units 25C and 25C remainder be combined into one unit. *Submitted by the Eastern Interior Regional Advisory Council*
Proposed Regulation	See the analysis for the proposed regulation language.
OSM Conclusion	**Take no action** on WP12–67 **Support** Proposal WP12-74
Eastern Interior Regional Council Recommendation	**Take no action** on WP12-67 in favor of WP12-74. **Support** Proposal WP12-74. The Council finds the proposal supports the efforts of the Fortymile planning group, and will provide managers more options in controlling harvest — both to protect it when needed, as well as to allow for increased harvest when warranted, while ensuring improved reporting and better protection of the herd as it expands into the White Mountains 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 recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Take no action** on Proposal WP12-67 **Support** Proposal WP12-74
Written Public Comments	**None**

STAFF ANALYSIS
WP12–67/74

ISSUES

Proposal WP12–67, submitted by Danny Grangaard, requests the caribou season start date for the fall hunt in Unit 20E be changed from Aug. 10 to Aug. 1.

Proposal WP12–74, submitted by the Eastern Interior Regional Advisory Council, requests expanding the joint State-Federal registration permit to include Unit 20F east of the Dalton Highway and south of the Yukon River and Unit 25C. Season dates would be aligned across Units 20E, a portion of 20F east of the Dalton Highway and south of the Yukon River and 25C. The proponent further request that Units 25C and 25C remainder be combined into one unit.

DISCUSSION

Proposal WP12–67 The proponent request the start date for of the fall hunting season for the Fortymile Caribou Herd (FCH) be changed to Aug. 1 providing Federal subsistence users with increased harvest opportunity. The FCH is available to Federal subsistence users in Unit 20E in the Forty Mile River Corridor along the Taylor Highway. Due to the migratory nature of the FCH, often the herd has moved away from the river corridor by August 10 eliminating the opportunity for Federal subsistence users to harvest caribou from the FCH.

Proposal WP12–74 The Eastern Interior Regional Advisory Council in cooperation with the FCH Harvest Management Coalition has developed this proposal to simplify regulations and expand the area cover by the State-Federal registration permit hunt. The FCH has grown and is returning to portions of its historic range in the White Mountains. Currently, the White Mountains are home to a smaller White Mountains Caribou Herd (WCH). While the proposal states that the WCH and the FCH might mix in the future, at present the two herds remain predominately separate (St Louis, 2010 pers. comm.). Under the proposed regulations the fall general season hunt (Nov. 1 through Mar. 31) for the WCH would be eliminated and new fall and winter State-Federal registration hunts would be created. While harvest of both the FCH and the WCH would be under the same registration permit the herds would be managed separately and have separate harvest quotas. The FCH harvest is managed in zones so that hunters in all parts of the herd's range have hunting opportunities (ADF&G, 2006). A new hunt zone would be created to replace the area currently under the fall general season hunt in 20F and 25C. The FCH harvest would continue to be managed by zones allowing the hunt managers the ability to open and close zones to regulate harvest quotas. The Federal Hunt Mangers will continue to have authority to modify or restrict bag limits, season dates, methods and means. Total State-Federal harvest levels will continue to comply with the population and harvest objectives in the 2006–2012 *Fortymile Caribou Herd Harvest Plan* and the White Mountain Caribou Herd Management Objective.

Existing Federal Regulation

Unit 20E—Caribou

Unit 20E— 1 caribou by joint State–Federal registration permit only. Up to 900 caribou may be taken under a State–Federal harvest quota. During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ratio for the two herds.	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28*

Unit 20F —Caribou

Unit 20F—east of the Dalton Highway and south of the Yukon River—1 caribou; however, cow caribou may be taken only from Nov. 1 – Mar. 31. During the Nov. 1– Mar. 31 season, a State registration permit is required.	*Aug. 10–Sept. 20* *Nov. 1–Mar. 31*

Unit 25C —Caribou

Unit 25C—that portion west of the east bank of the mainstem of Preacher Creek to its confluence with American Creek, then west of the east bank of American Creek—1 caribou; however, cow caribou may be taken only from Nov. 1–Mar. 31. However, during the Nov. 1–Mar. 31 season, a State registration permit is required.	*Aug. 10–Sept. 20* *Nov. 1–Mar. 31*

Unit 25C remainder—Caribou

Unit 25C remainder—1 caribou by joint State–Federal registration permit only. During the fall season the harvest will be restricted to 1 bull and the harvest will not exceed 100 caribou between Aug. 10 – 29. Up to 600 caribou may be taken under a State–Federal harvest quota.	*Aug. 10–Sept. 30* *Nov. 1–Feb. 28*

Proposed Federal Regulations

Proposal WP12-67

Unit 20E—Caribou

Unit 20E— 1 caribou by joint State–Federal registration permit only. Up to 900 caribou may be taken under a State–Federal harvest quota. During the fall season the harvest will be restricted to 1 bull and the harvest will not exceed 100 caribou between Aug. 10 – 29. During the winter season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ratio for the two herds.	*Aug.* ***1*** *~~10~~–Sept. 30* *Nov. 1–Feb. 28.*

Proposal WP12-74

Unit 20E—Caribou

Unit 20E— 1 caribou; ~~by~~ ***a*** *joint State–Federal registration permit* ***is required*** *. ~~only. Up to 900 caribou may be taken under a State–Federal harvest quota.~~* ***During the Aug. 10–Sept. 30 season the harvest is restricted to 1 bull. The harvest quota between Aug. 10–29 in Units 20E, 20F, and 25C is 100 caribou.*** *~~During the fall season the harvest will be restricted to 1 bull and the harvest will not exceed 100 caribou between Aug. 10 – 29.~~ During the ~~winter~~* ***Nov. 1 – Mar. 31*** *season, area closures or hunt restrictions may be announced when Nelchina caribou are present in a mix of more than 1 Nelchina caribou to 15 Fortymile caribou, except when the number of caribou present is low enough that less than 50 Nelchina caribou will be harvested regardless of the mixing ratio for the two herds.*	*Aug. 10–Sept. 30* *Nov. 1–~~Feb. 28~~* ***Mar. 31***

Unit 20F —Caribou

Unit 20F—east of the Dalton Highway and south of the Yukon River—1 caribou; ***a joint State-Federal registration permit is required.*** *~~cow caribou may be taken only from Nov. 1 – Mar. 31. During the Nov. 1–Mar. 31 season, a State registration permit is required.~~* ***During the Aug. 10 – Sept. 30 season the harvest is restricted to 1 bull. The harvest quota between Aug. 10–29 in Units 20E, 20F, and 25C is 100 caribou.***	*Aug. 10–Sept. ~~20~~****30*** *Nov. 1–Mar. 31*

Unit 25C —Caribou

~~Unit 25C—that portion west of the east bank of the mainstem of Preacher Creek to its confluence with American Creek, then west of the east bank of American Creek—1 caribou; however, cow caribou may be taken only from Nov. 1–Mar. 31. However, during the Nov. 1–Mar. 31 season, a State registration permit is required.~~	*~~Aug. 10–Sept. 20~~* *~~Nov. 1–Mar. 31~~*

Unit 25C ~~remainder~~—Caribou

Unit 25C ~~remainder~~—1 caribou; ***a*** *joint State–Federal registration permit* ***is required****.* *~~only~~.* ***During the Aug. 10 – Sept. 30*** *~~fall~~ season the harvest ~~will be~~* ***is*** *restricted to 1 bull.* ***The harvest quota between Aug. 10–29 in Units 20E, 20F, and 25C is 100 caribou****.* *~~and the harvest will not exceed 100 caribou between Aug. 10 – 29. Up to 600 caribou may be taken under a State–Federal harvest quota.~~*	*Aug. 10–Sept. 30* *Nov. 1–~~Feb. 28~~* ***Mar. 31***

Existing State Regulation

Unit 20E—Caribou

Residents Only: 1 bull (RC860)	***Zone 1 & 3*** *Aug. 29–Sept. 30* ***Zone 2*** *Aug. 10–Sept 30*
Or 1 caribou (RC867)	***Zone 1,2 & 3*** *Dec. 1–Feb. 28*
Nonresidents Only: 1 bull (RC860)	***Zone 1 & 3*** *Aug. 29–Sept. 20* ***Zone 2*** *Aug. 10–Sept. 20*

Extent of Federal Public Lands

Federal public lands comprise approximately 24% of Unit 20E and consists of 4% Forty Mile River Corridor managed by the Bureau of Land Management and 20% Yukon Charley Rivers National Preserve managed by the National Park Service.

Federal public lands comprise approximately 16% of Unit 20F and consist of 15% Dalton Highway Corridor Management Area managed by the Bureau of Land Management and 1% Yukon Flats National Wildlife Refuge managed by US Wildlife Service.

Federal public lands comprise approximately 74% of Unit 25C and consists of 64% Steese National Conservation Area managed by the Bureau of Land Management, 9% Yukon Charley Rivers National Preserve managed by the National Park Service and 1% Yukon Flats National Wildlife Refuge managed by US Wildlife Service (**Unit 20 and 25 Maps**).

Customary and Traditional Use Determinations

Rural residents of Units 12 (north of Wrangell–St. Elias National Preserve), 20D and 20E have a positive customary and traditional use determination for caribou in Unit 20E. Rural residents of Units 20F, 25D and Manley have a positive customary and traditional use determination for caribou in Unit 20F. There has not been a customary and traditional determination made for caribou in Unit 25C, therefore, all rural residents are eligible to harvest caribou in Unit 25C. Currently two proposals, if supported, could

change the positive customary and traditional use determination for caribou in Units 12 and 25. Proposal WP12-68, submitted by the Cheesh'na Tribal Council, requests the residents of Chistochina be added to the Unit 12 caribou customary and traditional use determination. Proposal WP12-69, submitted by the Eastern Interior Alaska Subsistence Regional Advisory Council, requests a change in the customary and traditional use determination for caribou in Unit 25 remainder from "all rural residents," to "residents of Unit 25."

Regulatory History

Fortymile Caribou Herd

The FCH historically provided much of the food needed by residents within eastern central Alaska to Whitehorse Yukon. Because of the importance of the FCH, ineffective State and Federal management, increasing competition among hunters and complex harvest regulations a grassroots planning process was initiated in 1994 (Gronquist, 2005). This effort led to development of the original Fortymile Caribou Herd Planning Team which represented State, Federal and Territorial agencies, and stakeholder groups. The first *Fortymile Caribou Herd Harvest Plan* (Harvest Plan) was completed in October 1995 by the FCH Planning Team. The plan provided guidance from 1995 through 2000 for governing overall herd harvest levels, with the goal of restoring FCH to its former range and abundance. In accordance with the Harvest Plan the Federal Board in cooperation with ADF&G established a joint quota for Units 20E and 25C of "up to 150 bulls" beginning in regulatory year (RY) 1996–1997. In 2001, a new Harvest Plan was developed for 2001–2006. This plan increased the harvest quota from 150 bulls per year to 850 caribou with up to 25% cows until the herd reached 50,000 caribou (ADF&G 1999). This annual harvest quota was maintained when the current 2006–2012 Harvest Plan was adopted (ADF&G 2006). The intent of the 2006–2012 Harvest Plan is to maintain an average annual harvest quota of 850 caribou, but allow up to 15% variation in a single year. If the quota is either not reached or exceeded in one year, the harvest allocation may be adjusted the following year to compensate. Currently, 75% of the harvest quota is allocated to the fall hunt (RC860) and 25% to the winter hunt (RC867). The FCH Planning Team has developed into the FCH Harvest Coalition and has continued to be involved in providing guidance for managing the FCH.

The FCH Harvest Plan made it possible for State and Federal managers in Units 20E and a portion of 25C (east and south of Preacher Creek) to managed the fall and winter FCH hunts using a joint State-Federal registration permit. Since 1995, one permit has been used for all hunts and harvest reports are returned to ADF&G. Federally qualified subsistence users can begin hunting on Federal public lands 15–30 days before other hunters. A short reporting period allows State and Federal managers to closely monitor the State and Federal season and determine when the harvest quota is met.

The State and Federal registration permit hunts for the FCH is divided into 3 zones. The hunt managers open and closed the hunts by zone as necessary to ensure the annual harvest quota is not exceeded. In the past five years, 2007–2011, the State has issued multiple Emergency Orders to close hunting of the FCH due to high harvest near the road system. Several of these Emergency Orders have been followed by Federal hunt closures. In 2010, the FCH Harvest Management Coalition submitted proposals WP10-105 to the Federal Subsistence Board and a companion proposal, Proposal 14, to the Alaska Board of Game with the intent of improving field conditions cause by overcrowding of hunters along the road system and reduced the harvest limit of 1 bull. The Federal proposal also capped the early harvest at 100 animals spreading the harvest over time, ensuring that the harvest quota is not filled before the State fall hunt begins. The Federal proposal also recommended a letter of delegation be issued allowing the Federal

subsistence manager the authority to modify or restrict bag limits, season dates, methods and means. Both proposals passed the respective Boards unanimously.

White Mountains Caribou Herd (WCH)

The WCH has historically sustained a low annual harvest, because of the herd size and location in timbered areas, they are difficult to locate and harvest. In 2000, the Alaska Board of Game changed the general season bag limit from 1 bull to 1 caribou and combined two registration hunts (RC877 and RC878) into one (RC879) with no motorized restrictions. The traditional hunt areas were reduced to accommodate northwest expansion of the FCH . The hunt boundary for the FCH hunt was moved northwest from the Steese Highway to Preacher and American Creeks, removing a portion of the eastern area for hunting White Mountains caribou (Seaton, 2009). In March 2002 the Board of Game reduced the fall caribou bag limit to bulls only because cow harvest in 2000 and 2001 approached sustainable limits.

Current events involving Species

The FCH Harvest Management Coalition will submit a companion wildlife proposal to the Alaska Board of Game at its March 2012 meeting. The State companion proposal is intended to a align State and Federal regulations by requesting the expansion of the State-Federal registration permit to include units 20B, 20D, 20E, 20F and 25C. The State companion proposal also proposes lengthening the winter season to allow more hunting opportunity and the lengthened season would serve to align State and Federal regulations.

Presently, the FCH Management Coalition is drafting the 2012 – 2018 *Fortymile Caribou Herd Harvest Plan,* to be implemented when the current management plan expires. The draft 2012 – 2018 *Fortymile Caribou Herd Harvest Plan* will be presented to the Alaska Board of Game for approval during the March 2012 meeting (St Louis, 2010 pers. comm.).

Biological Background

Fortymile Caribou Herd

Since implementation of the *Fortymile Caribou Herd Harvest Plan* in 1995, herd size has increased significantly. The FCH doubled in size between RY1995 and RY2002, with annual growth rates between 4 and 14% (Gross 2007). This increased adult and calf survival was attributed to reduced overall predation on the herd, favorable climate, good range conditions and reduced harvest. In 2004 and 2005 the herd began to experience a decline likely due to poor climate conditions and wolf predation on both adults and calves (**Table 1**). Increased survival rates among calves since 2006 allowed for a 19% increase in the estimated population (Gross 2007). Most recent herd composition surveys show a decrease in the bull:cow ratio (37 bulls:100 cows) and increase in the calf:cow ratio (33 calves:100 cows) in 2008.

White Mountains Caribou Herd

The WCH was first documented as a distinct herd in the late 1970s, during this time the herd ranged in size from 100 to 200 animals. Today the herd ranges between 529 and 605 animals (**Table 2**). Most of the White Mountains caribou herd's range is encompassed in the White Mountain National Recreation Area managed by BLM. The herd has remained relatively stable and the bull:cow ratios continue to meet the management objective of 30 bulls to 100 cows.

Table 1. Fortymile caribou fall composition counts and estimated herd size, regulatory years 2001-2002 through 2008-2009 (modified from Gross 2007 and Gross 2009).

Regulatory Year	Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size[a]
2001-2002	49	38	20	53	27	6878	40,800[a]
2002-2003	43	39	21	55	24	6088	44,100[a]
2003-2004	50	17	10	60	30	6296	42,300[a]
2004-2005	45	28	16	59	25	4157	39,700[a]
2005-2006	51	18	10	59	30	2350	39,000[a]
2006-2007	43	34	19	57	24	4995	41,000[a]
2007-2008	36	37	22	58	21	5228	42,000[a]
2008-2009	37	33	19	59	22	4119	46,509[ab]

[a] Herd estimates were deried from population models using data from summer census counts, fall composition counts, spring parturition surveys and monthly mortality surveys of collared caribou. Population estimate for 15 May of current regulatory year.

[b] Preliminary data.

Table 2 White Mountains Caribou Herd fall composition counts and estimated herd size, regulatory years 2001-2002 through 2009-2010 (modified from Seaton 2009 and St. Louis 2011 pers. comm.)

Regulatory Year	Bulls:100 Cows	Calves:100 Cows	Calves (%)	Cows (%)	Bulls (%)	Composition Sample Size	Estimated Herd Size
2001-2002	57	26	14	55	31	441	700-800
2002-2003	34	29	18	61	21	405	
2003-2004	30	17	11	68	20	308	
2004-2005	35	23	15	63	22	321	642[a]-733
2005-2006	44	21	13	61	27	391	514[a]-600
2006-2007	36	20	13	64	23	362	
2007-2008	39	37	21	57	22	358	590[a]-650
2008-2009[b]	46	42	23	53	24	507	677[a]–762
2009-2010	42	15	9	64	27	333	529[a]–605

[a] Minimum count from summer census.

[b] Some mixing with the Fortymile Caribou Herd occurred; therefore this data is less representative of the White Mountains Herd alone.

Harvest History

Fortymile Caribou Herd

Under both the 2001–2006 and 2006–2012 Harvest Plans, if a herd growth rate of approximately 10% is achieved in a particular year the harvest objective for that hunting season is 2–3% of the herd (ADF&G 1999 & 2006). When that growth rate is not achieved the harvest objective is reduced to the level of the previous year. Because the Fortymile Caribou Herd grew at less than 10% per year and showed some declines after 2003, the annual harvest quota has remained at 850 animals except for 2002, when the quota was set before an accurate population estimate was made. For RY2002 the quota was set at 950 caribou. Since 2002 the total harvest has ranged from 725 to 1080 caribou (**Table 3**). The cooperative management has allowed the harvest to stay within the harvest quota providing for continued conservation of the herd. Guidance provided by the 2006–2012 Harvest Plan ensures harvest quotas will remain conservative through 2012 allowing for continued herd growth and a stable bull:cow ratio (ADF&G 2006).

Table 3. Reported Fortymile caribou harvest by joint State-Federal registration permit, regulatory years 2002-2003 through 2009-1010 (modified from Gross 2009 and Gross 2010, and St. Louis 2011 pers. comm.)

Regulatory Year	Permits Issued	Total Hunters	Number Successfull	Bulls	Cows	Unknown	Total Harvest
2002-2003[a]	4155	2620	860	663	185	12	860
2003-2004[a]	5718	3440	799	612	181	6	799
2004-2005[b]	4217	2497	846	592	243	11	846
2005-2006[b]	4438	2483	741	556	182	3	741
2006-2007[b]	3975	2602	852	601	247	4	852
2007-2008[b]	4576	3182	1012	746	262	4	1012
2008-2009[b]	3582	2493	912	679	217	16	912
2009-2010[b]	2764	1999	1080	876	192	12	1080
2010-2011[b]	5112	3116	725	630	89	6	725

[a] Data from RC863, RC865, RC866, and RC867 harvest reports.
[b] Includes RC860 and RC867 harvest reports

Table 4. Reported White Mountain Caribou harvest by permit hunt RC879, regulatory years 2002-2003 through 2009-2010 (modified from Seaton 2009 and Seaton 2011 pers. comm.)

Regulatory Year	Permits Issued	Total Hunters	Number Successfull	Bulls	Cows	Unknown	Total Harvest
2002-2003	313	113	2	2	0	0	2
2003-2004	259	61	1	1	0	0	1
2004-2005	137	33	1	1	0	0	1
2005-2006	186	44	1	1	0	0	1
2006-2007	271	49	0	0	0	0	0
2007-2008	410	110	1	0	1	0	1
2008-2009	233	52	3	2	1	0	3
2009-2010	111	49	2	1	1	0	2
2010-2011	275	78	3	2	1	0	3

White Mountains Caribou Herd

The majority of White Mountains caribou are harvested by local resident hunter (Seaton, 2009). Success rate is low in both the fall and winter hunts due to the inaccessibility of caribou during both seasons. Modeling efforts by ADF&G indicate the White Mountains caribou herd could sustain a maximum total fall and winter harvest of 40 bulls and 25 cows. Current harvest levels fall far below the maximum allowable levels (**Tables 4 and 5**) Registration Hunt RC879 was closed in 2010 by Emergency Order because a large number of caribou from the FCH were present and at risk of being harvested under registration hunt RC879 (ADF&G 2010). RC879 is intended for the harvest of WCH and no harvest of caribou from the FCH is allocated in this hunt.

Effects of the Proposal

Proposal WP12–67

If this proposal were adopted it would add an additional 9 days to the Unit 20E caribou season, changing the season from Aug. 10 – Sept. 30 to Aug. 1 – Aug. 30. Although this would allow additional time for Federally qualified subsistence users to harvest caribou it would conflict with the FCH Harvest Management Coalition's recommended approach.

Table 5. Reported White Mountain Caribou harvest during general seaon, regulatory years 2002-2003 through 2009-1010 (modified from Seaton 2009 and Seaton 2011 pers. comm.)

Regulatory Year	Bull	Cow	Unk	Total
2002-2003	11	0	1	12
2003-2004	6	0	0	6
2004-2005	12	0	0	12
2005-2006	6	0	0	6
2006-2007	6	0	0	6
2007-2008	11	0	0	11
2008-2009	18	1	0	19
2009-2010	11	0	0	11
2010-2011	21	1	0	22

Proposal WP12–74

If this proposal were adopted it would simplify regulations by aligning Federal season dates across Units 20E, 20F east of the Dalton Highway and south of the Yukon River and 25C. The area covered by the joint State-Federal registration permit would be expanded to reflect the FCH's current range. Having both the WCH and the FCH on the same permit would provide the hunt managers with more flexibility to manage the hunts separately. Currently, if FCH migrates north of the Steese Hwy into hunt area for RC879 the hunt is closed by Emergency Order because the hunt is intended for the harvest from WCH and there is no harvest of FCH allocated to the WCH hunt. If this proposal is adopted the joint State-Federal hunt permit would cover hunts for both FCH and WCH simplifying regulations for the Federal subsistence users.

OSM CONCLUSION

Take No Action on WP12-67

Support Proposal WP12-74

Justification

While proposal WP12-67 would increase caribou harvest opportunities for Federal subsistence users, it proposes a regulation change that is outside the joint State-Federal approach to the managing the FCH harvest. Since 1995, the FCH Harvest Coalition, a joint State and Federal partnership, has worked to develop recommendations for managing the FCH. Their primary goal is to plan and implement strategies that support the herd's ability to grow and reoccupy their traditional range. The Federal Subsistence Board has been supportive of the FCH Harvest Management Coalition's efforts and adoption of this proposal would be contrary to the group's recommendations.

Under proposal WP12-74 the WCH and the FCH would continue to be managed separately. The joint State-Federal management has allowed the FCH population to grow and expand their range. The proposed regulation changes would allow flexibility and increased harvest opportunities for Federal subsistence users. Under the proposed regulatory changes, all necessary safeguards for monitoring inseason harvest of FCH and the WCH would be maintained. Total State-Federal harvest levels will continue to comply with the population and harvest objectives in the 2006–2012 and the 2012-2018 *Fortymile Caribou*

Herd Harvest Plans and the White Mountain Caribou Herd management objectives. Season closures and harvest limits would continue to be coordinated between State and Federal managers.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Take no action on WP12-67 in favor of WP12-74.

Support Proposal WP12-74. The Council finds the proposal supports the efforts of the Fortymile planning group, and will provide managers more options in controlling harvest — both to protect it when needed, as well as to allow for increased harvest when warranted, while ensuring improved reporting and better protection of the herd as it expands into the White Mountains area.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP12-67-74
December 5, 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-67 & 74 Caribou:
WP12-67 proposes changing the start date of the federal subsistence caribou hunt in Unit 20E.

WP12-74 seeks to expand the joint State-Federal registration permit to include Units 20F and 25C and to align the federal subsistence hunting season dates across Unit 20E a portion of Unit 20F and Unit 25C. The proposal also requests Unit 25C and Unit 25C Remainder be combined.

Introduction:
WP12-67 seeks to advance the fall season start date for the federal subsistence caribou hunt in Unit 20E from August 10 to August 1.

WP12-74 seeks to expand the joint State-Federal registration permit to include Unit 20F east of the Dalton Highway and south of the Yukon River and Unit 25C. The proposal also requests alignment of the federal subsistence caribou hunting season dates across Units 20E a portion of Unit 20F east of the Dalton Highway and south of the Yukon River and Unit 25C. The proponents requests both Units 25C and 25C Remainder be combined into a single unit.

Impact on Subsistence Users:
Adoption of WP12-67 would provide nine additional days of federal subsistence hunting opportunity from an expanded caribou hunting season.

Adoption of WP 12-74 would reduce user confusion by aligning federal subsistence and state hunting regulations.

Opportunity Provided by State:

GMU 20E Caribou:

Residents Only: 1 bull (RC860)	***Zone 1 & 3***
	Aug. 29-Sept 30
	Zone 2
	Aug 10-Sept 30
Or 1 caribou (RC867)	***Zone 1, 2 & 3***
	Dec 1-Feb 28
Nonresidents Only: 1 bull (RC860)	***Zone 1 & 3***
	Aug. 29-Sept 20
	Zone 2
	Aug 10-Sept 20

Other Comments: WP12-74 supports ongoing collaborative management efforts while providing flexibility for separate management of the Fortymile and White Mountain Caribou Herds.
Recommendation: Take No action WP12-67 / Support WP12-74

WP12-77/78/79/81 Executive Summary	
General Description	Proposals WP12-77, -78, -79 and -81 seek to shorten wolf seasons and/or lower harvest limits for wolves in Units 12, 20A and 25A. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**WP12-77** **Unit 12—Wolf Trapping** *No limit* — ***Nov. 1–Mar. 31 ~~Oct. 1–April 30~~*** **WP12-78** **Unit 20A—Wolf Hunting** ***~~10~~5*** *Wolves* — ***Nov. 1–Mar. 31 ~~Aug. 10–April 30~~*** **WP12-79** **Unit 20A—Wolf Trapping** *No limit* — *Nov. 1–~~April 30~~* ***Mar. 31*** **WP12-81** **Unit 25A—Wolf Hunting** ***~~No limit~~10 Wolves*** — *Aug. 10–April 30*
OSM Conclusion	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP12-77/78/79/81

ISSUES

Proposals WP12-77, -78, -79 and -81 were submitted by the Defenders of Wildlife and seek to shorten wolf seasons and/or lower harvest limits for wolves in Units 12, 20A and 25A.

DISCUSSION

WP12-77 requests that wolf trapping not be allowed in October and April in Unit 12. The proponent wishes to apply this restriction in the part of Unit 12 that is outside of the State's predator control program (U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) lands).

WP12-78 requests that hunting not be allowed in Unit 20A in the months of August, September, October and April and that the harvest limit be reduced from 10 wolves to five.

WP12-79 requests that wolf trapping not be allowed in April in Unit 20A.

WP12-81 requests that the harvest limit for wolf hunting in Unit 25A be reduced from "no limit" to 10 wolves.

The proponents note that in Unit 12, wolf hides are not fully prime by October 1, and trappers generally do not begin trapping until later when snow and ice conditions permit. The proponents note that in late April, in Units 20A and 12, hides are rubbed and that pregnant females are approaching full term. The proponents note that pups are only half grown at the start of the current wolf hunting seasons in 20A and 25A and that in August hides are not suitable for commercial sale or trophies. The proponents states that "Hunters shooting wolves in August would likely discard the low-quality hide or leave the intact carcass in the field."

Existing Federal Regulation

Unit 12—Wolf Trapping	
No limit	*Oct. 1–April 30*
Unit 20—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 20A—Wolf Trapping	
No limit	*Nov. 1–April 30*
Unit 25A—Wolf Hunting	
No limit	*Aug. 10–April 30*
Unit 25A—Wolf Trapping	
No limit	*Nov. 1–Apr. 30*

Proposed Federal Regulation

Proposal WP12-77

Unit 12—Wolf Trapping

No limit	***Nov. 1–Mar. 31 ~~Oct. 1–April 30~~***

Proposal WP12-78

Unit 20A—Wolf Hunting

~~10~~5 *Wolves*	***Nov. 1–Mar. 31 ~~Aug. 10–April 30~~***

Proposal WP12-79

Unit 20A—Wolf Trapping

No limit	*Nov. 1–~~April 30~~* ***Mar. 31***

Proposal WP12-81

Unit 25A—Wolf Hunting

~~No limit~~10 Wolves	*Aug. 10–April 30*

Existing State Regulation

Unit 12—Wolf Trapping

No limit	*Oct. 15–April 30*

Unit 20A—Wolf Trapping

No limit	*Nov. 1–April 30*

Unit 20A—Hunting

5 Wolves	*Aug. 10–May 31*

Unit 25A—Wolf Hunting

10 Wolves	*Aug. 10–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 59% of Unit 12 and consist of 82% NPS managed lands and 18% FWS managed lands (see **Unit 12 Map**). Federal public lands comprise approximately 1% of Unit 20A and are all Bureau of Land Management (BLM) managed lands (see **Unit 20 Map**). Federal public lands comprise approximately 76% of Unit 25A and consist of 97% FWS managed lands and 3% BLM managed lands (see **Unit 25 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 12, 20A and 25A. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park

Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf trapping season for Unit 12 has been October 1 to April 30 since 1990.

The Federal subsistence wolf hunting season in Unit 20A has been August 10 to April 30 since 1990. There was no harvest limit for wolf hunters in Unit 20A in regulatory year 1990/91; the harvest limit was reduced to 10 wolves in 1991/92 and has remained at that level since then. The Federal subsistence wolf trapping season in Unit 20A has been November 1 to April 30 since 1990.

There has been no harvest limit for wolf hunting in Unit 25A since 1990. Units 25A and 22 are the only units in Alaska that have no harvest limit for wolf in the Federal hunting regulations.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21 and 24–26 be closed until September 15. The Eastern Interior Alaska Subsistence Regional Advisory Council (Council) opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02. At its March 2005 meeting, Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

In 2009, the Alaska Wildlife Alliance submitted proposals (WP10-97, -98, -99 and -100) requesting these same regulatory changes. Proposals WP10-97, -98, -99 and 100 were opposed by the Eastern Interior Regional Advisory Council and were rejected by the Federal Subsistence Board.

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 12, 20A and 25A and are well adapted to living in the interior Alaska boreal forests, river valleys and mountains. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time

(Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. ADF&G (2010) observed that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through interspecific competition. It is the adults, including pregnant and lactating females that do the killing of large prey. Thus the adults are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support of pups (ADF&G 2010).

Unit 12

While information is limited, Hollis (2006) estimated that there were 240–255 wolves in Unit 12. Wolf density estimates for 2001 to 2004 ranged from 16 to 50/1000 mi^2 (Hollis 2006). Hollis (2006) estimated that in regulatory year 2002/03 that there were a total of 31 packs with an average pack size of 7.0–7.4 wolves. The fall wolf population estimate for Unit 12 was 179–192 wolves (18 to 19/1000 mi^2) (ADF&G 2010). The Unit 12 wolf population has benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998–2001 and 2007–2009 (ADF&G 2010). The Chisana caribou herd has been a reliable food source for wolves in eastern Unit 12. Caribou from the Mentasta, Nelchina, and Macomb herds also have used portions of the unit and are a food source for wolves (Hollis 2006).

Unit 20A

While information is limited, Young (2006) estimated that there were 200–250 wolves and 20–25 packs in Unit 20A. ADF&G (2009) reported that there were 224–229 wolves in Unit 20A in fall 2008. The Unit 20A fall wolf density estimate is 36/1000 mi^2; this is the highest density in interior Alaska (ADF&G 2010).

Unit 25A

The fall wolf population density estimate for Unit 25A is 230–277 wolves (11–13/1000 mi^2) (ADF&G 2010). Wolf population numbers have been relatively stable in Unit 25A for many years (ADF&G 2010).

Harvest History

Fur prices and snow conditions affect wolf trapping effort in any given year. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined. Hollis (2006) observed that few trappers selected for wolves, but noted that during years when martin and lynx pelt prices are low and wolf prices are adequate, more trappers concentrate on wolves. Harvest rates in remote areas are dependent on fur prices and weather conditions. Trapping pressure is high along the road system, especially around communities (Hollis 2006). Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. During the early winter period, conditions are inadequate for travel. Once snow-cover and ice are adequate for snowmachine travel, trappers began establishing and maintaining trap lines. In these interior Alaska units, wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. ADF&G (2010) observed that adult wolves learn to avoid humans through experience and are the most difficult pack members to take; pups are the most vulnerable pack members to harvest.

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

There have been a number of wolf control programs in these units over the years (Young 2006, Hollis 2006). The Alaska Board of Game authorized aerial wolf control in northern Unit 12 in 2004 (Hollis 2006).

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008).

Unit 12

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 12 ranged from 21–58/year (**Table 1**). Most of the wolves were taken using traps or snares. Annual harvest rates in Unit 12 have been <24% since 1998 (ADF&G 2010).

Table 1. Reported wolf harvest and method of take for Unit 12, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Trap/snare Oct. & April harvest	Method of take for total harvest from Unit 12				
			Trap/snare	(%)	Shot	%	Unknown
1999/2000	54	3	40	74	13	24	1
2000/01	58	1	51	88	7	12	0
2001/02	39	0	32	82	7	18	0
2002/03	53	1	49	92	4	8	0
2003/04	25	4	23	92	2	8	0
2004/05	29	1	27	93	2	7	0
2005/06	39	0	22	56	15	38	2
2006/07	30	1	24	80	6	20	0
2007/08	49	5	36	73	9	18	4
2008/09	39	0	29	74	7	18	3
2009/10	21	0	9	43	12	57	0

Of a total of 436 wolves taken Unit 12 for regulatory years 1999/2000 to 2009/10, 16 were trapped or snared during the months of October and April (**Table 1;** ADF&G 2011). Seven wolves were shot in October and April; it isn't clear whether the seven wolves that were shot were taken under hunting or trapping regulations. With a trapping license, during trapping season, a trapper may take free ranging wolves with a firearm on FWS lands in Unit 12.

Unit 20A

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 20A ranged from 33–98/year (**Table 2**; ADF&G 2011). Most were taken with traps or snares. Of the total Unit 20A wolf harvest, from 3 to 15 wolves/year were taken in August, September, October and April. The harvest rate of wolves in Unit 20A is higher than in some other areas.

Table 2. Reported wolf harvest and method of take for Unit 20A, regulatory years 1999/2000 to 2009/2010 (ADF&G 2011).

Regulatory year	Reported total harvest	Aug.–Oct. & April harvest	Method of take for total harvest in Unit 20A				
			Trap/snare	(%)	Shot	%	Unknown
1999/2000	67	11	53	79	14	21	0
2000/01	95	10	79	83	12	13	4
2001/02	98	10	90	92	8	8	0
2002/03	82	11	70	85	12	15	0
2003/04	61	3	52	85	2	3	7
2004/05	54	9	44	81	8	15	2
2005/06	33	7	28	85	5	15	0
2006/07	67	10	55	82	11	16	1
2007/08	42	11	27	64	13	31	2
2008/09	57	15	39	68	16	28	2
2009/10	50	5	41	82	9	18	0

Unit 25A

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 25A ranged from 12–24/year (**Table 3**; ADF&G 2011). Most were taken with traps or snares. Stephenson (2006) estimated that the reported annual harvest accounted for a maximum of 8 to 10% of the estimated wolf population in Unit 25A.

Other Alternatives Considered

Consideration was given to recommending a November 1 start date for the trapping season in Unit 12 (WP12-77) and the 10 wolf limit for hunters in Unit 25A (WP12-81 and alignment with the State). There is no trapping harvest limit in Unit 25A; therefore there should be no effect on the wolf population if the

Table 3. Reported wolf harvest and method of take for Unit 25A, regulatory year 1999/00 to 2009/2010 (ADF&G 2011).

Regulatory year	Reported total harvest	Aug.–Oct. & April harvest	Method of take for total harvest in Unit 25A				
			Trap/snare	(%)	Shot	%	Unknown
1999/2000	13	4	8	62	5	38	0
2000/01	24	4	13	54	11	46	0
2001/02	13	5	5	38	8	62	0
2002/03	12	3	9	75	3	25	0
2003/04	18	4	12	67	6	33	0
2004/05	15	5	12	80	3	20	0
2005/06	21	5	14	67	6	29	1
2006/07	24	9	14	58	10	42	0
2007/08	15	6	7	47	8	53	0
2008/09	21	5	12	57	9	43	0
2009/10	22	10	5	23	17	77	0

hunting harvest limit remains unchanged. There are no records of a person shooting more than 10 wolves per year in Unit 25A.

Effects of the Proposal

If adopted, these proposals will decrease opportunity for Federally qualified subsistence users to harvest wolves in Units 12, 20A and 25A. The harvest of wolves and the use, barter, and sale of pelts has long been very important for subsistence uses in Units 12, 20A and 25A (Halpin 1987; Andrews 1988; Caulfield 1983).

If proposal WP12-77 is adopted, the Federal wolf trapping season in Unit 12 will be closed in October and April, thereby shortening the season by 61 days. This will restrict subsistence opportunity to take a wolf while trapping other species such as muskrat or beaver in the fall or spring. The wolf harvest in the months of October and April in Unit 12 was relatively small in regulatory years 1999/00 to 2009/10.

If Proposal WP12-78 is adopted, the Federal wolf hunting season in Unit 20A will be closed August 10–October 31 and April 1–30 thereby shortening the season by 113 days. Between regulatory years 1999/00 and 2009/10, 14% of the reported Unit 20A wolf harvest occurred in August, September, October and April (**Table 1)**. If Proposal WP12-79 is adopted, the Federal wolf trapping season in Unit 20A will be closed during April, thereby shortening the season by 30 days. Federal subsistence wolf hunting and trapping in Unit 20A have little impact on wolf numbers; Federal public lands comprise a small part of Unit 20A (approximately 1%).

Currently, there is no limit on the number of wolves that can be taken by hunters under Federal regulations in Unit 25A. If proposal WP12-81 is adopted, the Federal wolf harvest limit for hunters will be reduced to 10 wolves. While it is possible that Proposal WP12-81 will negatively impact subsistence

users, it does not appear that this will be the case. Based on ADF&G's wolf harvest records from1990/91 to 2009/10, there are zero records of one person shooting ≥ 10 wolves in a given regulatory year in Unit 25A (ADF&G 2011).

WP12-77 and WP12-78 will eliminate the opportunity for subsistence users to harvest wolves under Federal regulations during the fall and spring when they are hunting other species.

Proposals WP12-77, -78 and -79 will make the Federal subsistence wolf seasons shorter than the State seasons. Proposal WP12-81 will align the Federal subsistence wolf hunting harvest limit with the State harvest limit.

OSM CONCLUSION

Oppose Proposals WP12-77, -78, -79 and -81.

Justification

The Alaska Wildlife Alliance proposed these same regulatory changes two years ago. Those proposals were opposed by the Eastern Interior Regional Advisory Council and rejected by the Federal Subsistence Board.

The wolf populations in Units 12, 20A and 25A are considered healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are a very important subsistence resource in Units 12, 20A and 25A. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy.

While less than 1% of the Unit 12 wolf harvest with traps and snares occurred in the months of October and April over the past eleven years, the opportunity for trappers to take wolves in these two months is important to subsistence users that participate in the harvest. Hunter may have an opportunity to take more than 10 wolves in Unit 25A.

Over the past eleven years, 14% of the reported, Unit 20A wolf harvest has occurred in the months of August, September, October and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use and to make clothing and handicrafts.

Even if Proposals WP12-77, -78, and -79 were adopted by the Federal Subsistence Board, hunters and trappers will still be able to take wolves under State regulations on FWS, BLM, and Wrangell-St. Elias Preserve lands in Units 12 and 20A. As such, adoption of these proposals by the Federal Subsistence Board will not have the effect sought by the proponent.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposals WP12-77/78/79/81. The Council feels that harvest limits are not needed and would unnecessarily restrict subsistence users when there are no conservation concerns.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-77: Shorten the federal subsistence wolf trapping season in that portion of Unit 12 not part of the State's predator control program from October 1 through April 30 to November 1 through March 31.

Introduction: The proponent assumes federal subsistence wolf trapping season opening date of October 1 is too early in the season for obtaining prime hides, generally will not allow access to trap lines due to snow and ice conditions, and will not allow for trappers to target multiple species. Hide value depends on what the wolf will be used for. The proponent indicates the early spring portion of the federal subsistence trapping season could potentially reduce pup survival. Additionally, the proponent incorrectly assumes the Federal Subsistence Board adopted the current season dates to benefit prey species.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the federally qualified subsistence wolf trapper opportunity by 60 days. If adopted, federally qualified subsidence user opportunity in Unit 12 to take a wolf while trapping other species in the spring would be reduced.

Opportunity Provided by State: The State provides an October 15 through April 30 trapping season with no bag limit in Unit 12.

Conservation Issues: The current season for wolf trapping in Unit 12 has virtually no impact on wolf numbers. Since 2001, an average of 36 wolves per year were taken by all trappers combined in Unit 12. Wolf numbers and total harvests have been relatively stable in Unit 12 for many years, and there are no current conservation concerns.

The current fall wolf population estimate in Unit 12 is 179–192 wolves (7–7.5 wolves/1,000 km^2). Despite active wolf reduction efforts in a portion of northern Unit 12 and in neighboring units, the minimum fall population of wolves residing entirely within Unit 12 has changed little since 1998. Harvest rates in Unit 12 have been <24% since 1998, well within the range of sustainability. Wolf numbers in Unit 12 have also benefited from higher numbers of Fortymile caribou since 1997, increasing migrating Nelchina caribou, and highs in snowshoe hare cycles in 1998–2001 and 2007–2009.

It is very important to note the difference between fall and spring wolf estimates when discussing wolf population dynamics and comparing areas. Wolf populations decline over the course of a winter due to human take, natural mortality, and dispersal; spring estimates do not yet include new pups. Wolf control areas are evaluated based on spring estimates.

Although Unit 20E has active wolf management program, the wolf population dynamics are not significantly affected by this activity. Shortening the wolf hunting or trapping seasons at this time would have no effect on the wolf population.

Enforcement Issues: Significant differences in federal and state regulations resulting from adoption of this proposal would create enforcement issues in areas with mixed land ownership, as well as lands such as the Tetlin Refuge and the Wrangell-St. Elias Preserve where both state and federal regulations apply.

Other Comments: It is unlikely that all adults would be taken out of a pack by the trapping addressed in this proposal. Adult wolves have learned to avoid humans through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adult wolves kill large prey, and thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support to pups.

Recommendation: Oppose.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-78: This proposal requests the federal subsistence wolf hunting season and annual bag limit in Unit 20A be reduced from August 10 through April 30 with a bag limit of 10 wolves to November 1 through March 31 with a bag limit of 5 wolves.

Wildlife Proposal WP12-79: This proposal requests the federal subsistence wolf trapping season in Unit 20A be reduced from November 1 through April 30 to November 1 through March 31.

Introduction: The proponent requests the Federal Subsistence Board reduce both federal subsistence wolf hunting and trapping in Unit 20A by 112 days and 30 days respectively. These proposals incorrectly assume federal subsistence wolf hunting and trapping bag limits and season lengths are part of a predator control program. Predator and prey management is the responsibility of the State of Alaska. Federal subsistence regulations are authorized by ANILCA for the purpose of providing a continued customary and traditional subsistence use by rural residents on federal public lands. The federal subsistence regulations provide August openings for wolf hunting and trapping that are traditional, allowing federally qualified subsistence hunters the opportunity to take a wolf while hunting for other big game in the fall and closing April 30 after mild spring weather that made travel conditions easier. After the end of April, travel conditions become much more difficult because of break-up but once the ice goes out travel conditions become easier on rivers. In fact, April seasons are traditional, allowing federally qualified subsistence users the opportunity to take a wolf while trapping for other furbearers. These proposals fail to recognize that hide value depends on intended use; e.g., hides taken in early fall and late spring are suitable for making warm items for personal use, consistent with subsistence use of this species.

Impact on Subsistence Users: Adoption of proposal WP12-79 would reduce the federally qualified subsistence user opportunity in Unit 20A to take a wolf while trapping other species in the spring, and adoption of proposal WP12-78 would reduce federally qualified subsistence user opportunity to hunt wolves by 112 days, about a 40% reduction of the season, and reduce the bag limit by 50%.

Opportunity Provided by State: In Unit 20A, the state wolf hunting season is August 10 through May 31 with a 5 wolf bag limit and the state trapping season is November 1 through April 30 with no harvest limit.

Conservation Issues: None. Current season and bag limits for federal subsistence wolf hunting and trapping in Unit 20A have little impact on wolf numbers in Unit 20A. While annual harvest by all methods averaged 50 wolves during 2004–2008, Alaska Department of Fish and Game research indicates that interspecific competition is a substantial cause of mortality in this wolf population. Shortening the federal subsistence season to end on the proposed date of March 30 is not warranted. The proposer cites wolf control during 1976 through 1983 as a reason to restrict current seasons and bag limits in Unit 20A. However, as the proposer points out, moose responded to reduced wolf numbers and are now abundant throughout Unit 20A. Wolf numbers

have also recovered in Unit 20A, reaching current fall densities of 14 wolves/1,000 km^2, the highest wolf density in Interior Alaska, indicating that previous wolf control in Unit 20A has benefited the wolf population as well as the moose population and federal subsistence hunters. The proposer suggests that density-dependent effects in the moose population cannot be reduced without increasing the wolf population. On the contrary, the department is managing hunter numbers in Unit 20A in order to effectively manage this moose population.

Other Comments: It is unlikely that all adult wolves would be taken out of a pack by the federal subsistence hunting and or trapping seasons and bag limits addressed in these proposals. Adult wolves have learned to avoid humans through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the older adult wolves, including pregnant and lactating females, that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of these proposals create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Recommendation: Oppose both proposals.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-81: This proposal requests a federal subsistence wolf hunting bag limit of 10 wolves per year in Unit 25A.

Introduction: The proponent requests the Federal Subsistence Board set a bag limit for the Unit 25A federal subsistence wolf hunt of 10 wolves per year. This federal subsistence wolf hunt currently does not have a bag limit. The proponent indicates a bag limit is necessary because wolves are not plentiful in the area and there is a danger of overharvesting.

Opportunity Provided by State: In Unit 25A, the following wolf hunting regulations were effective in 2010-2011: Ten wolves; residents and nonresidents; season August 10 through May 31; hide must be sealed within 30 days of kill.

Conservation Issues: None. Wolves are widely distributed in all of Unit 25 and the number of wolves harvested is low relative to population size. The Alaska Department of Fish and Game estimate approximately 600–750 wolves inhabit all of Unit 25. The number of wolves sealed during regulatory year 2000–2010 ranged 50–105 annually in Unit 25 and 13–24 in Unit 25A.

Other Comments: Most of the wolves taken in Unit 25 are harvested under a trapping license during the trapping season. The proponent supports the proposition with expressed disapproval of harvesting methods, state intensive management actions, and the incorrect assumption the Federal Subsistence Board has adopted the current bag limit to benefit prey species.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose. There is not a conservation concern for wolf in Unit 12, and shortening the trapping season would result in a loss of opportunity for subsistence users. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-80 Executive Summary	
General Description	Proposal WP12-80 requests that the Unit 25 wolf trapping season start a month earlier. *Submitted by the Eastern Interior Subsistence Regional Advisory Council*
Proposed Regulation	**Unit 25—Wolf Trapping** *No limit* ***Oct.*** *~~Nov.~~ 1–April 30*
OSM Conclusion	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support** if the intent is to align state and federal seasons with an opening date of October 1.
Written Public Comments	**None**

STAFF ANALYSIS
WP12-80

ISSUES

Proposal WP12-80, submitted by the Eastern Interior Subsistence Regional Advisory Council, requests that the Unit 25 wolf trapping season start a month earlier.

DISCUSSION

Currently the wolf trapping season in Unit 25 extends from November 1 to April 30. Proposal WP12-80 requests that the trapping season for wolf in Unit 25 be from October 1 to April 30. The proponent notes that this season extension would allow subsistence users the opportunity to harvest more wolves. This proposal would align the Federal and State season in Unit 25D, but the Federal season would open a month earlier than the State season in Units 25A, 25B, and 25C. The Eastern Interior Regional Advisory Council is submitting a proposal to the Alaska Board of Game requesting that the State wolf trapping seasons in Units 25A, 25B and 25C start on October 1.

Existing Federal Regulation

Unit 25—Wolf Trapping	
No limit	*Nov. 1–April 30*

Proposed Federal Regulation

Unit 25—Wolf Trapping	
No limit	***Oct.*** *~~Nov.~~ 1–April 30*

Existing State Regulation

Unit 25A, 25B and 25C — Wolf Trapping	
No Limit	*Nov. 1–April 30*
Unit 25D —Wolf Trapping	
No Limit	*Oct. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 76% of Unit 25A and consist of 97% FWS managed lands and 3% BLM managed lands (see **Unit 25 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 25.

Regulatory History

In regulatory year 1990/91 the Federal Subsistence Management Program wolf trapping season for Unit 25 was November 10 to March 31. Beginning in regulatory year 1992/93, the Unit 25 wolf trapping season was extended from November 1 to March 31. Beginning in regulatory year 2002/03, the Unit 25 wolf trapping season was extended from November 1 to April 30.

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout Unit 25 and are well adapted to living in the Northeastern Interior Alaska boreal forests, river valleys and mountains. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, salmon, beaver, small mammals and birds. Wolves first breed at age two to four and produce pups in dens during the spring. Burch (2002) reported that packs in the Yukon-Charley Rivers National Preserve produced an average of 3.7 pups (range, 1.4-4.9) annually. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. In the central Brooks Range study, pups constituted about half of the wolf population each August; these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008).

Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits (Adams et al. 2008). Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters (Adams et al. 2008). Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs.

Wolves sometimes disperse great distances. Burch (2002) reported an average home range of 886 mi^2 for packs in the Yukon-Charley Rivers National Preserve, and that 28% of 91 radiocollared wolves dispersed 18-292 miles. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles. Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve. Garner and Reynolds (1986) observed that several wolves in Arctic National Wildlife Refuge dispersed as far as 500 miles from their home range. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

In fall 1992, estimates from surveys, hunter observations, and harvest data indicated that 72-93 packs, including 520-630 wolves, were present in Units 25A, 25B and 25D (Stephenson 2006, Caikoski 2009). These estimates were still considered representative from 2000 to 2007. The 2009 fall wolf population density estimate for Unit 25A was 230–277 wolves (11–13/1000 mi^2) (ADF&G 2010). Burch (2002) reported that wolf population density averaged 10.6 wolves/1000 mi^2 in Yukon-Charley Rivers National Preserve, including part of Unit 25B. He reported that fall pack size averaged 7.2 wolves with a range of 4.3-9.1 wolves. Wolf population numbers have been relatively stable in Unit 25A for many years

(ADF&G 2010). The fall wolf population in Unit 25C was estimated at 75-125 wolves in 10-20 packs (Young 2006). In A March 2009 survey in western Unit 25D revealed a pack size of 2-10 wolves with an average of 4.6 wolves/pack and a density estimate of 11.4-13.9 wolves/1000 mi^2 (Caikoski 2009). The relatively low density of wolves in Northeastern Interior Alaska is consistent with the relative scarcity of prey. Caikoski (2009) reported that wolf populations in Units 25A, 25B and 25D appeared to be stable, but data on the population trends are limited, except in Unit 25D. Prey species in Unit 25D are limited. Moose populations have been at low density, and caribou are only seasonally abundant because of their wide-ranging migrations (Stephenson 2006, Caikoski 2009).

Harvest History

Fur prices and snow conditions affect wolf trapping effort in any given year. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined. Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. During the early winter period, conditions are inadequate for travel. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines (Stephenson 2006, Caikoski 2009). Wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt;the quality of the pelt declines as well.

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves during the normal hunting and trapping seasons in Unit 25 ranged from 45–83/year (**Table 1**; ADF&G 2011). Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of less than or equal to 29% annually. Creel and Rotella (2010) suggested that, “wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans” which are based on studies such as Adams et al. (2008).Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low. In Unit 25 most were taken with traps or snares. Stephenson (2006) estimated that the reported annual harvest accounted for a maximum of 8 to 10% of the estimated wolf population in Unit 25A, 25B and 25D. Caikoski (2009) reported the harvest in regulatory years 2005/06 to 2007/08 accounted for a maximum of 8-20% of the estimated wolf population in Unit 25D and 5-10% in Units 25A, 25B and 25C.

In March 2006, the Alaska Board of Game shifted the start date for wolf trapping season in Unit 25D from November 1 to October 1. No wolves have been harvested in October in Unit 25D since this regulatory change was implemented (ADF&G 2011). In October, conditions limit the ability for trappers to travel; rivers are freezing over in October and there usually isn’t enough snow to travel by snowmachine.

Effects of the Proposal

If adopted, this proposal will increase opportunity for Federally qualified subsistence users to harvest wolves in Unit 25. The harvest of wolves and the use, barter, and sale of pelts has long been very

Table 1. Reported wolf harvest and method of taken under hunting and trapping regulations in Unit 25, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Wolf harvest in October	Method of take for total harvest in Unit 25				
			Trap/snare	(%)	Shot	%	Unknown
1999/2000	45	0	38	84	7	16	0
2000/01	48	0	33	69	15	31	0
2001/02	51	0	39	76	12	24	0
2002/03	50	1	38	76	12	24	0
2003/04	59	0	44	75	15	25	0
2004/05	66	0	58	88	8	12	0
2005/06	47	0	35	74	12	26	0
2006/07	86	0	72	84	14	16	0
2007/08	74	0	60	81	14	19	0
2008/09	77	0	61	79	16	21	0
2009/10	83	1	45	54	35	42	3

important for subsistence uses (Caulfield 1983). While the hides of wolves would not yet be in prime condition in October, the hides would be suitable for certain types of clothing and handicrafts.

Under current Federal regulations in Unit 25, the wolf trapping season begins on November 1. Proposal WP12-80 requests that the trapping season for wolf in Unit 25 begin on October 1. This change will not likely have a significant effect on the wolf harvest level.

The proposed change will align the start date for Federal and State wolf trapping seasons in Unit 25D. If this proposal is adopted, wolf trapping season in Units 25A, 25B and 25C would start a month earlier than the current State wolf trapping seasons. As stated, the Eastern Interior Regional Advisory Council is submitting a proposal to the Alaska Board of Game requesting that the State wolf trapping seasons in Units 25A, 25B and 25C start on October 1.

OSM CONCLUSION

Support Proposal WP12-80.

Justification

The wolf population in Unit 25 is considered healthy and could sustain additional harvest. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in Unit 25 is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

The harvest of wolves and the use, barter, and sale of pelts is a long-standing component of the subsistence economy in Unit 25. While this proposed regulatory change would provide additional opportunity for subsistence users, it would not likely result in a significant increase in wolf harvest. This regulatory change would align the start date for the State and Federal wolf trapping seasons in Unit 25D. A similar proposal is being submitted to the Alaska Board of Game for Unit 25; that decision will be made in March 2012.

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EASTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-80. The Council finds no conservation concerns and sees benefit in aligning Federal and state seasons, especially for those federally qualified subsistence users with traplines that cross unit boundaries. The Council supports the increased subsistence opportunity that this proposal provides.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-80: This proposal requests the federal subsistence wolf trapping season dates for Unit 25 be changed from November 1 through April 30 to October 1 through April 30.

Introduction: The proponent requests the Federal Subsistence Board change the Unit 25 federal subsistence wolf hunting seasons by starting the seasons in all subunits one month earlier beginning on October 1. The proponent indicates adoption of this proposal will align wolf trapping in Unit 25. Currently the federal subsistence wolf trapping seasons in all of Unit 25 are identical.

Impacts to Subsistence Users: Adoption of this proposal will provide an additional month of opportunity for federally qualified subsistence wolf trappers.

Opportunity Provided by State: In Units 25A, B, and C, the state wolf trapping season is from November 1 through April 30 with no annual limit. In Unit 25D, the state wolf trapping season is from October 1 through April 30 with no annual limit.

Conservation Issues: None. Wolves are widely distributed in Unit 25 and the number of wolves harvested is low relative to population size. The Alaska Department of Fish and Game estimate approximately 600–750 wolves inhabit Unit 25. The number of wolves sealed during regulatory year 2000–2010 was 50–105 annually in Unit 25.

Other Comments: The department requests clarification regarding the intent of this proposal. The proponent's justification is confusing as all of the federal subsistence trapping season start dates are November 1. Adoption of this proposal will make federal and state wolf trapping regulations further out of alignment which does not match assumed the intent of the proponent.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Recommendation: Support if the intent is to align state and federal seasons with an opening date of October 1.

WP12-59/60 Executive Summary	
General Description	Proposals WP12-59 and -60 seek to shorten the Units 19B and 19C wolf trapping and hunting seasons. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**WP12-59** **Hunting** ***Units 19B and 19C — 5 wolves*** ***Nov. 1–Mar. 31*** *Unit 19D — 10 wolves per day* *Aug. 10–Apr. 30* *Unit 19, remainder — 5 wolves* *Aug. 10–Apr. 30* **WP12-60** **Trapping** ***Units 19B and 19C —*** *No limit* ***Nov. 1– Mar. 31*** *Unit 19,* ***remainder —****No limit* *Nov. 1 – Apr. 30*
OSM Conclusion	**Oppose**
Western Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the 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
WP12-59/60

ISSUES

Proposals WP12-59 and -60, submitted by the Defenders of Wildlife, seek to shorten the Units 19B and 19C wolf trapping and hunting seasons.

DISCUSSION

WP12-59 requests that wolf hunting not be allowed in Units 19B and 19C in the months of August, September, October, and April. WP12-60 requests that wolf trapping not be allowed in Units 19B and 19C in the month of April. The proponents note in WP12-59 and WP12-60 that in late April, hides are rubbed and that pregnant females are approaching full term. The proponent notes in WP12-59 that wolf pups are only half grown at the start of the current hunting season and that hides are not suitable for commercial sale or trophies.

Existing Federal Regulation

Unit 19—Wolf

Hunting	
Unit 19D — 10 wolves per day	*Aug. 10–April 30*
Unit 19, remainder — 5 Wolves	*Aug. 10–April 30*
Trapping	
No limit	*Nov. 1–April 30*

Proposed Federal Regulation

Units 19B and 19C—Wolf

Proposal WP12-59

Hunting	
Units 19B and 19C — 5 wolves	***Nov. 1–Mar. 31***
Unit 19D — 10 wolves per day	*Aug. 10–Apr. 30*
Unit 19, remainder — 5 wolves	*Aug. 10–Apr. 30*

Proposal WP12-60

Trapping	
Units 19B and 19C — *No limit*	***Nov. 1– Mar. 31***
Unit 19, ***remainder —****No limit*	*Nov. 1 – Apr. 30*

Existing State Regulation

Units 19B and 19C—Wolf

Hunting	
10 Wolves	*Aug. 1–May 31*
Trapping	
No limit	*Nov. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 12% of Unit 19B and consist of 85% National Park Service (NPS), 15% Bureau of Land Management (BLM) and <0.2% U.S. Fish and Wildlife Service (FWS) managed lands. Federal public lands comprise approximately 13% of Unit 19C and consist of 65% NPS and 35% BLM managed lands (see **Unit 19 Map).**

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 19B and 19C.

Regulatory History

The Federal Subsistence Management Program wolf trapping season for Units 19B and 19C extended from November 1–March 31 for regulatory years 1990/91 to 1997/98. Action taken on a proposal (Proposal 82) from the Western Interior Subsistence Regional Advisory Council (Council), changed the trapping season to November 1–April 30 in regulatory year 1998/99. Since then the Unit 19B and 19C wolf trapping season has been November 1–April 30. There has been no harvest limit for wolf trapping in Units 19B and 19C since the start of the Federal Subsistence Management Program.

The Federal Subsistence Management Program wolf hunting season in Units 19B and 19C has been from August 10–April 30 since regulatory year 1990/91. There was no harvest limit for wolf hunting from regulatory years 1990/01 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2), and supported by the Council, changed the limit to 5 wolves in regulatory year 1994/95. The Unit 19B and 19C harvest limit for wolf hunting has remained at that level since then.

On BLM and FWS lands trappers may shoot a free ranging wolf during trapping season. Hunters and trappers may harvest wolves under State regulations on BLM, FWS, Lake Clark National Preserve and Denali National Preserve public lands in Units 19B and 19C.

State hunting regulations diverged from Federal regulations for Unit 19 with the regulatory year 2004/05 hunting season. Beginning in that year the wolf hunting season extended from August 1–May 31 with a 10 wolf limit across the entire unit.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 not be open until September 15. The Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with those Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In March

2005 the Council noted that pelts from yearling wolves are highly prized and sought after in the fall time to provide for winter clothing and that subsistence users should have an opportunity to harvest wolves in the fall time and noted that wolves sometimes have good pelts in the fall (FSB 2005). At its March 2005 meeting in Fairbanks, Eastern Interior Subsistence Regional Advisory Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

In 2009, Defenders of Wildlife and the Alaska Wildlife Alliance requested the same regulatory changes (WP10-70 and -71) described in WP12-59/60. The Western Interior Regional Advisory Council opposed Proposals WP10-70 and -71 noting that there was no biological reason to reduce the season and that such a reduction would deny opportunity to subsistence users. The Federal Subsistence Board rejected Proposals WP10-70 and -71.

Biological Background

Murie (1944) observed that the wolves (*Canis lupus)* have been part of Alaska fauna for hundreds of years and have probably been present since the Pleistocene glaciation. Biological data concerning wolves in Units 19B and 19C is very limited. Wolves (*Canis lupus)* are found throughout these units and are well adapted to the mountains, tundra, and river valleys of the units. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver.

General information about wolf population dynamics is available from other parts of Alaska. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Meier et al. (2006) reported that 28% of the wolves they studied in Denali National Park and Preserve left their packs each year, and that most offspring eventually left the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles. The size of the home range is believed to depend on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) reported that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003).

While information is very limited, Seavoy (2006) estimated that there are 217–289 wolves in Units 19B and 19C at a density of approximately 15–20 wolves/1000 mi^2. He estimated that there were a total of 30–45 packs in Units 19B and 19C. ADF&G (2010a) estimates that the wolf population in Unit 19B is 116–154 wolves and the Unit 19C wolf population is 101–135 wolves. Meier et al. (2006) reported a minimum density for wolves studied in Denali National Park and Preserve of approximately 12 wolves/1000 mi^2, and that the mean pack size was 4.4 wolves. Seavoy (2006) felt that the Unit 19B and 19C wolf population was stable and that population would decline as the prey populations decline.

Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Seavoy (2006) observed that the Mulchatna caribou herd in Unit 19B was in decline. He noted that the harvest of wolves in Unit 19B would likely decline as other hunting opportunities and the number of hunters decline.

Harvest History

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Harvest data are summarized by regulatory year. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported. Wolf harvests have been highly variable in recent years. From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Units 19B and 19C ranged from 7 to 85 wolves/year (**Table 1**). Of this harvest, 6 to 29 wolves/year (**Table 1**) were taken during August, September, October and April.

Table 1. Reported wolf harvest and method of take for Units 19B & C, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Aug.–Oct. & April harvest	Method of Take				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	51	21	26	51	25	49	0
2000/01	54	26	27	50	27	50	0
2001/02	85	28	52	61	32	38	1
2002/03	56	29	22	39	32	57	2
2003/04	37	23	12	32	25	68	0
2004/05	20	11	9	45	10	50	1
2005/06	44	27	19	43	25	57	0
2006/07	14	6	7	50	7	50	0
2007/08	17	7	8	47	7	41	2
2008/09	20	11	7	35	13	65	0
2009/10	7	7	0	0	7	100	0

Hunters take wolves opportunistically in the fall when they are hunting caribou, moose, bear, or sheep. Seavoy (2006) estimated that approximately half of the historic wolf harvest in these units was incidental to hunts for other species. Wolf harvest in these units has declined as hunting opportunities for other species has diminished. This is particularly true in Unit 19B where many hunters were once drawn by the Mulchatna caribou herd. As that herd has declined and caribou hunting restrictions were implemented, the number of hunters and wolf harvest has also declined (Seavoy 2006).

During much of the fall and early winter period, conditions are inadequate for travel. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines. Because of limited day-length from November through January, little effort is expended hunting wolves though some are taken opportunistically in conjunction with trapping-related activities. Travel conditions begin improving in February with increasing day-length. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. In most years, about half of the wolves harvested in Units 19B and 19C are shot and about half are taken with traps and snares (**Table 1**). The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

Based on an analysis of information regarding North American wolf populations, Adams et al. (2008) concluded that wolf populations appeared to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, Adams et al. concluded that the risks of reducing wolf populations through regulated harvest are quite low. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008). Seavoy (2006) estimated that the Unit 19B and 19C wolf population was 217 to 289 wolves. The reported harvest has been 7 to 84 wolves/year (**Table 1;** ADF&G 2011).

Effects of the Proposal

The proponent states that wolf pups are still totally dependent on adults for food and protection from predators in early fall and that if the adults are shot the pups would die an inhumane death due to starvation. The proponent feels that harvesting late-term pregnant females is not an acceptable wildlife management practice. ADF&G (2010) observed that adult wolves learn to avoid man through experience and are the most difficult pack members to harvest, while younger wolves are the most vulnerable to harvest. ADF&G noted that wolf populations can sustain a small reduction in pups born by taking of a few pregnant females and that wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. ADF&G (2010) reported that it is the mature adults, including pregnant and lactating females that do the killing of large prey, and thus are subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

If Proposal WP12-59 is adopted, the Federal wolf hunting season in Units 19C and 19B will be closed in August, September, October and April, thereby shortening the season by 113 days. Proposal WP12-59 will eliminate the opportunity for subsistence users to harvest wolves during the fall and spring when they are hunting other species of wildlife. If Proposal WP12-60 is adopted, the Federal wolf trapping season in Units 19C and 19B will be closed in April, thereby shortening the season by 30 days. WP12-60 will eliminate the opportunity for subsistence users to trap wolves during April when there are more hours of daylight and adequate conditions for snowmachine travel. These proposals will significantly decrease the opportunity to harvest wolves under Federal subsistence regulations in Unit 19B and 19C. Between regulatory year 1999/00 and 2009/10, 48% of the reported Units 19B and 19C wolf harvest occurred in August, September, October, and April (**Table 1)**.

The proposed changes will make the Federal subsistence wolf hunting and trapping seasons shorter than the State seasons.

OSM CONCLUSION

Oppose Proposals WP12-59 and -60

Justification

Two years ago the Defenders of Wildlife and the Alaska Wildlife Alliance requested these same regulatory changes. The Western Interior Regional Advisory Council opposed those proposals and the Federal Subsistence Board rejected them.

The wolf population in Units 19B and 19C is thought to be healthy. The current harvest rate for Units 19B and 19C wolves is thought to be within sustainable levels. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and two-year-olds. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are an important subsistence resource in Units 19B and 19C. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. Over the past decade, nearly half of the reported wolf harvest in Units 19B and 19C has occurred in the months of August, September, October, and April. In the fall, the wolves have shorter hair and their hides are used primarily for personal use to make clothing and handicrafts. Wolves are an important subsistence resource.

Even if these proposals were adopted by the Federal Subsistence Board, hunters and trappers will still be able to take wolves on FWS, BLM, Denali National Preserve, and Lake Clark National Preserve public lands during August, September, October, and April under State regulations.

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WESTERN INTERIOR SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-59/60. Subsistence users have discretion when taking resources. This would be cumbersome and there is no need for this proposal to be adopted; no biological concern exists.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-59: This proposal requests the federal subsistence wolf hunting season in Unit 19B and C be reduced from August 10 through April 30 to November 1 through March 31.

Wildlife Proposal WP12-60: This proposal requests the federal subsistence wolf trapping season in Unit 19B and C be reduced from November 1 through April 30 to November 1 through March 31.

Introduction: The proponent requests the Federal Subsistence Board restrict federal subsistence wolf hunting in Unit 19B and C by 112 days and restrict federal subsistence wolf trapping in Unit 19B and C by 30 days. These proposals incorrectly assume federal subsistence wolf hunting and trapping bag limits and season lengths are part of a predator control program. Predator and prey management is the responsibility of the State of Alaska. Federal subsistence regulations are authorized by ANILCA for the purpose of providing a continued customary and traditional subsistence use by rural residents on federal lands. The federal subsistence regulations provide August openings for wolf hunting that are traditional, allowing federal subsistence hunters the opportunity to take a wolf while hunting for other big game in the fall and closing April 30 after mild spring weather that made travel conditions easier. After the end of April, travel conditions become much more difficult because of break-up but once the ice goes out travel conditions become easier on rivers. In fact, April seasons are traditional, allowing federally qualified subsistence users the opportunity to take a wolf while trapping for other furbearers. These proposals fail to recognize that hide value depends on intended use; e.g., hides taken in early fall and late spring are suitable for making warm items for personal use, consistent with subsistence use of this species.

Impact on Subsistence Users: Proposal 59 would reduce federally qualified subsistence user opportunity to hunt wolves in 19 B and C by 112 days, about a 40% reduction of the season. Proposal 60 would reduce the federally qualified subsidence user opportunity in Unit 19B and C to take a wolf while trapping other species in the spring.

Opportunity Provided by State: In Unit 19B and C, the state wolf hunting season is August 1 through May 31 with a 10 wolf per day bag limit and the state trapping season is November 1 through April 30 with no harvest limit.

Conservation Issues: The current federal subsistence season and bag limits for wolf trapping and hunting in Units 19B and 19C have very little impact on wolf populations in these units. Furthermore, wolf control in adjacent Units 19A and eastern 19D have little effect on wolf populations in Units 19B and 19C. The wolf population in Unit 19B is estimated to be 116–154 wolves and the Unit 19C wolf population is estimated to be 101–135 wolves with a density of 5.8–7.7 wolves/1,000 km^2 in both units. Annual state harvest of wolves in Units 19B and 19C has averaged 29 wolves per year since 1999 across both units and is less than 13% of the population. This harvest rate is well within the range of sustainability regardless of the long hunting and trapping seasons. April harvest makes up only 9% (average of less than 3 wolves

annually) of this harvest, although it is unknown what part of this number is taken under federal instead of state regulations. Eliminating early fall and late spring harvest would not benefit the wolf population. The proposer suggests that adjacent Units 19A and 19D have very low wolf densities due to active predator management. While wolves have been reduced in these units in recent years, it was not by 80%, or complete removal, as the proposer suggests. The February 2008 wolf population in Unit 19A was estimated to be at least 74 wolves (a 51% reduction across the entire unit) and the eastern Unit 19D population was estimated to be 85–105 wolves (no more than a 57% reduction throughout eastern Unit 19D) in fall 2009. Wolf populations remain at or above the population objectives stated in 5AAC 92.125 in Units 19A and 19D, as required by state regulations. Shortening the wolf trapping and hunting seasons in Units 19B and 19C at this time would have no effect on the conservation of wolves.

Enforcement Issues: Shorter federal subsistence seasons resulting from adoption of this proposal will create enforcement issues in areas with mixed land ownership and will cause confusion among users.

Other Comments: Adult wolves have learned to avoid humans through experience and are the most difficult pack members to harvest. Younger wolves are more vulnerable. These populations can sustain the small reduction in pups born by the taking of a few pregnant females. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, it is the mature adults, including pregnant and lactating females, which are responsible for obtaining large prey, and are thus subject to injury and death during attempted predation. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose both proposals.

WP12-44/48 Executive Summary		
General Description	Proposal WP12-44 requests that the harvest limit for moose in Unit 18 remainder be changed from one antlered bull to one antlered bull or one cow without a calf. *Submitted by Zechariah C. Chaliak Sr. of Nunapithcuk* Proposal WP12-48 requests a change to the harvest limit from 1 antlered bull to 1 moose during the winter season as well as an extension of the winter season in Unit 18 remainder from January 10 to the last day of February. *Submitted by the Yukon Delta National Wildlife Refuge*	
Proposed Regulation	**WP12-44**	
	Unit 18 remainder — 1 antlered bull ***or 1 cow without a calf***	*Aug. 10 – Sept. 30* *Dec. 20 – Jan. 10*
	WP12-48	
	Unit 18 remainder — 1 antlered bull	*Aug. 10 – Sept. 30*
	Unit 18 remainder — 1 ~~antlered bull~~ moose	*Dec. 20 – ~~Jan. 10~~* ***the last day of February***
OSM Conclusion	**Oppose** Proposal WP12-44. **Support** Proposal WP12-48.	
Yukon-Kuskokwim Delta Regional Council Recommendation	**No action taken** on Proposal WP12-44. **Support** Proposal WP12-48.	
Western Interior Regional Council Recommendation	**No action taken** on Proposals WP12-44/48	
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** Proposal WP12-44: **Support** Proposal WP12-48 **with modification**. The department recommends modification of the proposal to align with the recent Board of Game approved season and bag limit for the Lower Yukon Area of Unit 18 as described above.	
Written Public Comments	**None**	

STAFF ANALYSIS
WP12-44/48

ISSUES

Proposal WP12-44, submitted by Zechariah C. Chaliak Sr. of Nunapithcuk, AK, requests that the harvest limit for moose in Unit 18 remainder be changed from one antlered bull to one antlered bull or one cow without a calf.

Proposal WP12-48, submitted by the Yukon Delta National Wildlife Refuge, requests a change to the harvest limit from 1 antlered bull to 1 moose during the winter season as well as an extension of the winter season in Unit 18 remainder from January 10 to the last day of February.

DISCUSSION

The proponent for Proposal WP12-44 states that cow moose are becoming too abundant in Unit 18 remainder and that a cow hunt should be allowed for the Aug. 10–Sept. 30 fall season for one calendar year, after which the hunt would go back to the 1 antlered bull requirement.

The proponent for Proposal WP12-48 states that both ADF&G and the USFWS are proposing to liberalize regulations for the winter moose season in Unit 18 remainder. The proponent believes healthy populations combined with a low harvest during the winter season justify liberalization of the season length and removal of the antlered requirement.

Note: During a phone discussion, the proponent requested that the winter hunt end on the last day of February, regardless of whether the year in question was a leap year or not. To satisfy this request, the OSM concluded that the regulation would read as "Dec. 20 – the last day of February."

Existing Federal Regulation

Unit 18 remainder — Moose

Unit 18 remainder — 1 antlered bull	*Aug. 10 – Sept. 30* *Dec. 20 – Jan. 10*

Proposed Federal Regulations

WP12-44

Unit 18 remainder — 1 antlered bull ***or 1 cow without a calf***	*Aug. 10 – Sept. 30* *Dec. 20 – Jan. 10*

WP12-48

Unit 18 remainder — 1 antlered bull	*Aug. 10 – Sept. 30*
Unit 18 remainder — 1 ~~antlered bull~~ moose	*Dec. 20 – ~~Jan. 10~~* ***the last day of February***

Existing State Regulations

Unit 18 remainder — Moose

Residents, one antlered bull	*Aug. 10 – Sept. 30*
Or	*Dec. 20 – Jan. 10*
One antlered bull for nonresidents	*Sept. 1 – Sept. 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 65% of the remainder area of Unit 18, approximately 90% of which is managed by the U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service managed lands are located within the Yukon Delta National Wildlife Refuge. The other 10% of Federal public lands is managed by the Bureau of Land Management (**Map 1**).

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, and Chuathbaluk can hunt in portions of of Unit 18 remainder under Federal moose regulations.

Regulatory History

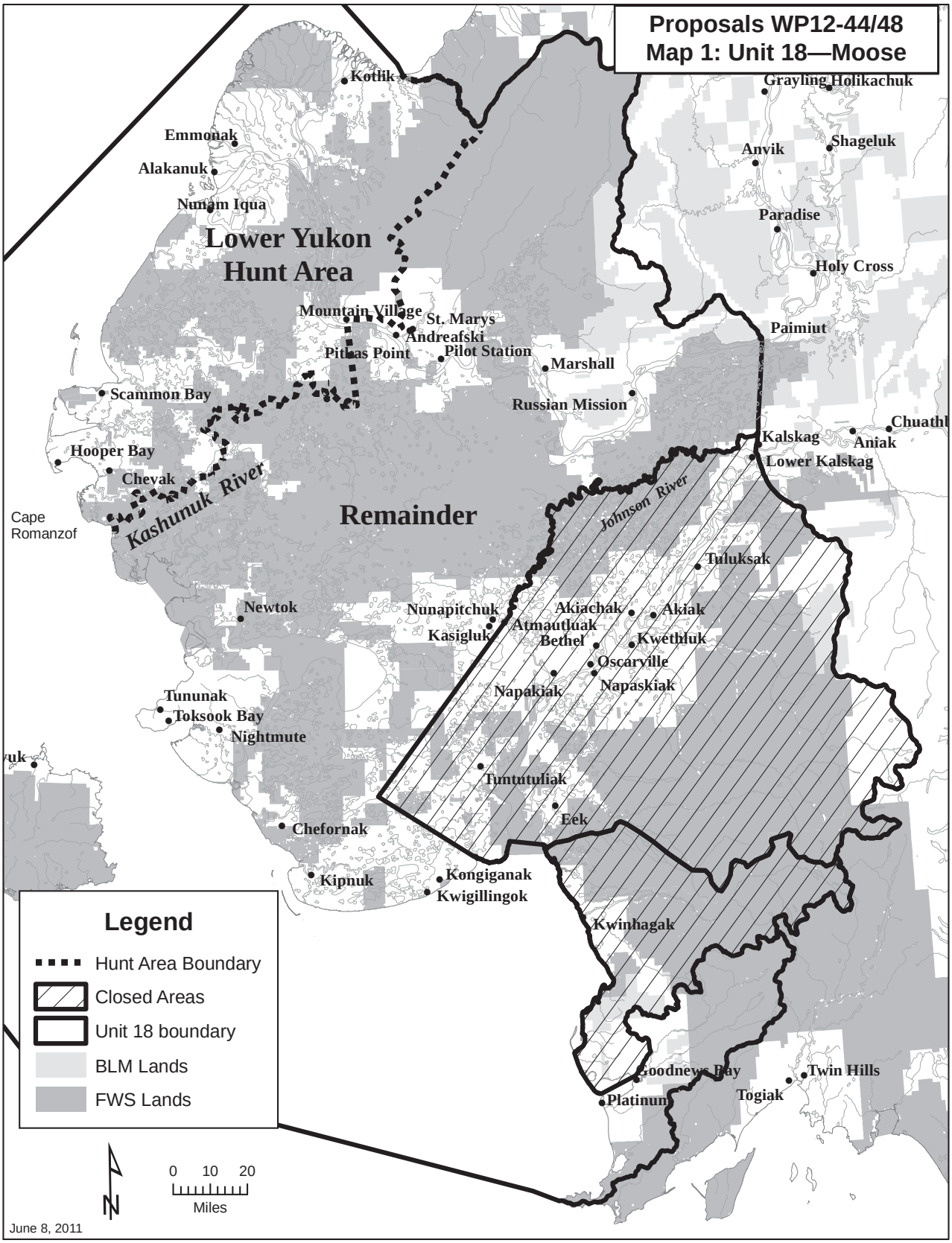
Moose harvest season dates in Unit 18 have varied over the past 10 years, however harvest limits have remained constant at one bull. As the moose population in the area grew, the closure of Federal public lands to non-Federally qualified users was lifted and the seasons were extended.

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.


Proposals WP12-44/48
Map 1: Unit 18—Moose
Kotlik
Grayling
Holikachuk
Emmonak
Alakanuk
Nunam Iqua
Anvik
Shageluk
Paradise
Holy Cross
Lower Yukon
Hunt Area
Mountain Village
St. Marys
Andreafski
Pitmas Point
Pilot Station
Marshall
Paimiut
Scammon Bay
Russian Mission
Chuathl
Kalskag
Aniak
Lower Kalskag
Hooper Bay
Chevak
Kashunuk River
Cape
Romanzof
Remainder
Johnson River
Tuluksak
Newtok
Nunapitchuk
Akiachak
Akiak
Atmautluak
Kasigluk
Bethel
Kwethluk
Oscarville
Napaskiak
Napakiak
Tununak
Toksook Bay
Nightmute
Tuntutuliak
Eek
Chefornak
Kipnuk
Kongiganak
Kwigillingok
Kwinhagak
Goodnews Bay
Twin Hills
Togiak
Platinum
Legend
Hunt Area Boundary
Closed Areas
Unit 18 boundary
BLM Lands
FWS Lands
0 10 20
Miles
N
June 8, 2011

- 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 August 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 January 20, instead of January 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 August 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, August 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 Federal public lands to non-Federally qualified users during the fall and winter moose seasons in Unit 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 February 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 February 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.

Current Events Involving Species

At their November 2011 meeting, the Alaska Board of Game Proposal 8 was carried with modification to extend the moose season until the end of February in Unit 18 remainder. This mirrors the changes proposed in WP12-48.

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 2008).

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 2008). 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 immediately 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 2006. The mid-point of the 2006 survey estimate was 3,614 moose with a density of 2.3 moose per square mile (Sundown 2009, pers. comm.), which was an increase from the 1992 density estimate of 0.64 moose per square mile (Perry 2008). Based on the 2006 survey data the population growth rate was estimated at 11% per year. Using the estimated growth rate, the current density in the area may be near 3 moose per square mile (Wald 2010, pers. comm.). However, Federal and State managers are hesitant to support liberalizing the fall hunt (as proposed in WP12-44) without more recent density data (Rearden 2011, 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 ADF&G 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). 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 2008). 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, the area has fewer moose than could be supported by the available forage (Perry 2008).

Harvest History

In Unit 18 remainder, during the 2008/2009 season, 189 moose were reported harvested, with 48 of that total being harvested in the winter season (Sundown 2010, pers. comm.). In 2007/2008, 248 moose were harvested with 50 harvested in the winter and in 2006/2007, 166 moose were harvested with 39 in the winter (Sundown 2010, pers. comm.). Most local residents living within the Kuskokwim River drainage area hunt the Yukon River drainage area during winter, when they can travel via snowmachine (Rearden 2011, pers. comm.).

As a result of extending the winter season till February 28 and allowing the harvest of any moose for the last two years during the extension (WSA09-12/13/14 and WSA10-04), 66 (45 cows and 21 bulls)

Table 1. Winter moose harvest data for Unit 18 remainder, 2005-2011 (Perry pers. comm. 2011).

Year	Local Resident Harvest	Nonlocal Resident Harvest	Total Winter Harvest
2005-2006	46	1	47
2006-2007	38	1	39
2007-2008	49	1	50
2008-2009	58	3	61
2009-2010	67	2	69
2010-2011	96	4	100

and 50 additional moose (39 cows and 11 bulls) were harvested in 2009 and 2010 respectively (Rearden 2011, pers. comm.). **Table 1** gives a summary of winter moose harvest for Unit 18 remainder (Perry 2011, pers. comm.). Overall harvest in Unit 18 remainder more than doubled between 2005 and 2010, with the majority of harvest coming from residents of Unit 18.

Effects of Proposal

If adopted, Proposal WP12-44 would revise current hunting regulations to allow for the harvest of one cow moose without a calf for the Aug. 10–Sept. 30 fall season for one calendar year, however, the regulations would revert to the current one antlered bull requirement after one year. This action would allow for more hunting opportunities for Federally qualified subsistence users by expanding the segment of the moose population available for harvest, but would only be in effect for one year. There would be some reduction to the moose population under this proposal, but the overall extent of the effects are unknown since the most recent density estimates for the area are five years old.

If adopted, Proposal WP12-48 would add an additional month and a half of harvest opportunity for Federally qualified users and would liberalize the harvest limit by allowing any moose to be harvested instead of 1 antlered bull during the winter season only. Impacts on the moose population in Unit 18

remainder should be minimal as the population is healthy and is believed to be increasing. A companion proposal is expected to be submitted before the Alaska Board of Game for Unit 18 remainder by ADF&G. WP12-48 would align Federal and State regulations if the State proposal is adopted, thereby reducing the regulatory complexity for Federally qualified subsistence users in this area.

OSM CONCLUSION

Oppose Proposal WP12-44.

Support Proposal WP12-48.

Justification

Adopting Proposal WP12-48 would add an additional month and a half of harvest opportunity during the winter season for Federally qualified users and liberalize the harvest from one bull to one moose in Unit 18 remainder. Although moose populations appear to be healthy and increasing in Unit 18 remainder, the most recent density estimates for the unit are five years old and as a result, Federal and State managers are hesitant to allow for an even more liberal harvest during the fall hunting season as requested in WP12-44. Harvest of moose has almost doubled between 2005 and 2009, with most of this harvest coming from residents of Unit18. In addition, Proposal WP12-48 may satisfy the proponent of Proposal WP12-44 because most local residents living within the Kuskokwim River drainage area are more likely to hunt the Yukon River drainage area during winter, when hunters can travel via snowmachine (Rearden 2011, pers. comm.). The proposed changes in WP12-48 will align Federal regulations with changes for moose in Unit 18 remainder made by the State Board of Game during its November 2011 meeting.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

No action taken on Proposal WP12-44.

Support Proposal WP12-48. Moose are an important subsistence food and the current resource can support the harvest proposed by WP12-48.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposals WP12-44/48**.** Defer to home region.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-44: This proposal requests eliminating the Unit 18 Remainder federal subsistence antlered bull moose harvest requirement for both the fall and winter hunts for one season.

Wildlife Proposal WP12-48: This proposal requests liberalization of the Unit 18 "Remainder" segment of the federal subsistence moose winter hunting season. The proposal also requests eliminating the antlered bull federal subsistence moose harvest requirement.

Introduction: The proponent of WP12-44 request authorization to harvest cow moose without calves in both the fall and winter federal subsistence moose hunts in Unit 18 remainder for one year. The proponent indicates a significant rise in the numbers of cow moose in the area and requests a temporary reduction through increased harvest.

The proponent of WP12-48 requests the federal subsistence moose hunting winter season in Unit 18 Remainder be liberalized from December 20 through January 10 to December 20 through February 29. The proponent also requests changing the bag limit to any moose. The proponent indicates the moose population health combined with a low harvest rate during the winter justifies this proposal.

The proponents of these proposals indicate adoption will result in greater opportunity and higher success rates for federally qualified subsistence users.

Impact on Subsistence Users: If WP12-44 is adopted, federally qualified subsistence users participating in the Unit 18 Remainder federal subsistence moose hunts will have greater opportunities to harvest a moose, with or without antlers, for the requested one year. If WP12-48 is adopted, federally qualified subsistence users participating in the in Unit 18 Remainder winter moose hunt will have approximately 49 more days to harvest any moose with or without antlers. If adopted, federally qualified subsistence users hunt success rates are expected to climb.

Opportunity Provided by State: In Unit 18 Remainder, the state moose winter hunting season is from December 20 through January 10 with a bag limit of one antlered bull. Meat-on-the-bone salvage is required thus meat taken prior to October 1 must remain on the bones of the front and hindquarters until removed from the field or processed for human consumption.

In Unit 18 Remainder, the state moose fall hunting season is from August 10 through September 30 for residents of Alaska with a bag limit of one antlered bull. The nonresident state moose hunting season is September 1 through September 30 with a bag limit of one antlered bull. The state winter hunting season for Unit 18 Remainder is from December 20 through January 10 with a bag limit of one antlered bull. Meat-on-the-bone salvage is required thus meat taken prior to October 1 must remain on the bones of the front and hindquarters until removed from the field or processed for human consumption. Residents may not harvest more than one moose per year between the fall and winter seasons.

Conservation Issues: The Lower Yukon River moose population is growing rapidly and currently is not a conservation concern. If the moose population continues at a high rate of growth, over-browsing may result in future management and conservation considerations. Moose are abundant in areas of Unit 18 currently open for hunting, thanks to the success of the moratoria. Information presented to the Federal Subsistence Board in 2007 indicated that the moose population in areas targeted in this proposal is highly productive and is continuing to grow.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of these proposals create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Other Comments: The proponent indicates that ADF&G is expected to submit a similar proposal to the Alaska Board of Game. The department submitted similar if not more liberal proposals number 7 and 8 to the Alaska Board of Game for the November 2011 meeting requesting liberalization of harvest regulations for portions of Unit 18. At this meeting, the Alaska Board of Game approved RC 21 Proposal 7a which liberalizes moose hunting in the Lower Yukon Area of Unit 18 to August 1 through the last day of February. The resident hunter bag limit was also liberalized to two moose of which only one may be an antlered bull before October 1 and hunters may not take a calf or a cow accompanied by a calf prior to October 1.

Recommendation:
WP12-44: **Oppose**
WP12-48: **Support with modification**. The department recommends modification of the proposal to align with the recent Board of Game approved season and bag limit for the Lower Yukon Area of Unit 18 as described above.

WP12-46 Executive Summary	
General Description	Proposal WP12-46 requests that the Federal moose season in portions of Unit 18 be changed from Aug. 25 – Sept. 20 to Sept. 1 – Sept. 30. This same action was submitted and approved as Special Actions (WSA10-01 and WSA11-05) in August 2010 and July 2011. *Submitted by Togiak National Wildlife Refuge*
Proposed Regulation	*Unit 18—Goodnews River drainage, and south to the Unit 18 boundary—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with BLM, ADF&G, and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.* ~~*Aug. 25*~~ ***Sept. 1***–*Sept.* ~~*20*~~ ***30***
OSM Conclusion	**Support**
Yukon-Kuskokwim Delta 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	**None**

STAFF ANALYSIS
WP12-46

ISSUES

Proposal WP12-46 was submitted by Togiak National Wildlife Refuge (NWR) requesting that the Federal moose season in portions of Unit 18 be changed from Aug 25 – Sept 20 to Sept 1 – Sept 30. This same action was submitted and approved as Special Actions (WSA10-01 and WSA11-05) in August 2010 and July 2011.

DISCUSSION

The proponent states that this change should be made to align the Federal season with the State season as the hunt is administered through the State registration permit process and, historically, the moose season was September 1–30. The proponent states that in the Goodnews River drainage, moose numbers increased from 2 in 2002 to 196 in 2011, and residents of Goodnews Bay and Platinum have worked cooperatively with the Togiak NWR and Alaska Department of Fish and Game (ADF&G) in building and managing this moose population.

Existing Federal Hunting Regulation

Unit 18—Moose

Unit 18—Goodnews River drainage, and south to the Unit 18 boundary—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with BLM, ADF&G, and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.	*Aug. 25–Sept. 20*

Proposed Federal Hunting Regulation

Unit 18—Moose

Unit 18—Goodnews River drainage, and south to the Unit 18 boundary—1 antlered bull by State registration permit. Any needed closures will be announced by the Togiak National Wildlife Refuge Manager after consultation with BLM, ADF&G, and the Chair of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council.	*~~Aug. 25~~* ***Sept. 1****–Sept. ~~20~~* ***30***

Existing State Hunting Regulation

Unit 18—Moose (that portion south of and including the Goodnews River drainage)

Residents: One antlered bull by registration permit available in person in Goodnews Bay and Platinum Aug 1–20. Season will be closed by emergency order when 10 bulls are taken.	*Sept. 1–Sept. 30*
Nonresidents:	*No open season*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% U.S. Fish and Wildlife Service managed lands and 2% Bureau of Land Management administered lands. Federal public lands associated with WP12-46 consist of a portion of the Togiak National Wildlife Refuge and Bureau of Land Management administered lands (**Map 1**). Drainages affected by the proposal include the Goodnews, Salmon, Kinegnak, and Unaluk Rivers and a number of coastal tributaries with undocumented place names.

Customary and Traditional Use Determinations

Rural residents of Unit 18 and Upper Kalskag have a positive customary and traditional use determination for moose in the hunt area relevant to this request.

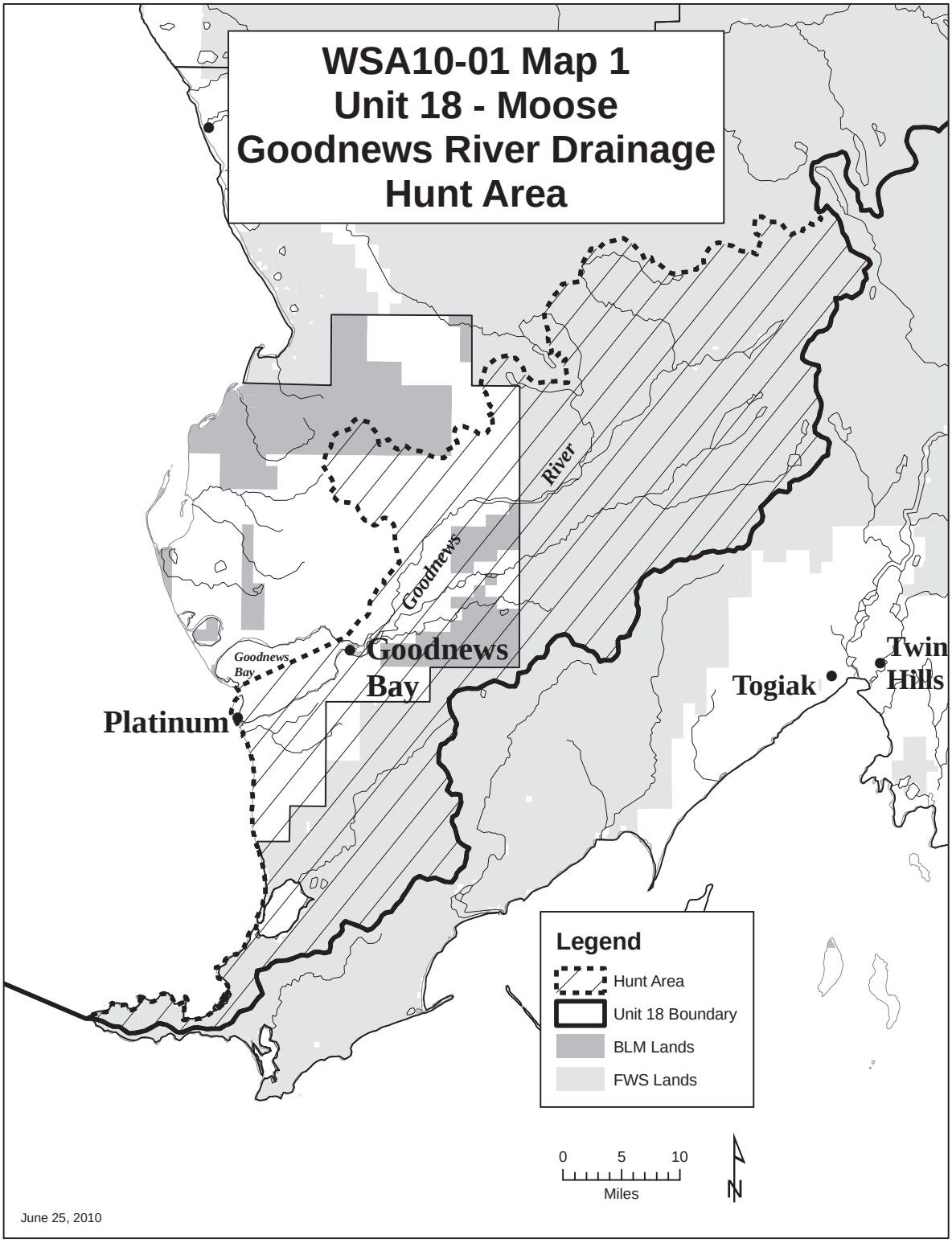
Regulatory History

Federal public lands in the Goodnews River drainage area were closed to all moose hunting between 1991–2008, but under State regulations, moose hunting remained open until 2004 on those lands outside Federal jurisdiction. The State closed the moose hunting season by emergency orders in 2004 and 2005 due to a continuous small moose population. In 2006, the Alaska Department of Fish and Game (ADF&G), U.S. Fish and Wildlife Service, and the villages of Goodnews Bay and Platinum agreed to a moratorium on hunting, with the understanding that once the population reached 100 moose, or after three years elapsed, hunting would resume (Liedberg 2008, pers. comm.). In 2008, Proposal WP08-34 was adopted with modification by the Federal Subsistence Board to establish a Federal moose hunting season in the Goodnews River drainage area as the population exceeded 100 animals. The State also re-established a moose hunting season and both Federal and State seasons were set for August 25–September 20 for one bull moose.

The Native Village of Goodnews Bay (also called Mumtraq Traditional Council) submitted a proposal to the Alaska Board of Game in 2009, to change the season dates to September 1–30 and to implement a harvest quota, due to the small moose population. The Board of Game adopted the proposal.

Biological Background

Surveys conducted in the Goodnews drainage area indicate that while the moose population has experienced substantial growth (**Figure 1**), it is considered a small population at a medium density (Aderman 2010, pers. comm.). In the Goodnews drainage area, no moose were observed during surveys in 1991, 1992 and 1994. However, population surveys between 2004–2011, indicated significant growth in the population (**Figure 1**). A minimum of 196 moose were counted in this area in March 2011 (Aderman 2011, pers. comm.).). Biologists believe the initial population growth was due to moose emigrating from adjacent Unit 17A and subsequent growth is thought to be due to high calf recruitment rates among established cows (Aderman 2008). This pattern is similar to the growth of the moose herd that occurred in adjacent Unit 17A during the 1990s (Aderman 2008).


WSA10-01 Map 1
Unit 18 - Moose
Goodnews River Drainage
Hunt Area
Goodnews River
Goodnews Bay
Goodnews Bay
Platinum
Togiak
Twin Hills
Legend
Hunt Area
Unit 18 Boundary
BLM Lands
FWS Lands
0 5 10
Miles
N
June 25, 2010

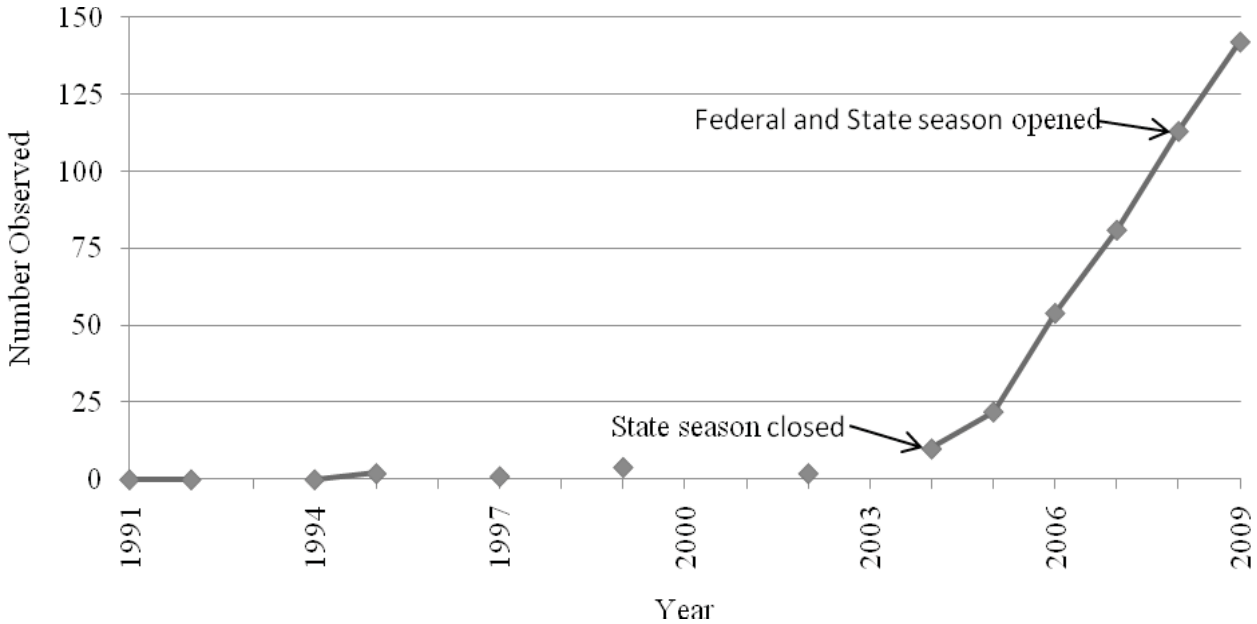


Figure 1. Number of moose observed in the Goodnews River drainage area, 1991–2011 (ADF&G 2009 and FWS 2009). Moose surveys were not conducted in years 1993, 1996, 1998, 2000, 2001, 2003, and 2010.

Harvest History

Between 1996–2003, the reported harvest was 0–2 moose per year for the Goodnews River area (ADF&G 2010). The harvest was significantly lower for years 1996–2003 because Federal public lands were closed and the moose population was small. No hunting seasons were in place for years 2004–2007.

In 2008, 40 permits were issued. Of these, 35 individuals reported hunting with a harvest of 13 bulls. In 2009, 45 permits were issued; of which 32 hunters reported hunting and 10 bulls were harvested (ADF&G 2010). In 2010, 48 permits were issued; of which 44 hunters reported hunting and 12 moose (11 bulls and 1 unknown) harvested (Perry 2011 pers. comm.). Of the 23 moose harvested in 2008 and 2009, only one was harvested in August and 22 were harvested in September (ADF&G 2010).

Effects of the Proposal

If this proposal is adopted, the moose season would shift from August 25–September 20 to September 1–30 and align with the State season, which was adopted by the Board of Game in 2009. This proposed change would lengthen the season by three days, shift the season into a time when bull moose are nearing peak rut (Schwartz and Hundertmark 1993) and tend to aggregate in lower elevations (Hundertmark 2007). Conservation concerns are minimized due to the establishment of a harvest quota and a registration permit system.

OSM CONCLUSION

Support Proposal WP12-46

Justification

Adopting this proposal would align Federal regulations with State regulations and would benefit Federally qualified subsistence hunters by avoiding potential confusion in determining Federal land boundaries .

In addition this would allow Federally qualified subsistence users to use a single permit to hunt on lands under both State and Federal jurisdiction during the same season. The requested change would add three days to the season and shift it later, when bulls may be more vulnerable. Conservation is provided for through a harvest quota.

The Native Village of Goodnews Bay supports adoption of this proposal. In addition, the Native Village of Goodnews Bay/Mumtraq Traditional Council's proposal to the Alaska Board of Game requesting a change to the moose season dates demonstrated a preference for a later season.

Residents of Goodnews Bay and Platinum have worked cooperatively with the Togiak NWR and the Alaska Department of Fish and Game in building and managing this moose population. Aligning Federal and State regulations would help continue cooperative management.

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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-46. This proposal is a result of working with local user groups. This is a cooperative effort.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-46: This proposal requests changing the season dates for the federal subsistence moose hunt in a portion of Unit 18 from August 25 through September 20 to September 1 through September 30.

Introduction: This proposal was submitted to change the federal subsistence moose hunting season in the Good News River drainage and south to the Unit 18 boundary by delaying the opening date by five days and liberalizing the hunting season by three additional days. The proposal is a product of a working group in which the department participated, and was submitted upon working group recommendations. The intent of this proposal is to align state and federal subsistence hunting seasons and is in response to changes the Alaska Board of Game made to the state season in 2009. The proponent indicates if the proposal is adopted, hunter success may improve because the season would be delayed and lengthened into the rut.

Impact on Subsistence Users: Adoption of this proposal may result in increased success for federally qualified subsistence users in the identified area.

Opportunity Provided by State: State regulations for that portion south of and including the Good News Bay drainage are as follows:

> One antlered bull by permit available in person in Goodnews Bay and Platinum August 1 through 25. Season will be closed by emergency order when 20 bulls are taken. Season dates are September 1 through September 30.

Conservation Issues: This proposal will impact a small but increasing moose population of about 190. The department and Togiak National Wildlife Refuge have worked closely with the residents of Goodnews Bay and Platinum to increase the moose population and provide opportunity through a Registration hunt. The quota for the hunt has been set with consultation with Alaska Department of Fish and Game, Togiak National Wildlife Refuge and the local communities. Close monitoring of the quota during this season minimizes the chances of overharvest.

Enforcement Issues: Adoption of this proposal will re-align the federal and state moose hunting season dates which will reduce or enforcement issues in areas with mixed land ownership.

Other Comments: Previous proposals submitted by this proposer were withdrawn upon recommendations from the working group which supported this proposal.

Recommendation: Support.

WP12-54 Executive Summary	
General Description	Proposal WP12-54 seeks to increase the wolf harvest limit for hunters in Unit 18. *Submitted by Orutsaramuit Native Council*
Proposed Regulation	**Unit 18—Wolf Hunting** *~~5~~* ***10*** *wolves* *Aug. 10–April 30*
OSM Conclusion	**Support**
Yukon-Kuskokwim Delta 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	**None**

STAFF ANALYSIS
WP12-54

ISSUES

Proposal WP12-54, submitted by Orutsaramuit Native Council (ONC), seeks to increase the wolf harvest limit for hunters in Unit 18.

DISCUSSION

Proposal WP12-54 requests that the Unit 18 harvest limit for hunters be increased from 5 wolves per year to 10 wolves per year. The proponent observed that hunters with the ability and opportunity to harvest more than 5 wolves per year should be allowed to do so. The proponent observed that there would only be a slightly higher harvest of wolves if this proposal is adopted.

Existing Federal Regulation

Unit 18— Wolf Hunting

5 wolves	*Aug. 10–April 30*
Wolf Trapping	
No limit	*Nov. 1–Mar. 31*

Proposed Federal Regulation

Unit 18—Wolf Hunting

*~~5~~ **10** wolves*	*Aug. 10–April 30*

Existing State Regulation

Unit 18—Wolf Hunting

5 wolves	*Aug. 10–April 30*
Wolf Trapping	
No Limit	*Nov. 10–Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, of which 96% is managed by the U.S. Fish and Wildlife Service and 4% is managed by Bureau of Land Management (see **Unit 18 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 18.

Regulatory History

In 1990 the Federal Subsistence Management Program Unit 18 harvest limit for hunters was 4 wolves per year. In 1993 ADF&G submitted a proposal (Proposal 2) to change the limit to 5 wolves for hunters in Unit 18. The Yukon-Kuskokwim Subsistence Regional Advisory Council requested that Proposal 2 be amended to "no limit" for wolves in Unit 18. Based on conservation concerns, the Federal Subsistence Board adopted the 5 wolves per year limit. Since regulatory year 1994/95 the harvest limit for hunters in this unit has been 5 wolves per year.

The Alaska Board of Game, at its Nov. 11–14, 2011 meeting, supported a similar proposal (Proposal 15) to increase the harvest limit from 5 to 10 in Unit 18.

Biological Background

Wolves (*Canis lupus)* are found throughout most of Unit 18 and are well adapted to the hills, tundra, and river valleys of the unit. Wolves first breed at age two to four and produce pups in dens during the spring. Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Pups constituted about half of the wolf population each August, and these young wolves disperse from packs at high rates as yearlings and 2-year-olds (Adams et al. 2008). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles. Adams et al. (2008) reported that 7 of 11 dispersing wolves (<36 months old) were subsequently detected 40–430 miles from their initial home range in the Gates of the Arctic National Park and Preserve.

The size of the home range of a wolf pack is dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves (Adams et al. 2008). Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance (Adams et al. 2008).

Wolf numbers were low throughout Unit 18 from the demise of the reindeer herding in the 1930s (Calista 1984) until the 1980s, when moose populations became established. Based on observations from trappers, hunters, fur buyers, and agency biologists, wolf numbers have increased in Unit 18, particularly along the main stem of the Yukon River and in the Kilbuck Mountains east of Bethel (Perry 2009). There have been recent increases in the wolf population along the Kuskokwim River and its tributaries from Kalskag to Bethel. The distribution and abundance of wolves in Unit 18 reflect the expanding distribution and increased abundance of moose (Perry 2009).

Perry (2009) estimated that there were approximately 250–300 wolves in 25–30 packs in Unit 18 in fall from 2001 to 2007. The estimate was revised to 200–300 wolves in 20–30 packs for 2008. These estimates were based on: recent trends and reported harvest; trapper questionnaire data; observations of animals, tracks, concentrations of activity; reported sightings; other reports by the public and anecdotal

information. Packs are established within the Yukon Delta and throughout the Yukon River riparian corridor. There are at least five resident packs along the Kuskokwim River upriver of Bethel (Perry 2009). The distribution of these packs follows the distribution, population growth, and range expansion of moose, as well as the seasonal movements of Mulchatna caribou (Perry 2009). Wolves occupy the Kilbuck Mountains from the area near Whitefish Lake to the southernmost tip of Unit 18 near Cape Newenham. These wolves prey predominately on caribou and moose (Perry 2009). It appears that a large proportion of the wolves that use the eastern portion of Unit 18 are transient packs and leave the unit when the caribou migrate to Unit 17 to calve. Wolves are occasionally encountered on the tundra between the riparian corridors of the Kuskokwim and Yukon rivers and on Nelson Island; these wolves are probably transient animals (Perry 2009). Wolf numbers observations in Unit 18 have continued to increase in response to populations of moose in Unit 18. It appears that the Unit 18 wolf population is regulated more by natural factors than by the harvest of hunters and trappers.

Harvest History

The harvest of wolves, and the use, barter, and sale of pelts is important for subsistence in Unit 18 (Weekley et al. 2011, Krauthoefer and Koster 2007). Wolf ruffs are highly prized as parka trim. The local domestic demand for wolf pelts is very high (Perry 2006).

State and Federal regulations require that wolves harvested in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained concerning the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take and access used. Some of the wolves taken in Unit 18 are neither sold nor sealed (Perry 2006). Perry (2009) observed that there is a poor understanding of wolf hunting regulations by many hunters, particularly those who take wolves opportunistically and those using snowmachines to take wolves. From regulatory year 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 18 ranged from 19 to 95 wolves per year (**Table 1**). During this period, the average annual Unit 18 wolf harvest (51 wolves) was dramatically higher than it was in the decade beginning in 1985 (7 wolves). Male wolves are more vulnerable to harvest than females. From regulatory year 1985/86 to 2004/05, 62% of the wolves that were harvested in Unit 18 were males (Perry 2006). In any given year, snow conditions for snowmachine travel and weather affect the wolf harvest level. With increasing gas prices, subsistence users are unable to travel as far to harvest wolves.

Perry (2009) estimates that recent wolf harvests in Unit 18 range from 10% to 30% of the wolf population. Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, Adams et al. (2008) concluded that the risks of reducing wolf populations through regulated harvest are quite low. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008).

Robert Sundown (2011, pers. comm.) noted that this proposed regulatory change would not result in a significant increase in the Unit 18 wolf harvest. He observed that very few Unit 18 hunters take the current limit of 5 wolves. Based on ADF&G's wolf harvest records from 1997/98 to 2009/10, there are only twelve cases of one person shooting five or more wolves in a given regulatory year in Unit 18 (ADF&G 2011). Since wolves may be shot with either a hunting license or a trapping license, it is not possible to determine how many of these people took their limit of five wolves under hunting regulations. Sundown (2011, pers. comm.) noted that many subsistence users in Unit 18 purchase both a hunting and

Table 1. Reported wolf harvest and method of take for Unit 18, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Method of take for total harvest from Unit 18				
		Trap/snare	%	Shot	%	Unknown
1999/2000	51	31	61	18	35	2
2000/01	28	7	25	21	75	0
2001/02	95	50	53	45	47	0
2002/03	19	8	42	11	58	0
2003/04	86	32	37	53	62	1
2004/05	63	29	46	34	54	0
2005/06	85	34	40	51	60	0
2006/07	26	15	58	11	42	0
2007/08	62	25	40	37	60	0
2008/09	28	19	68	9	32	0
2009/10	19	5	26	14	74	0

trapping license. The wolf trapping season in Unit 18 is from November 10 through March 31 with no harvest limit.

Other Alternatives Considered

Additional options were considered, which would maintain the current harvest limit or increase it to less than 10 wolves per year. There are few records of a person shooting more than 5 wolves per year in Unit 18. However there is no harvest limit under the trapping regulations, therefore there should be no real affect in the wolf population if the hunting limit is increased.

Effects of the Proposal

If Proposal WP12-54 is adopted, subsistence hunters will be allowed to harvest 10 wolves per year. This regulatory change will make the Federal subsistence wolf hunting harvest limit higher than the State limit. Currently there is no harvest limit for trapping wolves in Unit 18. Wolves are not normally targeted while hunting, but rather taken incidentally. Increasing the harvest limit from 5 to 10 wolves under hunting regulations should not cause any conservation concerns for wolves in the Unit.

OSM CONCLUSION

Support Proposal WP12-54.

Justification

Wolves have long been an important subsistence resource in Unit 18. The proposed regulatory change would provide an additional opportunity for subsistence users. It appears that the wolf population in Units 18 is increasing. It appears that the Unit 18 wolf population is regulated more by natural factors than harvest by hunters and trappers. At this time, there is no trapping limit. This proposal would align Federal subsistence regulations with State regulations.

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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-54. There are now more wolves in the lower and middle Kuskokwim areas and some subsistence users are having problems with wolves as wolf numbers increase. The Lower Kuskokwim Fish and Game Local Advisory Committee supported this proposal.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-54: This proposal liberalizes the federal subsistence wolf hunting annual bag limit in Unit 18 from 5 wolves per year to 10 wolves per year.

Introduction: This proposal was submitted by Orutsaramuit Native Council (ONC) to increase the annual wolf hunting bag limit from 5 to 10 wolves annually. Wolf populations in Unit 18 are not censused; however, harvest and observation information suggest that populations have increased in recent years.

Impact on Subsistence Users: Raising the limit to 10 wolves will allow for a very few federal subsidence users to harvest more than 5 wolves when hunting in Unit 18.

Opportunity Provided by State: In Unit 18, the state wolf hunting season is from August 10 through April 30. The state bag limit for hunting wolves was set at 5 wolves in 1993 by the Alaska Board of Game. The hunt is open to both residents and nonresidents; hide must be sealed within 30 days of harvest.

Conservation Issues: None. The current state season allows for maximum opportunity within areas that do not have predator management programs. Current wolf harvests in Unit 18 approximate 10% to 30% of the population per year and are considered within sustained yield for the population. Adams et al. (2008) concluded North American wolf populations to be largely unaffected by human take of ≤29% annually. The risks of reducing wolf populations through regulated harvest are considered quite low. The 2001-2010 average wolf harvest in Unit 18 is approximately 51 wolves per year. Few if any wolf hunters harvested five wolves per year under hunting regulations during those years.

Enforcement Issues: Different bag limits for wolves across federal public land and non-federal public lands will create enforcement problems due to differing land status in Unit 18.

Other Comments: ONC and the Lower Kuskokwim Advisory Committee submitted similar proposal number 15 to the Alaska Board of Game which was approved by the Board at the November 2011 meeting in Barrow.

Recommendation: Support.

WP12-55 Executive Summary	
General Description	Proposal WP12-55 requests an increase in the harvest limit for wolverine under Federal hunting regulations in Unit 18. *Submitted by the Orutsararmiut Native Council*
Proposed Regulation	**Unit 18 — Wolverine Hunting** ~~*1*~~ ***2*** *wolverine* *Sept. 1–Mar. 31* **Unit 18 — Wolverine Trapping** *No limit* *Nov. 10–Mar. 31*
OSM Conclusion	**Support**
Yukon-Kuskokwim Delta 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	**None**

STAFF ANALYSIS
WP12-55

ISSUES

Proposal WP12-55, submitted by the Orutsararmiut Native Council, requests an increase in the harvest limit for wolverine under Federal hunting regulations in Unit 18.

DISCUSSION

The proponent states that, under Federal hunting regulations, Federally qualified subsistence users are unnecessarily restricted from harvesting more than one wolverine per year in Unit 18. The proponent states that there would be no conservation concern due to the small increase in the harvest limit.

Existing Federal Regulation

Unit 18 — Wolverine Hunting

1 wolverine	*Sept. 1–Mar. 31*

Unit 18 — Wolverine Trapping

No limit	*Nov. 10–Mar. 31*

Proposed Federal Regulation

Unit 18 — Wolverine Hunting

*~~1~~ **2** wolverine*	*Sept. 1–Mar. 31*

Unit 18 — Wolverine Trapping

No limit	*Nov. 10–Mar. 31*

Current State Hunting Regulation

Unit 18 — Wolverine

1 wolverine	*Sept. 1–Mar. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 64% of Unit 18, and consist of 62% FWS and 2% BLM managed lands (Unit Map 18).

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for wolverine in Unit 18.

Regulatory History

In 1990, the Federal Subsistence Board adopted temporary subsistence regulations for wolverine hunting and trapping that aligned with State regulations. Since inception, the Federal wolverine hunting regulations in Unit 18 consisted of a Sept. 1–Mar. 31 season with a harvest limit of one wolverine.

Under current Federal subsistence regulations in Unit 18, the wolverine hunting season begins approximately two months earlier (Sept. 1–Mar. 31) than the wolverine trapping season (Nov. 10–Mar. 31). One wolverine may be harvested under Federal hunting regulations, while there is no limit to the number of wolverines that can be harvested under trapping regulations.

Wolverine sealing became a mandatory State requirement in 1971, and it serves as the primary means of attaining harvest information. ADF&G requires anyone who harvests a wolverine to have the pelt sealed with a locking metal tag and report, when, where, and how the animal was harvested. Therefore, harvest reporting only indicates successful harvest, not harvest attempts or harvest effort. Federally qualified subsistence users must possess a State of Alaska-issued resident hunting or trapping license to hunt or trap under Federal regulations.

Current Events Involving Species

The Alaska Board of Game adopted a similar proposal during its November 2011 meeting. State Proposal 16 requested a harvest limit increase from two to five wolverines under State hunting regulations in Unit 18.

Biological Background

The wolverine population in Unit 18 is thought to be at moderate to low levels (Perry 2007). Wolverines are distributed among the Kilbuck and Andreafsky mountains and along riparian habitats in Unit 18 (Perry 2007). The population may have increased since the Mulchatna caribou herd began using the eastern portion of Unit 18 in 1994 (Seavoy 2000), and sealing records suggest a potential increase in Unit 18 between 2003 and 2006 (Perry 2007).

Throughout their range, the densities of wolverine are low, even in high quality habitat, compared to other carnivores or predators (Hash 1999). Wolverines have an extremely large home range that varies from about 19 to 154 mi^2 for females and 89 to 610 mi^2 for males (Hornocker and Hash 1981, Magoun 1985, Whitman et al. 1986, Banci 1987, Gardner et al. 1993). Males typically travel longer distances than females, especially lactating females which have more restricted movements (Banci 1994). Wolverines primarily scavenge carrion during winter, but will opportunistically use a variety of prey in summer (e.g., rodents, snowshoe hares, and birds) (Banci 1994, Hash 1999).

Wolverines are polygamous and exhibit delayed implantation, which means they mate in summer, but fertilized eggs remain in the blastocyst stage until early to mid-winter. The timing of birth varies between January and April (Banci and Harestad 1988), with most kits being born in Alaska from mid-February to March (Rausch and Pearson 1972). The reproductive capacity of wolverines appears to be limited by the availability of food (Banci 1994).

Human harvest was an important source of adult wolverine mortality in many North American studies (Hornocker and Hash 1981, Whitman and Ballard 1983, Magoun 1985, Banci 1987). Survival rates were higher in populations that were not exposed to trapping pressure, suggesting that harvest mortality is additive (Krebs et al. 2004). However, harvest may not affect all age-sex classes equally. Harvests may

have a greater effect on subadult male survival due to their greater dispersal rates (Krebs et al. 2004). Thus, subadult male harvest may be partially compensatory, due to higher natural mortality of that sex-age class (Banci 1994). Most natural mortality is associated with starvation and predation (Banci 1994).

The State management objectives for furbearers, including wolverine, in Unit 18 (Perry 2007) include:

- Encourage trappers to become more active through liberal seasons and bag limits for all furbearers in Unit 18 and through informal means of communication. Furbearer populations in Unit 18 range from healthy to overabundant.
- Encourage trappers to target beaver and fox through broad educational efforts, as these species have great potential for adverse interactions with the public.
- Maintain fur sealing, fur buyer, and trapper programs in order to continue harvest assessment.
- Address problems of trapping regulation and harvest reporting compliance through public communication and broad educational efforts.

Harvest History

Since 1971, the State has required that wolverine be sealed and this has been the primary means for tracking harvest data. Wolverine sealing data should be considered a minimum harvest level as some harvest is not reported. Some of the unreported harvest has been attributed to users who tan their own hides because "some fur sewers prefer the stiffer hides derived from home tanning to commercial tanned" (Perry 2007). However, reporting rates may be improving (Perry 2007).

Wolverine harvest under hunting regulations likely comprises a small portion of the total wolverine harvest in Unit 18. Harvest under hunting regulations is currently limited to one wolverine and most of this harvest is opportunistic (Sundown 2011, pers. comm.). For example, wolverine may be opportunistically harvested while users are hunting caribou (Perry 2007). Trapping is a more targeted harvest and current regulations do not limit the wolverine harvest in Unit 18.

According to sealing records, the number of wolverine harvested in Unit 18 was variable between 1990 and 2010 and ranged from 4 to 61 wolverines annually (**Figure 1**). Over the same period, an average of 18 wolverines were sealed in Unit 18. After a below average harvest in 2009 (9 wolverines), an unprecedented number of wolverines were sealed in 2010 (62 wolverines). The high harvest in 2010 may be related to better than average snow conditions providing more access to users, increased trapping effort, increased incidental harvest by lynx trappers, an above normal compliance rate, and/or increased numbers of wolverine due to high abundance of prey species, such as snowshoe hare and ptarmigan (Jones 2011, pers. comm.). The sealing records presented are total harvest and include wolverine harvested under hunting and trapping regulations. The wolverine harvest in Unit 18 is limited by snow conditions as most users travel by snowmachine, and lower harvest levels in 2002/2003 were due to poor travel conditions (Seavoy 2004). The use of snowmachines has changed the spatial distribution of wolverine harvests in many areas due to increased access (Krebs et al. 2004), but harvest densities remained low throughout much of western Alaska, including the Yukon-Kuskowkim Delta, between 1984 and 2003 (Golden et al. 2007).

Male wolverines may be more vulnerable to harvest than females. Male wolverines range widely throughout their home ranges most of the year (Golden 1997) and typically have territories within home-ranges of several females (Hedmark 2007). Overall sex ratios are thought to be equal (Banci 1994), but

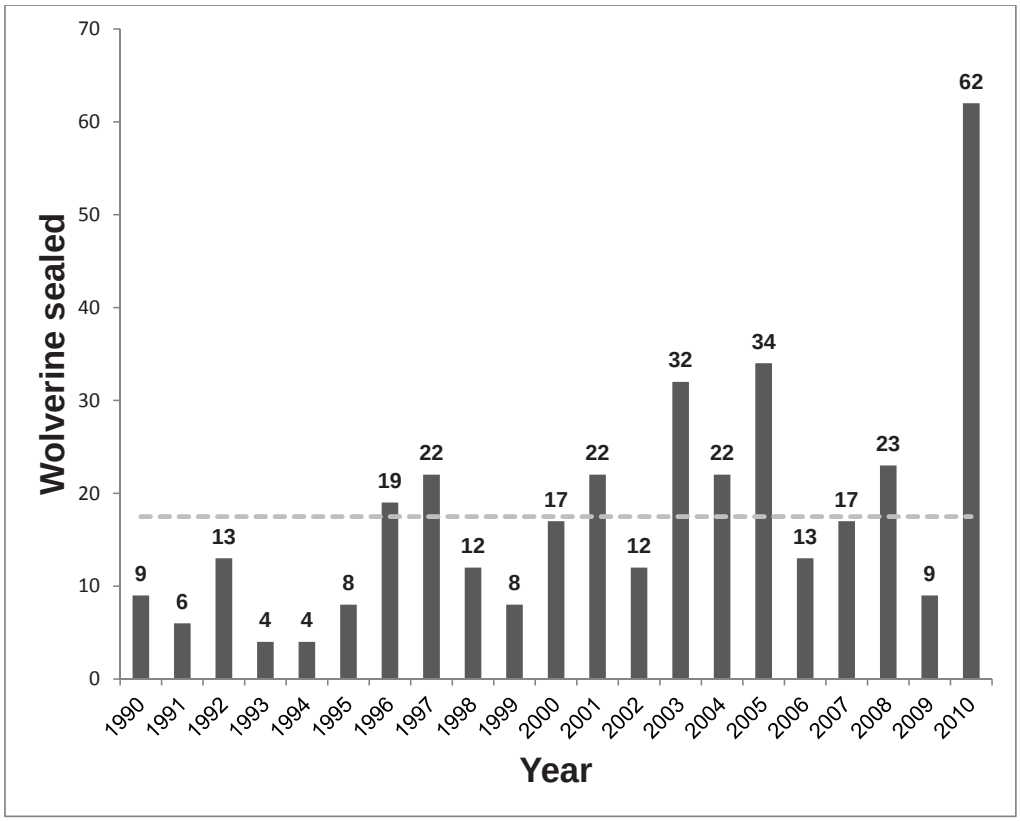

Figure 1. Wolverine harvest numbers under hunting and trapping regulations in Unit 18, according to sealing records between 1990 and 2010. The dashed line represents the long-term average of 18 wolverines sealed annually in Unit 18. Sealing data were provided by the Alaska Department of Fish and Game.

sealing records were skewed toward males by ratios of 5 males:1 female in 1997–2000 (Seavoy 2004) and 5 males:3 females in 2003–2006 (Perry 2007). The increased vulnerability of males may be due to increased dispersal rates by males, especially by younger individuals. Subadult male wolverine had lower survival rates in harvested populations than other age-sex classes across 12 studies in North America (Krebs et al. 2004).

Effects of the Proposal

If the proposal were adopted, the harvest limit in Unit 18 would be raised from one to two wolverines under Federal hunting regulations, providing more opportunity for Federally qualified subsistence users hunting wolverine on Federal public lands.

The proposed harvest limit change would have a minimal impact on the wolverine population in Unit 18. Current State and Federal trapping regulations allow for an unlimited harvest of wolverines in Unit 18. The effect of increasing the harvest limit by one wolverine would most likely be insignificant, especially as wolverines are often harvested opportunistically under hunting regulations.

The effects of this proposal on non-Federally qualified users would be minimal. Under State trapping regulations, there is currently no limit on the harvest of wolverines in Unit 18 and State hunting regulations allow one wolverine to be harvested.

OSM CONCLUSION

Support Proposal WP12-55.

Justification

The overall impact of the harvest limit increase under Federal hunting regulations would be minimal to the wolverine population in Unit 18, compared to the unlimited harvest under State and Federal trapping regulations. Although limited information is available beyond sealing records, the wolverine population has supported an unlimited trapping harvest and may be increasing.

The proposed changes would align Federal regulations with the recently increased harvest limit for wolverine in Unit 18 under State hunting regulations.

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YUKON-KUSKOKWIM DELTA SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-55. The Lower Kuskokwim Fish and Game Local Advisory Committee supported this proposal. This proposal would provide a very limited additional opportunity for Yukon-Kuskokwim Delta subsistence users.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-55: This proposal liberalized the federal subsistence wolverine hunting bag limit in Unit 18 from one per year to two per year.

Introduction: This proposal was submitted to increase the federal subsistence wolverine hunting annual bag limit by 100%. The proponent indicates federally qualified subsistence users are unnecessarily restricted by the current federal subsistence bag limit of one animal per year. The proponent expects little additional harvest if this proposal is adopted.

Impact on Subsistence Users: Adoption of this proposal will provide additional opportunity for federally-qualified subsistence users on federal public lands by 100%. Adoption of this proposal will allow federally qualified subsistence users to harvest a second wolverine prior to the beginning of the November 10 trapping season. If adopted and participation in the federal subsistence wolverine hunt significantly increases harvest rates, the Unit 18 wolverine population productivity could be affected resulting in reduced opportunity for federal subsistence harvests in the long-term. Adoption of this proposal will likely not increase overall wolverine harvest by federally qualified subsistence users in Unit 18, and liberalizing the bag limit would not be expected to significantly increase hunting effort. Most wolverines harvested by hunters in Unit 18 are opportunistic events when hunters are in the field happen upon a wolverine while targeting other game.

Opportunity Provided by State: The State provides a September 1 through March 31 hunting season with a bag limit of 1 wolverine in Unit 18.

Conservation Issues: Wolverine numbers in 18 are moderate to low and are present in low densities. The population is probably increasing in Unit 18 as greater numbers of caribou, moose, and wolves prey and carrion. The reported wolverine harvest (harvested by both hunters and trappers) in Unit 18 between 2000 and 2006 ranged from 12 to 34 annually. These are relatively low harvest figures. Only a few local residents currently participate in wolverine trapping and even fewer hunters target wolverine.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of this proposal will create enforcement issues in areas with mixed land ownership. Additionally, the current bag limit for the Unit 18 wolverine hunt is one per year and federally qualified users who harvest a wolverine in the federal subsistence hunt would be prohibited in harvesting a second animal under state hunting regulations. This discrepancy will be alleviated through Board of Game adoption of similar proposal 16 if the Federal Subsistence Board adopts this proposal.

Other Comments: The large majority of wolverine harvested in Unit 18 is by trappers using a state trapping license. No annual bag limit exists for either the state or federal subsistence trapping seasons and legal trapping methods and means for wolverine in Unit 18 include firearms. Few hunters harvest wolverine with a hunting license as most possess a trapping license which allows the individual to harvest as many wolverines as opportunistically

encountered. It is not possible to accurately separate harvests between the federal subsistence hunting and trapping seasons and the state hunting and trapping seasons.

The Alaska Board of Game approved similar proposal number 16 at the November 2011 meeting to increase the Unit 18 wolverine hunting annual limit to two animals.

Recommendation: Support

WP12-39 Executive Summary	
General Description	Proposal WP12-39 requests combining the current Units 17B and 17C regulations, which would provide an additional 31 days of harvest opportunity for moose in portions of western Unit 17C and eastern 17B, and require the use of a State registration permit during the December 1 – December 31 season. *Submitted by the Togiak National Wildlife Refuge*
Proposed Regulation	See the analysis for proposed regulation.
OSM Conclusion	**Support**
Bristol Bay Regional Council Recommendation	**Support**
Yukon/Kuskokwim Delta Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-39

ISSUES

Proposal WP12-39, submitted by the Togiak National Wildlife Refuge, requests combining the current Units 17B and 17C regulations, which would provide an additional 31 days of harvest opportunity for moose in portions of western Unit 17C and eastern 17B, and require the use of a State registration permit during the December 1 – December 31 season.

DISCUSSION

This proposal would simplify moose hunting regulations on Federal public lands in Units 17B and 17C. Federal subsistence regulations currently require a State registration permit during the winter hunt only in the remainder portions of Units 17B and 17C. This proposal would require a State registration permit during the period December 1 – December 31 for all of Units 17B and 17C, which would align Federal regulations with existing State regulations.

Note: The proposal as written stated December 30th as the end date for the winter season. This was a typographical error and has been corrected to read December 31st in the relevant sections of this analysis. In addition, the proposal as written also stated the State registration permit in the text. Federal subsistence regulations do not reference State permit numbers so it has been omitted in this analysis.

Existing Federal Regulation

Unit 17B — Moose

Unit 17B — That portion that includes all the Mulchatna River drainage upstream from and including the Chilchitna River drainage – 1 bull by State registration permit. During the period Sept. 1 – 15, a spike/fork bull or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.	*Aug. 20 – Sept. 15*

Unit 17C — Moose

Unit 17C — That portion that includes the Iowithla drainage and Sunshine Valley and all lands west of Wood River and south of Aleknagik Lake – 1 bull by State registration permit. During the period Sept. 1 – 15, a spike/fork bull or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.	*Aug. 20 – Sept. 15*

Units 17B and 17C remainder — Moose

Units 17B and 17C remainder — 1 bull by State registration permit. During the period Sept. 1 –15 a spike/fork bull or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.	*Aug. 20 – Sept. 15* *Dec. 1 – Dec. 31*

Proposed Federal Regulation

Unit 17B — Moose

~~*Unit 17B — That portion that includes all the Mulchatna River drainage upstream from and including the Chilchitna River drainage — 1 bull by State registration permit. During the period Sept. 1 – 15, a spike/fork bull or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.*~~	~~*Aug. 20 – Sept. 15*~~

Unit 17C — Moose

~~*Unit 17C — That portion that includes the Iowithla drainage and Sunshine Valley and all lands West of Wood River and south of Aleknagik Lake — 1 bull by State registration permit. During the period Sept.1 – 15, a spike/fork bull or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.*~~	~~*Aug. 20 – Sept. 15*~~

Units 17B and 17C remainder — Moose

~~*Units 17B and 17C remainder — 1 bull by State registration permit. During the period Sept. 1 –15 a spike/fork or a bull with 50-inch antlers or with 3 or more brow tines on one side may be taken with a State harvest ticket.*~~	~~*Aug. 20 – Sept. 15*~~ ~~*Dec. 1 – Dec. 31*~~

Units 17B and 17C — Moose

Units 17B and 17C – one bull.	***Aug. 20 – Sept. 15*** ***Dec. 1 – Dec. 31***

During the period Aug. 20 – Sept. 15 — one bull by State registration permit;
Or
During the period Sept. 1 – 15 — one bull with spike-fork or 50-inch antlers or antlers with 3 or more brow tines on at least one side with a State harvest ticket;
Or
During the period Dec. 1 – 31 — one antlered bull by State registration permit.

Existing State Regulation

Unit 17B — Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
Or	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
Or	

One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit for nonresidents.	*Sept. 5 – Sept. 15*

Unit 17B Remainder — Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
Or	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
Or	
One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side for nonresidents.	*Sept. 5 – Sept. 15*

Unit 17C — Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
Or	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
Or	
One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 8% of Unit 17B and consist of 6% National Park Service managed lands, 1% U.S. Fish and Wildlife Service managed lands and approximately 1% scattered tracts of Bureau of Land Management managed lands.

Federal public lands comprise approximately 25% of Unit 17C and consist of 15% U.S. Fish and Wildlife Service managed lands and 10% Bureau of Land Management managed lands (**See Unit 17 Map**).

Customary and Traditional Use Determinations

Residents of Kwethluk have a positive customary and traditional determination for 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 Unit 17 boundary intersects the Shotgun Hills.

Residents of Akiak and Akiachak have a positive customary and traditional determination for moose in Units 17B, that portion within the Togiak National Wildlife Refuge.

Residents of Unit 17, Nondalton, Levelock, Goodnews Bay and Platinum have a positive customary and traditional determination for moose in Units 17B and 17C.

Regulatory History

The Bristol Bay Federal Subsistence Regional Advisory Council submitted Proposal WP97-50 in 1996 to reduce the harvest of moose in Unit 17B and 17C by shortening the season in a portion of Unit 17B and a portion of Unit 17C from Aug. 20 – Sept. 15 to Aug. 20 – 31; and the remainder of Units 17B and 17C to Aug. 20 – 31 and change antler restrictions. The Council recommended modifying their proposal to align with Alaska Board of Game Proposal 136, submitted by the Nushagak Advisory Committee. The Federal Subsistence Board (Board) adopted WP97-50 as amended in April 1997.

Proposal WP02-26, submitted by the Togiak National Wildlife Refuge in 2001, requested that the Federal permit requirements be aligned with State permit requirements; the proposal was adopted by the Board at its May 2002 meeting.

Biological Background

Much of Unit 17B and 17C is mesic and alpine tundra, which is poor moose habitat. The majority of moose in these units are found in riparian areas of the major river drainages. Moose are now common along the Nushagak/Mulchatna Rivers and all of their major tributaries. They are also found throughout the Wood/Tikchik Lakes area (Woolington 2008).

Over the past three decades moose populations throughout Unit 17 have increased substantially in both numbers and range due to moderate snowfalls over several successive winters and decreased harvest of cow moose, resulting in decreased mortality and increased recruitment rates (Woolington 2008). The reduction in the cow harvest is due in part to a positive response by unit residents to educational efforts by the Alaska Department of Fish and Game (ADF&G) and the Togiak National Wildlife Refuge, and due to residents switching harvest to an abundant alternative food source as the Mulchatna caribou herd grew and expanded its range in the 1980s and 1990s (Van Daele 1995).

The moose population in Unit 17B was estimated at 2500–3000 in 1987 (Taylor 1990). This estimate was primarily based on extrapolations from a census in the upper Mulchatna River area. ADF&G established a minimum management goal of 4900 moose for the unit. Late winter surveys conducted by ADF&G between 1992 and 1997 indicated the moose population size in the unit was stable to increasing. A moose population estimation survey was completed in the western portion of 17B and yielded an estimate of 1202 moose. This included 61 calves comprising 5.1% of the total moose observed (Woolington 2002). A moose population estimation survey was completed for the eastern portion of 17B in March 2002, yielding an estimate of 1953 moose, including 76 calves representing 3.9% of the total moose observed (Woolington 2004). In March of 2006, another moose population estimation survey was completed in the western portion of 17B, yielding an estimate of 1210 moose, including 151 calves. Based on these estimates, it appears the moose population of 17B was less than the minimum management objective (Woolington 2008). A more recent survey of the western portion of 17B in 2010 yielded an estimate of 1137 moose, while a survey of the eastern portion of 17B in 2009 yielded an estimate of 1466 moose (Woolington 2011, pers. comm.).

The moose population in Unit 17C was estimated at 1400–1700 in 1987 (Taylor 1990). This estimate was based on extrapolations from surveys conducted in Unit 17C in 1983. ADF&G established a minimum management goal of 2800 moose for the unit. In March 1999, portions of 17C were surveyed, yielding an estimate of 2955 moose, including 435 calves, representing 14.7% of the total moose observed (Woolington 2002). In March 2004, another moose population survey was conducted within portions of 17C, yielding an estimate of 3670 moose, including 410 calves, representing 11.2% of the total moose observed (Woolington 2006). These survey estimates indicate that the moose population of 17C was

above the minimum management objective (Woolington 2008). A more recent survey of 17C conducted in 2008 yielded an estimate of 3235 moose (Woolington 2011, pers. comm.).

Bull:cow ratios in all areas of Unit 17 have historically been high, but no composition data were collected during the last reporting period of 2005–2007. Aerial surveys to estimate moose in the Lake Clark National Park and Preserve boundary of Unit 17B in 1994 and 1999 yielded an estimated bull:cow ratio of 37:100 and 34:100 respectively (FWS 2002). A calf:cow ratio of 16.5:100 was estimated from surveys in 1999.

Calf production and survival have fluctuated between areas and years in Unit 17. A 1999 population estimation survey yielded a minimum calf percentage of 14.7% in Unit 17C. A 2001 survey indicated a minimum calf percentage of 5.1% in western Unit 17B, while a 2002 survey yielded a minimum calf percentage of 3.9% in eastern Unit 17B. A 2004 population survey indicated a minimum calf percentage of 11.2% in Unit 17C (Woolington 2008). More recent surveys in 2010 and 2009 yielded a minimum calf percentage of 8% for both the western and eastern portions of 17B, while a 2008 survey of 17C yielded a minimum calf percentage of 12% (Woolington 2011, pers. comm.).

Harvest History

Reported moose harvests in Unit 17 have nearly tripled since 1983–1984 from 127 to 380 in 2005–2006 as a result of a 4-fold increase in the number of moose hunters in the unit in response to the increased moose populations. The reported moose harvest from 2003–2007 in Unit 17B has ranged from 113 to 183, with an average annual harvest of 149 moose. In Unit 17C, the five year average annual harvest was 224, with a range of 193 to 251 moose (FWS 2002). Local residents have accounted for the largest numbers of moose harvested in Unit 17 during the most recent reporting period from 2000–2007, with an average of 209 moose (79% of all moose harvested) being harvested by local users during that time period (**Table 1**).

The State's general moose hunt in Units 17B and 17C is of shorter duration with a more restrictive harvest limit than the State registration hunts. Greater numbers of nonlocal Alaska residents and nonresidents participate in the general hunt (Sept. 1 – 15) than local Unit 17 Alaska residents. Longer seasons and more liberal harvest limits have encouraged many resident hunters to participate in State registration hunts (Woolington 2008).

Effects of Proposal

If adopted, this proposal would simplify moose hunting regulations and reduce the regulatory complexity on Federal public lands in Units 17B and 17C and provide increased harvest opportunities for Federally qualified subsistence users. Increased moose harvest in the area including Sunshine Valley and all lands west of Wood River and south of Aleknagik Lake may improve habitat conditions and reduce harvest pressure in other areas of Unit 17.

Federal subsistence regulations currently require a State registration permit during the winter hunt only in the remainder portions of Units 17B and 17C. If adopted, this proposal would require a State registration permit from December 1 – December 31 for all of Units 17B and 17C, which would align with existing State regulations and provide an additional 31 days of hunting opportunity for Federally qualified subsistence users in portions of western Unit 17C (Sunshine Valley and all lands west of Wood River and south of Aleknagik Lake) and in eastern Unit 17B (all of Mulchatna River drainages upstream from (and including) the Chilchitna River drainage). In addition, this alignment with State regulations will aid in minimizing law enforcement violations by Federally qualified subsistence users in areas of mixed land status designations. This change may reduce moose numbers in some areas of Unit 17C that

Table 1. Unit 17 moose hunter harvest and residency for permit hunts[a], 2000-2007 (Woolington 2008).

Regulatory Year	Local Residents[b]	Nonlocal Residents	Nonresident	Total
2000-2001	144	45	0	189
2001-2002	193	57	0	250
2002-2003	228	56	0	284
2003-2004	214	71	0	285
2004-2005	204	50	0	254
2005-2006	224	45	10	279
2006-2007	254	47	6	307

[a]Includes only permittees who reported hunting.
[b]Unit 17 residents.

have had little to no harvest during the last 20 years and may help improve habitat conditions and reduce harvest pressures in other areas of Unit 17. Under the State registration permit system, the ADF&G Area Biologist can keep selected areas closed and use Emergency Order authority to close selected areas if the harvest objective is met before the end of the open season.

OSM CONCLUSION

Support Proposal WP12-39.

Justification

Adoption of this proposal would revise the moose season in Units 17B and 17C, would provide Federally qualified subsistence users with an additional 31 days of hunting opportunity in portions of these units, and align Federal and State regulations, which will also help minimize law enforcement violations by Federally qualified subsistence users hunting in areas of mixed (Federal and State) land status designation. The moose population may be reduced in areas that have had little or no harvest in the last 20 years and may help improve habitat conditions. Longer seasons and more liberal harvest limits may encourage many resident hunters to participate in registration hunts. The use of a State registration permit for portions of this hunt will allow the managers the opportunity to keep selected areas closed and use Emergency Order authority to close areas if harvest objectives are met before the end of the season.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP12-39 as presented by OSM. This proposal would align Federal season with State regulations and provide Federally qualified users with additional moose hunting opportunity. The moose population has been rebuilt and is now healthy due to cooperative efforts and support of Togiak residents.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-39. This is a cooperative effort of the Yukon-Kuskokwim Delta Subsistence Regional Advisory Council and the Bristol Bay Subsistence Regional Advisory Council. People from Yukon-Kuskokwim Delta region hunt in proposed area.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP12-39
December 5, 2011, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-39: Combines Game Management Units 17B and 17C federal subsistence moose hunting regulations by aligning the area open during the current federal subsistence moose hunting season with the area open under state hunting regulations.

Introduction: Proposal WP12-39, submitted by the Togiak National Wildlife Refuge, seeks to combine Game Management Units 17B and 17C federal subsistence moose hunting regulations. Adopting this proposal would align state and Federal regulations by providing federally qualified subsistence users an additional 31 days of harvest opportunity for moose in portions of western Unit 17C and eastern 17B, and require the use of a state registration permit during the December 1 – December 31 season.

Impact on Subsistence Users: If adopted, federally qualified subsistence users in the areas affected would gain 31 days of harvest opportunity under more simplified federal subsistence regulations.

Opportunity Provided by State:

Unit 17B Nonresident Closed Area– Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
OR	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
OR	
One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*
One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side by permit for nonresidents. Orientation requirement in place for nonresidents.	*Sept. 5 – Sept. 15*

Unit 17B Remainder – Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
OR	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
OR	
One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*

One bull with 50-inch antlers or antlers with 4 or more brow tines on at least one side for nonresidents.	*Sept. 5 – Sept. 15*
Orientation requirement in place for nonresidents.	

Unit 17C – Moose

Residents, one bull by permit	*Aug. 20 – Sept. 15*
OR	
One bull with spike-fork antlers or 50-inch antlers or antlers with 3 or more brow tines on at least one side for residents only	*Sept. 1 – Sept. 15*
OR	
One antlered bull by permit for residents only	*Dec. 1 – Dec. 31*

Conservation Issues: As moose populations have increased in the described area so has harvest. Areas currently experiencing lower moose harvest are expected to increase harvest levels.

Enforcement Issues: Adoption of this proposal will alleviate complications to enforcing several differing regulations in a small land area.

Other Comments: WP12-39 is a housekeeping proposal to align the federal subsistence hunting season in 17B and 17C to the present state registration moose hunt regulations. The Alaska Board of Game changed the area open during the December state registration hunt in 2009 and this proposal was submitted requesting the Federal Subsistence Board adopt the same changes.

Recommendation: Support

WRITTEN PUBLIC COMMENTS

Support. The commission supports combining the current regulations for hunting moose in Units 17B and 17C and requiring a state registration permit for the December 1–31 season. This proposal would benefit residents of Nondalton who have positive C&T for moose in 17B by creating an additional winter hunting opportunity that does not currently exist. The SRC further recommends that the state registration permits required to participate in the Unit 17B moose hunts be made available in Nondalton for the convenience of local residents. *Lake Clark Subsistence Resource Commission*

WP12-40 Executive Summary		
General Description	Proposal WP12-40 requests a revision of the hunt area descriptor for Unit 17A winter moose hunt to include all of 17A. *Submitted by the Togiak National Wildlife Refuge*	
Proposed Regulation	*Unit 17A — 1 bull by state registration permit* *Unit 17A~~, that portion that includes the area east of the west shore of Nenevok Lake, east of the west bank of the Kemuk River, and east of the west bank of the Togiak River south from the confluence Togiak and Kemuk rivers~~ — 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 Subsistence Regional Advisory Council*** *~~local users~~.*	*Aug. 25 – Sept. 20* *Winter season to be announced.*
OSM Conclusion	**Support**	
Bristol Bay Regional Council Recommendation	**Support**	
Yukon-Kuskokwim Delta Regional Council Recommendation	**Support**	
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.	
ADF&G Comments	**Support**	
Written Public Comments	**None**	

STAFF ANALYSIS
WP12-40

ISSUES

Proposal WP12-40, submitted by the Togiak National Wildlife Refuge, requests a revision of the hunt area descriptor for Unit 17A winter moose hunt to include all of 17A.

DISCUSSION

The proponent requests that all of Unit 17A be opened during the Federal winter moose hunt. The closures to moose hunting in portions of 17A were initiated to encourage expansion of moose populations from Unit 17A into southern Unit 18 and were supported by both subsistence users and management agencies. State and Federal managers for Unit 17A did not allow moose hunting west of the Kemuk and Togiak rivers during the first four winter hunts from 2002/2003 to 2005/2006, which allowed the moose population in the unit to increase and expand into the neighboring Goodnews River drainage (southern Unit 18) from 2002 to 2011. Under State regulations, all of Unit 17A has been open to winter moose hunting since the 2006/2007 season. However, Federal regulations have been more restrictive, allowing for a winter harvest only in smaller portions of the unit. A healthy and viable moose population with a harvestable surplus now exists in Unit 17A. This proposal aims to revise the area descriptor for the winter moose hunt to reflect these biological realities and to align Federal and State regulations.

Existing Federal Regulation

Unit 17A — Moose

Unit 17A — 1 bull by state registration permit *Unit 17A — that portion that includes the area east of the west shore of Nenevok Lake, east of the west bank of the Kemuk River, and east of the west bank of the Togiak River south from the confluence Togiak and Kemuk Rivers — 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 local users.*	*Aug. 25 – Sept. 20* *Winter season to be announced.*

Proposed Federal Regulation

Unit 17A — Moose

Unit 17A — 1 bull by state registration permit *Unit 17A~~, that portion that includes the area east of the west shore of Nenevok Lake, east of the west bank of the Kemuk River, and east of the west bank of the Togiak River south from the confluence Togiak and Kemuk rivers~~ — 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 Subsistence Regional Advisory Council*** *~~local users~~.*	*Aug. 25 – Sept. 20* *Winter season to be announced.*

Existing State Regulation

Unit 17A — Moose

Residents, one bull by permit	*Aug. 25 – Sept. 20*
Or	
One antlered bull by permit for residents only	*May be announced*

Extent of Federal Public Lands

Federal public lands comprise approximately 84% of Unit 17A and all of them are U.S. Fish and Wildlife Service managed lands (**See Unit 17 Map**).

Customary and Traditional Use Determinations

Residents of Akiak and Akiachak have a positive customary and traditional determination for moose in Unit 17A, that portion north of Togiak Lake that includes the Izavieknik River drainage. Residents of Kwethluk have a positive customary and traditional determination for 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 Unit 17 boundary intersects with the Shotgun Hills.

In addition, rural residents of Unit 17, Goodnews Bay, and Platinum have a positive customary and traditional determination for moose.

Regulatory History

WSA-02-11 — A Special Action was submitted by the Togiak Traditional Council, Togiak, Alaska to establish a limited winter moose hunt in part of Unit 17(A). WSA02-11 was subsequently modified by the Togiak Traditional Council recommending that a Federal registration permit be required instead of a State registration permit. The Special Action was approved with modification by the Federal Subsistence Board (Board) on November 12, 2002. The modification stipulated that the Federal subsistence hunt will require the use of a State registration permit rather than the use of a Federal registration permit.

WP04-46 — A proposal submitted by the Bristol Bay Native Association requested that a limited moose hunt be held in Unit 17A during the period of December 1 – January 31. At its May 2004 meeting, the Board adopted the proposal with modifications consistent with the recommendation of the Bristol Bay Regional Advisory Council. The first modification implemented a winter hunt using the State registration permit process instead of a Federal permit and the second modification included language stating “up to a 14-day season” during the period of December 1 – January 31.

WP04-47 — A proposal submitted by Togiak Natives Limited, requested that a winter moose hunt be held in Unit 17A from January 1 – 31, with a harvest limit of one moose and a closure of the season once 20 cows had been harvested. The proposal was rejected by the Board at its May 2004 meeting.

Biological Background

Moose are relative newcomers to southwest Alaska and to Unit 17A, possibly migrating into the area from the middle Kuskokwim River drainages during the last century. Aerial surveys conducted in the 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, bears, and beaver were the main sources of wildlife meat in the area. The Alaska Department of Fish and Game (ADF&G) began collecting data on the Unit 17 moose population in 1971. ADF&G established a minimum population objective of 300 moose and a target population of 1100–1750 moose for Unit 17A (Woolington 2008). Late winter moose count minimums for Unit 17A show an increase from 652 animals in 2002 to 1166 animals in 2011. In the neighboring Goodnews River drainage (southern Unit 18), moose numbers increased from 2 in 2002 to 196 in 2011 (Aderman 2011, pers. comm.).

A cooperative research effort between the Togiak National Wildlife Refuge and ADF&G in Unit 17A in 1998 resulted in 36 adult moose being collared. Aerial radiotracking was conducted monthly for all moose and weekly for cows during the calving period. Annual calf production during 1998–2003 averaged 136.5 calves per 100 cows with an average twinning rate of 64.6 percent. Calf survival from birth to November averaged 52.7 percent and annual adult survival during the same period averaged 85.6 percent (FWS 2004). More recent data has shown an average annual calf production between 1998 and 2010 of 129.9 calves per 100 cows with an average twinning rate of 63.8% over the same period. Calf survival from birth to November during this time averaged 47.3% with an average recruitment of 62.6 calves per 100 cows. Bull:cow ratios from 1998 to 2006 averaged 81.7 bulls per 100 cows (Aderman 2008).

Harvest History

Fall and winter hunt statistics were combined for this analysis. For the winter moose hunt period 2003–2010, hunter participation had an annual average of 98 local residents and 8 nonlocal residents. The average harvest for this time period was 27 moose for local residents and 4 moose for nonlocal residents (**Table 1**). From 2003–2010, the average annual hunter success was 29% (Range 18–39%) (Woolington 2011, pers. comm.).

Effects of Proposal

If adopted, this proposal would open up all of Unit 17A during the Federal winter moose hunt. The closure of portions of Unit 17A was supported by subsistence users and local managers in order to encourage expansion of the moose population into southern Unit 18. Moose numbers have increased in both Unit 17A and southern portions of Unit 18 as a result of these closed areas. Moose harvests have increased and reflect an increasing population trend for the species. A healthy and viable moose population with a harvestable surplus now exists in all of Unit 17A. If this proposal is adopted, it would provide for additional opportunity for Federally qualified subsistence users and would align Federal and State hunting regulations in the unit.

OSM CONCLUSION

Support Proposal WP12-40.

Justification

Adoption of this proposal would open up all of Unit 17A for the winter moose hunt and would allow for a winter season of up to 14 days during the period Dec. 1 – Jan. 31 in a larger area than currently available to local residents. Opening all of Unit 17A to a winter moose hunt would align Federal and State regulations. Past hunting closures in parts of 17A were initiated to encourage expansion of moose populations into areas of southern Unit 18. These efforts have been a success and a healthy and viable moose population with a harvestable surplus now exists in Unit 17A. Since all of Unit 17A has been open

Table 1. Unit 17A registration moose hunts (RM573 and RM575) 1997 – 2010 (Woolington 2011)

	Permits Issued				# Reported Hunting				# Moose Reported Taken		
Regulatory Year	Local Resident	Nonlocal Resident	Total Permits		Local Resident	Nonlocal Resident	Total Hunters		Local Resident	Nonlocal Resident	Total Moose
1997	44	0	44		39	0	39		15	0	15
1998	48	0	48		43	0	43		10	0	10
1999	55	2	57		39	2	41		10	0	10
2000	54	2	56		48	1	49		10	0	10
2001	55	1	56		46	1	47		6	1	7
2002	39	1	40		35	1	36		8	0	8
2003 (F)	(52)	(7)	(59)		(44)	(3)	(47)		(6)	(1)	(7)
(W)	(19)	(0)	(19)		(14)	(0)	(14)		(4)	(0)	(4)
Tot	71	7	77		58	3	61		10	1	11
2004 (F)	(52)	(1)	(53)		(48)	(0)	(48)		(10)	(0)	(10)
(W)	(44)	(0)	(44)		(29)	(0)	(29)		(10)	(0)	(10)
Tot	96	1	97		77	0	77		20	0	20
2005 (F)	(68)	(5)	(73)		(58)	(3)	(61)		(20)	(1)	(21)
(W)	(76)	(0)	(76)		(35)	(0)	(35)		(3)	(0)	(3)
Tot	144	5	149		93	3	96		23	1	24
2006 (F)	(62)	(5)	(67)		(56)	(5)	(61)		(21)	(3)	(24)
(W)	(48)	(6)	(54)		(26)	(5)	(31)		(11)	(1)	(12)
Tot	110	11	121		82	10	92		32	4	36
2007 (F)	(81)	(2)	(83)		(63)	(0)	(63)		(32)	(0)	(32)
(W)	(98)	(6)	(98)		(45)	(4)	(49)		(8)	(1)	(9)
Tot	179	8	181		108	4	112		40	1	41
2008[b](F)	(87)	(16)	(103)		(81)	(13)	(94)		(17)	(7)	(24)
(W)	(110)	(0)	(110)		(64)	(0)	(64)		(21)	(0)	(21)
Tot	197	16	213		145	13	158		38	7	45
2009[a] (F)	(98)	(21)	(119)		(82)	(17)	(99)		(18)	(11)	(29)
(W)	(35)	(1)	(36)		(29)	(0)	(29)		(2)	(0)	(2)
Tot	133	22	155		111	17	128		20	11	31
2010a(F)	(96)	(17)	(113)		(81)	(12)	(93)		(21)	(6)	(27)
(W)	(30)	(1)	(31)		(26)	(0)	(25)		(10)	(0)	(10)
Tot	126	18	144		106	12	118		31	6	37

Local Residents =Unit 17 residents RM573: August 25 - September 20. RM575: 2 weeks (TBA)
December 1 – January 31
NOTE: 2005 - 2008 winter hunts included western GMU 17C
[a] 2009 and 2010 data preliminary. [b] Fall 2008 was first year that aircraft could be used during this hunt.
As of 12/29/2010 six permittees for RM573-2009 still had not reported, and four permittees for RM575-2009 have not reported
As of 02/03/2011 15 permittees for RM573-2010 still had not reported, and five permittees for RM575-2010 have not reported.
(05/08/2011)

during the last five winter hunts under State regulations, this proposal would clarify Federal and State regulations for hunters.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Bristol Bay Subsistence Regional Advisory Council

Support Proposal WP12-40 as presented by OSM. This proposal would provide additional moose hunting opportunities for Federally qualified users and will align Federal and State regulations. Closures of portions of Unit 17, supported by local residents, have resulted in increased numbers of moose and encouraged their expansion into Unit 18. This has been a management success, and the local communities should benefit.

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

Support Proposal WP12-40. There are not conservation concerns for moose in the proposal area. This proposal would align the State and Federal regulations.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-40: This proposal seeks to align state and federal regulations by changing the boundary description for Unit 17A winter moose hunt to include all of 17A.

Introduction: This proposal was submitted by the Togiak National Wildlife Refuge (TNWR) to align state and federal regulations by changing the boundary description for Unit 17A winter moose hunt to include all of 17A. This proposal was submitted to reopen portions of Unit 17A which was closed to the winter federal subsistence moose hunt to encourage moose population expansion into Unit 17A and southern portions of Unit 18. The closure was successful and the current moose population is considered healthy.

Impact on Subsistence Users: Adoption of this proposal will provide federally qualified subsistence hunters additional opportunity to participate in the federal subsistence winter moose hunt throughout unit 17A.

Opportunity Provided by State:

Residents, one bull by permit	*Aug 25 – Sept 20*
OR	
One antlered bull by permit for residents only	*May be announced*

Conservation Issues: None. This moose population has increased to target management levels with high calf production.

Enforcement Issues: This proposal would align state and federal regulations therefore reducing confusion for both enforcement officers and users.

Other Comments: Research in this area has been conducted jointly by TNWR and the department through collaborative efforts.

Recommendation: Support.

WP12-23 Executive Summary	
General Description	Proposal WP12-23 requests a season be established for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 – March 31 by Federal registration permit. *Submitted by Vicki Penwell et al.**
Proposed Regulation	*Unit 11 —* ***That portion within the Wrangell-St. Elias National Park and Preserve that is bounded by the Copper Lake Trail to the east, Nabesna Road to the north and the Copper River to the south and west to the Suslota Trail trailhead and the Suslota Trail to the east, the park and preserve boundary to the north and west ending at the boundary between Units 11 and 13.*** — ~~*No Federal open season*~~ ***Oct. 21 – March 31*** ***1 bull caribou per household by Federal Registration permit only with a limit of 25 permits issued.*** *Unit 11 — Remainder* — *No Federal open season*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

*Note: Thirty-two residents of Slana submitted this proposal.

STAFF ANALYSIS
WP12-23

ISSUES

Proposal WP12-23, submitted by Vicki Penwell et al.[1], requests a season be established for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 – March 31 by Federal registration permit.

DISCUSSION

The proposal requests a season be established in a portion of Unit 11 to allow the harvest of one bull caribou per household by Federal Registration Permit from October 21 – March 31 with a limit of 25 permits issued. The proponent states the Mentasta caribou herd co-mingles with the Nelchina caribou herd within the requested hunt area and they believe that most of the harvest would be from the Nelchina herd. The proponent states that while there is an opportunity to harvest caribou in other nearby locations, they are not traditional harvest locations and the expense in cash and time continue to place a burden on people with a heavy reliance on wild foods.

Existing Federal Regulation

Unit 11	*No Federal open season*

Proposed Federal Regulation

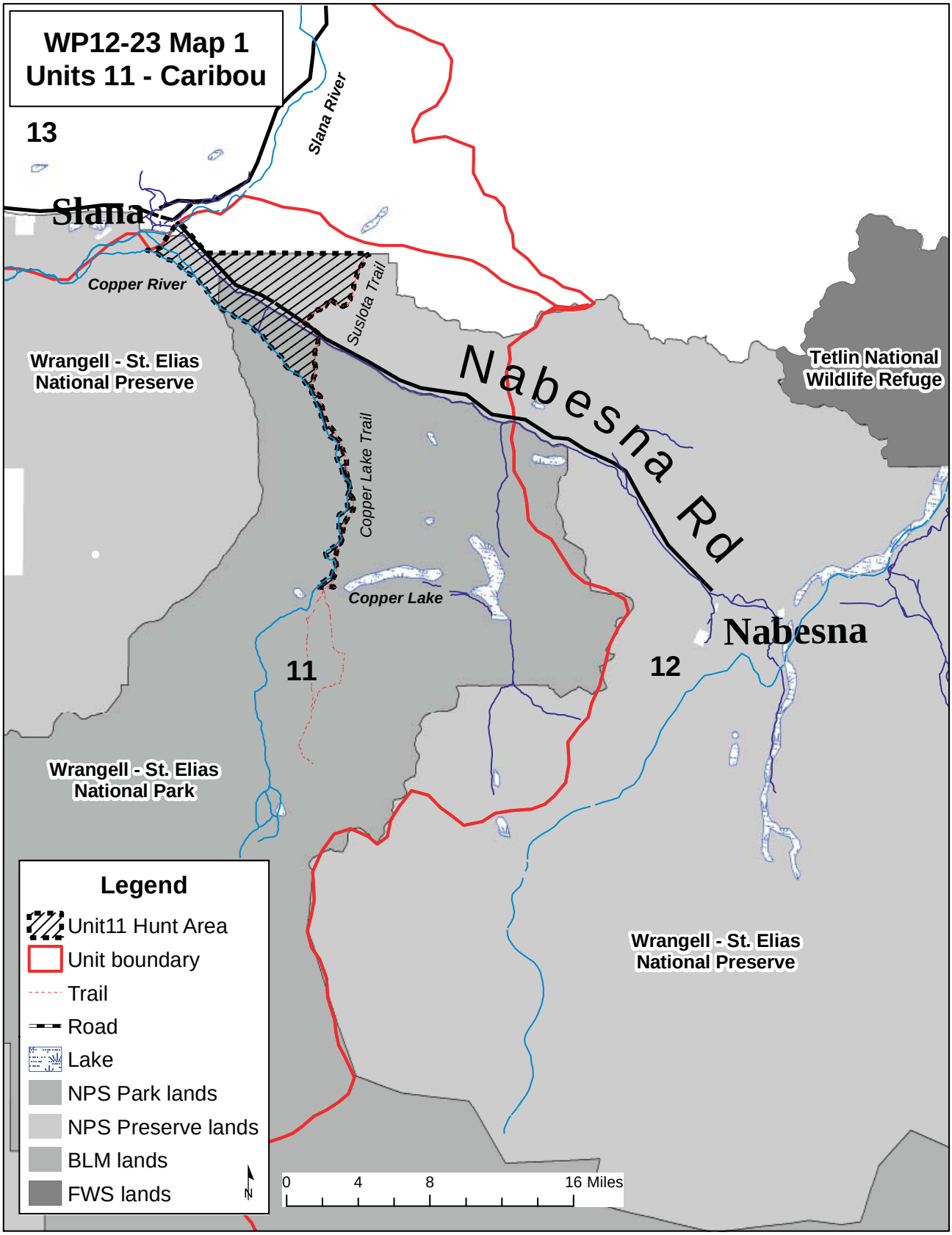
Proposal WP12-23

Unit 11 — ***That portion within the Wrangell-St. Elias National Park and Preserve that is bounded by the Copper Lake Trail to the east, Nabesna Road to the north and the Copper River to the south and west to the Suslota Trail trailhead and the Suslota Trail to the east, the park and preserve boundary to the north and west ending at the boundary between Units 11 and 13.***	*~~No Federal open season~~* ***Oct. 21 – March 31***
1 bull caribou per household by Federal Registration permit only with a limit of 25 permits issued.	
Unit 11 — Remainder	*No Federal open season*

Existing State Regulation

Unit 11	*No State open season*

[1]Thirty-two residents of Slana submitted this proposal.


WP12-23 Map 1
Units 11 - Caribou
13
Slana
Slana River
Copper River
Suslota Trail
Wrangell - St. Elias
National Preserve
Nabesna Rd
Tetlin National
Wildlife Refuge
Copper Lake Trail
Copper Lake
Nabesna
11
12
Wrangell - St. Elias
National Park
Wrangell - St. Elias
National Preserve
Legend
Unit11 Hunt Area
Unit boundary
Trail
Road
Lake
NPS Park lands
NPS Preserve lands
BLM lands
FWS lands
N
0
4
8
16 Miles

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and within those consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) lands (**Map 1**).

Special Requirements for Park Service Lands

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.

Customary and Traditional Use Determinations

In Unit 11 north of the Sanford River, rural residents of Units 11, 12, 13A, 13B, 13C, 13D, Healy Lake, Chickaloon and Dot Lake have a positive and customary use determination for caribou. In Unit 11 remainder, rural residents of Units 11, 13A, 13B, 13C, 13D, and Chickaloon have a positive and customary use determination for caribou.

Regulatory History

In 1993, Proposal 93-94 was adopted by the Federal Subsistence Board (Board) to close Federal public lands to caribou hunting in Unit 11. The combination of low caribou numbers and low recruitment were direct indicators of a continuing conservation concern which warranted protection of this small caribou population. Under ANILCA Section 815(3), restricting the taking of fish and wildlife on Federal public lands can be authorized if necessary for the conservation of healthy populations.

In 1996, the National Park Service (NPS) proposed (Proposal 17) establishing a limited caribou hunt (15-bull quota) based on the objectives of the "Mentasta Caribou Herd Cooperative Management Plan (1995)," which was signed by Wrangell-St. Elias NPS, the Alaska Department of Fish and Game, and Tetlin National Wildlife Refuge. The cooperative plan was also endorsed by both the Southcentral and Eastern Interior Subsistence Regional Advisory Councils. The management objectives in the cooperative plan were based on productivity and not the population size. Therefore the cooperative plan called for establishing a limited hunt despite a declining population due to increased productivity. In 1996, the Board adopted Proposal 17 with modification to reopen the caribou season only to residents of Chitina, Chistochina, Copper Center, Gakona, Gulkana, Mentasta, and Tazlina with a quota of 15 bulls. In 1998, Proposal 23 was adopted by the Board to close all caribou hunting within Unit 11 because calf recruitment was below management objectives stated in the Mentasta Caribou Herd Cooperative Management Plan (1995). The Alaska Department of Fish and Game supported the closure because the State season for Mentasta caribou in this area had been closed for several years.

Management Direction

The Mentasta Caribou Herd Management Plan (1995) states "an annual fall harvest quota will be established between 15 and 20 percent of the previous 2-year mean calf recruitment as long as such recruitment is at least 80 calves. In addition, at population levels below 2,000 the harvest limit will be

limited to "bulls only" and will be closed if the 2-year mean bull:cow ratio drops below 35 bulls:100 cows".

In addition, the plan states "winter hunts for the Nelchina and Forty-mile caribou herds, may result in incidental harvest of Mentasta caribou and should be managed to minimize the effect on the Mentasta population. When quotas are below 30, permits will be allocated among these Federal subsistence users in accordance with a priority system based on: 1) customary and direct dependence upon the resources as the mainstay of one's livelihood; 2) local residency; and 3) availability of alternative resources (ANILCA, Sec. 804)".

The Cheesh'Na Tribal Council does not consider the Mentasta caribou a separate herd from the Nelchina herd (SCRAC 2011). Wilson Justin, the legal representative of the Cheesh'Na Tribal Council stated at the Southcentral Regional Advisory Council that,

> "there never was a Mentasta herd. There's only two caribou around, the big medicine people's bull caribou, sometimes called the Glacier Caribou and then the Nelchina Herd…We never considered them as Mentasta or Chisana Herd, they were always just portions of the Nelchina Herd that didn't move out…So I object to the terminology, it's not Mentasta Caribou, it's nothing more than Nelchina Caribou and they have come there sometimes staying over through the winter into the summer in large numbers, sometime in small numbers, depending directly on predation, hunting pressure or in many cases the food source. So this number of 3,000 down to 400 is erroneous, it should not be used for managing that game. The Cheesh'Na does not believe that the game management unit boundaries under any conditions should ever be used to determine community harvest and access of those resources that are directly related to that community under all conditions."

Biological Background

Management of caribou herds in Alaska has been based on the site fidelity of caribou cows to discrete calving grounds (Skoog 1968, Hemming 1971, Gunn and Miller 1986) and aggregating together for at least a major portion of the year (Miller 1982). Cows that calve together typically also remain together during the rut which suggests that caribou with a herd are breeding together. Population dynamics of caribou are defined by geographic units rather than one large interbreeding population which requires that individual herds be managed separately (Hinkes et al. 2005). There are conflicting views on the role of animal exchange between caribou herds or between calving grounds and its effect on altering demographics (Bergerud 2000). Changes in caribou abundance may be due to changes in distribution and go undetected due to limitations of census efforts (Bergerud 2000). Adjacent herds seldom have concurrent censuses which make it difficult to identify the major shifts of caribou movement between herds. However, major shifts in calving ground use to that of another herd are presumed to be minimal (Gunn and Miller 1986, Valkenburg et al. 2002).

The Mentasta caribou herd is the primary herd within Unit 11 and calves and summers within the upper Copper River Basin, and northern and western flanks of the Wrangell Mountains (Putera 2011). Barten et al. (2002) found that parturient female caribou from the Mentasta herd used birth sites that lowered the risk of predation and traded-off forage abundance for increased safety. Minimizing risk of predation of neonates may result in ungulates selecting habitats that compromise their ability to optimize foraging (Bowyer et al. 1999, Barten et al. 2001). Female Mentasta herd caribou used sites at higher elevations with sub-optimal forage, presumably to avoid predators, and when <10 day old neonates were lost, females descended from the higher elevations to join other nonparturient females. In addition, females

with neonates >10 days old also descended to join the larger group of females which coincides with moving out of the riskiest period of predation on ungulate neonates (Adams et al. 1995).

Population surveys conducted between 1987 and 1991 revealed continued declines in both total numbers and calf:cow ratios, more specifically, results from a 1991 survey revealed a critically low calf:cow ratio of 3 calves:100 cows (FWS 1992). These results may have been due to a total reproductive failure within the MCH for that year and may be due to sub-optimal nutrition for caribou cows. Poor forage quality in the summer can cause cow caribou to skip a breeding season to regain body condition due to being nutritionally stressed. The resulting decrease in body condition in female caribou can have a negative effect on productivity by causing lower weight gain or survival in calves (Crete and Huot 1993, Dale 2000).

From the 1987 fall population estimate of 3,160 animals, the herd steadily declined to the 2010 fall estimate of 336 caribou (Putera 2011, pers. comm.) (**Table 1**). The 1993–2005 population estimates ranged from 970 to 261 animals (post-closure trend) and population estimates that have been adjusted for sightability probabilities show an average of 350 caribou since 2008 (range 319–421) (Putera 2010, pers. comm.). Results from June post-calving and fall post-rut surveys for the period revealed critically low calf production and survival. Fall surveys conducted between 1987 and 2009 revealed severe declines in total observed cows from 2,065 to 79, respectively (Putera 2010, pers. comm.).

Fall surveys conducted within the same 23-year period also revealed severe declines in total observed Mentasta bulls from 847 observed in 1987 to 68 bulls observed in the fall 2009 survey (**Table 1**). Although observed fall bull:cow ratios appear high, the number of cows observed is small and the bull component likely includes a significant number of Nelchina bulls. The number of Mentasta bulls per 100 cows has been difficult to determine during fall composition counts due to the presence of Nelchina bulls within the Mentasta herd range in September. Given the years of low Mentasta herd recruitment, recent population estimates for the herd are calculated using a ratio of 30 bulls per 100 cows. While Nelchina bulls have wintered within the range of the Mentasta herd (Putera 2011), the range of the Nelchina herd has varied widely due to burns and their effect on lichen availability within their traditional area (Collins et al 2011). Thus, there is limited ability to predict the extent or frequency of mixing between Nelchina and Mentasta bulls and impossible to discern whether the harvest of a bull would be from the Nelchina or Mentasta herd. Higher numbers of adult bulls in the population are important as it helps maintain synchrony in parturition. Holand et al. (2003) showed skewed sex ratio and increased young male age structure of reindeer could result in fewer adult females conceiving during the first estrous cycle due to their hesitation to mate with young bulls. Maintaining synchrony in parturition also provides increased survival chances for calves since parturition is typically timed with the start of plant growth (Bergerud 2000). Late-born offspring have been shown to have lower body mass than caribou offspring produced earlier in the season (Holand et al. 2003) which can lead to lower juvenile survival rates due to density dependent factors of winter food limitation (Skogland 1985) and deep snows (Bergerud 2000).

The Mentasta caribou herd is considered a sedentary and low density ecotype (Bergerud 1996 Hinkes et al. 2005) versus a migratory and high density ecotype, such as the Nelchina herd, and thus more susceptible to extreme random events. The term ecotype designates populations of the same species that evolved different demographic and behavioral adaptations to cope with specific ecological constraints. A key factor in distinguishing between the two ecotypes is whether animals were dispersed or aggregated when young were born (Seip 1991, Bergerud 2000). The chronic low calf productivity and recruitment for the Mentasta caribou could make random environmental events a primary driver for a more severe population decline (Tews et al. 2006). Increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible calves and bulls with depleted energy reserves following

Table 1. Results from 1987–2010 population surveys of the Mentasta Caribou Herd, Unit 11 (Putera 2011, pers. comm.).

Year	June Calves:100 Cows	Fall Cows	Fall Calves	Fall Bulls	Fall Calves:100 Cows	Fall Bulls:100 Cows[7]	Fall Population Estimate[1]
1987	18	2065	248	847	12	41	3160
1988	34	1540	277	662	18	43	2480
1989	31	1615	727	258	16	45	2600
1990	-	-	-	-	-	-	-
1991	3	1347	27	566	2	42	1940
1992	16	973	58	399	6	41	1430
1993	9	683	27	260	4	38	970
1994	19	591	65	224	11	38	880
1995	26	541	119	189	22	35	850
1996	16	534	59	187	11[2]	35[2]	780
1997	15	432	23	159	5	40	610
1998	13	350	35	150	10	42	540
1999	13	230	22	177	10	77	430
2000	1	297	0	175	0	59	470
2001	11	228	12	150	5	66	586[5]
2002	21	190	55	86	29	45	410[5]
2003	17	223	38	101	16	46	522[5]
2004	8	-	-	-	5[3]	-	293[4]
2005	23	113	17	78	15	69	261
2006	-	-	-	-	-	-	-
2007	23	93	27	72	29	77	280
2008	14	89	18	65	20	73	319[6]
2009	12	79	8	68	10	86	421[6]
2010	25	88	22	106	25	120	336[6]

[1] September population estimates are based on # of cows at time of postcalving count and fall calf/bull/cow ratios

[2] 1996 fall composition count was not conducted because of early mixing with Nelchina herd. Fall calf/cow was estimated from postcalving calf/cow ratio and survival radiocollared cows (.70; 30 June –30 September). Fall bull/cow ratio is assumed to be the same as 1995.

[3] 2004 fall comp count was not conducted due to budget. Fall calf/cow was estimated from post-calving calf:cow ratio and average (1987–2003) calf survivorship (0.63)

[4] 2004 population estimate is based on extrapolation from June census, adjusted for average calf survivorship and average bull ratios.

[5] September population estimates are adjusted based on sightability probabilities.

[6] September population estimates are adjusted based on sightability probabilities and assuming a ratio of 30 bulls:100 cows within Mentasta herd to adjust for mixing of Nelchina bulls.

[7] Observed high bull:cow ratios likely due to presence of Nelchina bulls.

the rut (Dau 2004, Miller and Gunn 2003). Bull caribou die at a higher rate than cows due to greater energy demands during early winter rutting activities which greatly reduce their body reserves (Russell et al. 1993, Miller and Gunn 2003).

Harvest History

Both annual reported harvest and success rates reflected overall declines between 1977 and 1989. The total harvest reported between 1977 and 1989 was 1,294 caribou. Annual harvest ranged from 149 animals harvested in 1977 to 45 animals in 1989 (ADF&G 1993). The average annual harvest for the 13-year period was 100 caribou (ADF&G 1993). Harvest success rates decreased from 43% in 1977 to 19% in 1989. There has been no reported harvest from the Mentasta Caribou herd since 1998 as there has been no State or Federal season.

Current Events Involving Species

Two similar proposals (WP10-102 and 103) were submitted to the Federal Subsistence Board for consideration in 2010. The Eastern Interior and Southcentral Regional Advisory Councils (EIRAC and SCRAC) recommended rejection of both proposals during their winter 2010 meetings. Both the EIRAC and SCRAC unanimously opposed the proposals based on conservation concerns for both the NCH and the MCH (EIRAC 2010, SCRAC 2010). Additionally, the TNWR Manager said "the depressed MCH cannot support additional harvest" (Booth 2009. Pers. Comm.),The Wrangell-St. Elias National Park Subsistence Resource Commission recommended rejection, as did the Office of Subsistence Management in its recommendation to the Federal Subsistence Board. Proposal WP10-102 requested that harvest limit be raised from one caribou to two caribou in Unit 12 remainder. Proposal WP10-103 requested the season opening date be put into regulation and start on October 21st. Ultimately, the proposals were placed on the consent agenda with a recommendation of reject and the Federal Subsistence Board concurred. The June 2009 Nelchina caribou herd census showed approximately 33,000 caribou (ADFG 2009a), a little below the State's management objective of 35,000–40,000 caribou. During the EIRAC 2010 winter meeting TNWR, staff reported that Mentasta Caribou had been observed within the boundaries of the TNWR during their fall surveys. Wrangell St. Elias National Park and Preserve staff reported the MCH herd was approximately 450 animals and could not sustain a hunt (EIRAC 2010, Putera 2010). The most recent census of the MCH was conducted in 2010 and resulted in a population estimate of 336 animals. This census also noted that the cow component of the population was critically low and calf production was below management objectives in the Mentasta Caribou Herd Management Plan (Putera 2011). While the MCH is present on the refuge during the winter caribou hunt, it is unknown how many Mentasta Caribou are mixing with the NCH (EIRAC 2010).

Effects of the Proposal

If either WP12-23 is adopted, it would allow a harvest on a population that has chronically low productivity which would have detrimental effects on the caribou herd and ultimately subsistence users, by driving the population of the herd to the point where recovery is more difficult. The additional harvest is unlikely to have any biological effect on the NCH. However, impacts to the MCH are a conservation concern and deters from the principles in the MCH management plan. While it is known that the MCH migrates with the Nelchina herd, it is not known with certainty how many Mentasta caribou mix with the NCH.

OSM CONCLUSION

Oppose Proposal WP12-23

Justification

The Mentasta Caribou herd as currently defined exists in low numbers and their occupation of summer and winter ranges results in small groups distributed as a fragmented population. Because of this, total numbers and composition can be significantly affected by sightability when searching for small groups of caribou over vast terrain. Mixing of the Nelchina and Mentasta caribou bulls makes interpreting fall composition surveys difficult and there is limited ability to predict the extent, timing or frequency of mixing between the two herds and it would be impossible to discern whether the bull was from the Mentasta herd or the Nelchina herd. The possibility of increased winter mortality due to icing events may result in malnutrition and starvation for more susceptible bulls with depleted energy reserves following the rut furthering the decline of the Mentasta caribou population. In addition, calf production and survival remain critically low and have resulted in low numbers of adult cows and bulls observed during the fall population surveys. Calf production and recruitment in particular remains below the management objective of a running two-year mean fall calf recruitment greater than 80 calves, as stated in the "Mentasta Caribou Herd Cooperative Management Plan (1995)." These declines are indicative of low production, poor recruitment, and low survival rates among cohorts within the population.

Federal public lands within Unit 11 should remain closed to caribou hunting for the conservation of a healthy population (Section 815(3)).

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-23. The Council has conservation concerns and felt that it was inconsistent to open a new area in a location already of concern for increased hunting pressure. The Council notes that, if populations are strong enough to establish a season, customary and traditional use should be considered first. The council also finds changing an existing hunt area to create a new area confusing.

Eastern Interior Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-23. The Council cites conservation concerns for the Mentasta Caribou Herd, including chronically low numbers, low recruitment, and concerns about incidental take.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-23/24: Caribou Hunt GMU11 within Wrangell-St. Elias

Introduction: WP12-23 seeks to establish a hunt for caribou in Unit 11, within Wrangell-St. Elias National Park and Preserve, from October 21 through March 31 by Federal registration permit. If adopted, WP12-23 would allow the harvest of one bull caribou per household by Federal Registration Permit from October 21 through March 31 with a limit of 25 permits issued. The proponent states the Mentasta caribou herd co-mingles with the Nelchina caribou herd within the requested hunt area and they believe that most the harvest would be from the Nelchina herd. The proponent states that while there is an opportunity to harvest caribou in other nearby locations, they are not traditional harvest locations and the expense in cash and time continue to place a burden on people with a heavy reliance on wild foods.

WP12-24 seeks to establish a season for one bull caribou from August 1 through September 30 in Unit 11 by Federal registration permit within Wrangell-St. Elias National Park and Preserve.

Impact on Subsistence Users: More caribou would be harvested by Federal registration permit in a new area possibly at the long term expense of the herd and continuance of subsistence uses.

Opportunity Provided by State: No open season.

Conservation Issues: If adopted these proposals would allow harvest of a population known for chronically low productivity. Such harvest would have detrimental effects on the caribou herd and ultimately subsistence users, by driving the population of the herd to the point where recovery is more difficult.

Enforcement Issues: Both proposals would further malign state and federal regulations.

Other Comments: The guidelines set forth for a harvest in the management plan are based on the 2010 census in which the herd met the required population level, bull/cow and calf cow ratios.

Recommendation: Oppose

WRITTEN PUBLIC COMMENTS

Oppose. The commission opposes the proposal due to serious conservation concerns about the Mentasta caribou herd. The herd is too small to sustain a harvest. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-27 Executive Summary	
General Description	Proposal WP12-27 requests a positive customary and traditional use determination for goat in Unit 11 by residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46). *Submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee*
Proposed Regulation	**Customary and Traditional Use Determination Unit 11—Goat** *Residents of Unit 11, Chitina, Chistochina, Copper Center, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***
OSM Conclusion	**Support**
Southcentral Regional Council Recommendation	**Support**
Eastern Interior Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Support**

STAFF ANALYSIS
WP12-27

ISSUES

Proposal WP12-27, submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee, requests a positive customary and traditional use determination for goat in Unit 11 by residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and Nabesna Road (mileposts 25–46).

DISCUSSION

Proposal WP12-27 seeks a positive customary and traditional use determination for the residents of Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46), referred to in this analysis as the proposal area (see **Map 1**), to harvest goat in Unit 11. The proponent states that residents of the proposal area have subsistence use patterns that closely resemble those of Slana and Mentasta Lake (located in Unit 13). Further, the proponent states that the residents of the proposal area 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 black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River. 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, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake.*

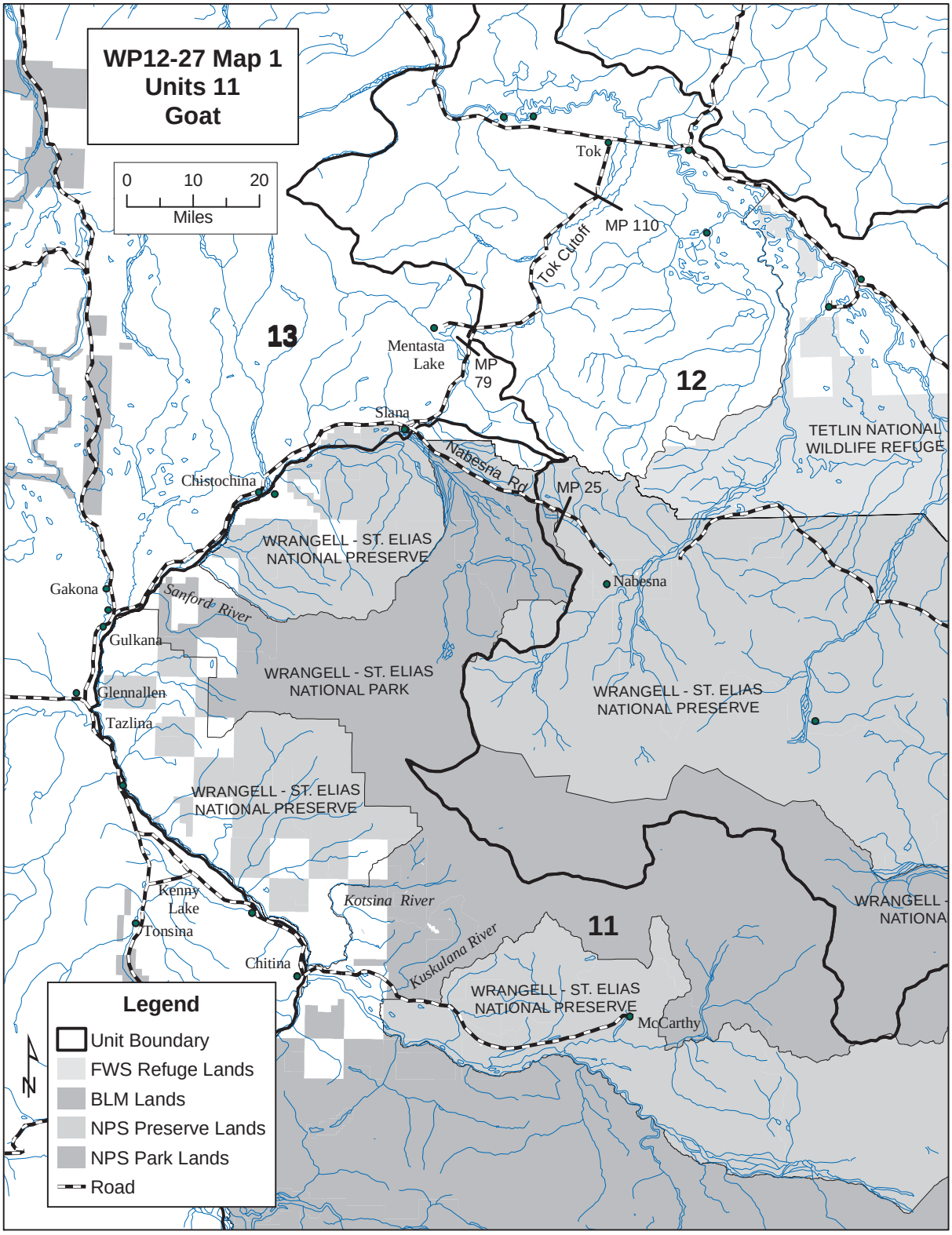
Proposed Federal Regulation

> **Customary and Traditional Use Determination Unit 11—Goat**
>
> *Residents of Unit 11, Chitina, Chistochina, Copper Center, Gakona, Glennallen, Gulkana, Mentasta Lake, Slana, Tazlina, Tonsina, and Dot Lake,* ***Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and Nabesna Road (mileposts 25–46).***

Additionally, Federal regulations provide a harvest limit of 45 goats after which the Wrangell-St. Elias National Park Superintendent will close Federal public lands to goat hunting.

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%).


WP12-27 Map 1
Units 11
Goat
0 10 20
Miles
Tok
MP 110
Tok Cutoff
13
Mentasta Lake
MP 79
12
Slana
Nabesna Rd
MP 25
TETLIN NATIONAL WILDLIFE REFUGE
Chistochina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Nabesna
Gakona
Sanford River
Gulkana
WRANGELL - ST. ELIAS NATIONAL PARK
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Glennallen
Tazlina
WRANGELL - ST. ELIAS NATIONAL PRESERVE
Kenny Lake
Kotsina River
11
Tonsina
Chitina
Kuskulana River
WRANGELL - ST. ELIAS NATIONAL PRESERVE
McCarthy
Legend
Unit Boundary
FWS Refuge Lands
BLM Lands
NPS Preserve Lands
NPS Park Lands
Road
N

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 given after adoption from the State.

In 1997, the Board addressed Proposal 22, which addressed customary and traditional uses of goat in Unit 11. The Board recognized the customary and traditional use of goat for the residents of Unit 11 and the residents of the Native Village of Dot Lake, Chistochina, Gulkana, Gakona, Mentasta, Copper Center, Chitina, Tonsina, and Tazlina. Some 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 Federal Subsistence 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 (WP98-70) 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 25 (WP98-70) was deferred until the following year. In 1999, Proposal 11 (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.

By comparison, other large mammal species have had similar regulatory changes made over the past decade, including the regulations for sheep, brown bear, and black bear. Residents of the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and the Nabesna Road (mileposts 25–46) have positive customary and traditional use determinations in Unit 11 for sheep, brown bear, and black bear. The residents of these areas have had a positive customary and traditional use determination for sheep since 1991/1992, and for brown bear and black bear since the last regulatory cycle (2010). Thus, after careful review, the Board decided that indeed the residents residing along the Tok Cutoff Road (mileposts 79–110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) have an established pattern of use for brown and black bear, as well as for other species.

Harvest History

Distribution

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

There is scant harvest data for communities that hunt in Unit 11. Wrangell-St. Elias National Park and Preserve, in cooperation with ADF&G, conducted subsistence harvest surveys in 2011 and data will be available in late 2011 or 2012. The previous ADF&G harvest surveys were limited in scope, revealing low harvest numbers for Mentasta, Mentasta Pass, Nabesna Road, and Slana in the years 1982 and 1987 (**Table 1**). Between 2005–2010 there were 574 hunting permits issued for goat in Unit 11 including 495 resident and 79 non-resident permits (FWS 2011). There were 49 Federal subsistence goat hunting permits issued in 2011 for Unit 11 (FWS 2011). Harvest reports are sparser for Unit 11 by relevant communities (**Table 2**). The combined FWS and ADF&G data (FWS 2011) reveal harvests by residents of Mentasta Lake and Slana, but not for Mentasta Pass, Nabesna Road, or the Tok Cutoff Road. In Mentasta Lake, 9 permits were issued, whereas in Slana only 5 permits were issued between 2005–2011. Note that it is difficult to determine harvest estimates based on the ADF&G harvest ticket data because residents

Table 1. Subsistence Goat Harvest by Community (ADF&G CSIS Database 2011)

Community Name	Study Year	Percent Using	Percent Attempting to Harvest	Percent Harvesting	Reported Harvest	Reported Pounds Harvested	Average Lbs Harvested per Household	Per Capita Lbs Harvested
Mentasta	1982	0		0	0	0	0	0
Mentasta	1987	0	0	0	0	0	0	0
Mentasta Pass	1987	0	0	0	0	0	0	0
Nabesna Road	1982	12.5		12.5	1	72.5	9.06	2.08
Nabesna Road	1987	0	0	0	0	0	0	0
Slana	1982	0		0	0	0	0	0
Slana	1987	0	0	0	0	0	0	0
Slana Homestead	1987	0	0	0	0	0	0	0
Slana Homestead	1987	0	0	0	0	0	0	0

can get their mail at one of several post offices in the area and their mailing address does not necessarily indicate where they actually live.[1]

In the spring of 2011, ADF&G Subsistence Division staff and staff at Wrangell-St. Elias National Park conducted harvest surveys in the area, focusing on subsistence activities in 2010. Preliminary data became available after the printing of the Southcentral and Eastern Interior Council books, but was presented verbally to the Councils at their fall meetings (Cellarius 2011, pers. comm.). For that part of the road that falls within Unit 12 (milepost 25 to 46), nine permanent households were identified. Of these nine, five households were interviewed and use-area mapping was conducted with four households. None of these four households hunted for or harvested goat in 2010. For the Mentasta Pass area (milepost 79 to 110 of

[1]For example: Nabesna Road residents are on a rural delivery route that have a Gakona address and a Gakona zip code. The same zip code is also used to deliver mail to the Slana post office although mail for Slana has "Slana" on the address rather than "Gakona" (Cellarius 2010, pers. comm.).

Table 2. Harvest by Community 2005-2010 (FWS 2011)

Community	Species	Issued	State	Non-Res	Hunted	Male	Female	Ukn Sex	Dayshunt
Mentasta Lake	Goat	10	10	0	9	0	0	0	41
Slana	Goat	5	5	0	0	0	0	0	0
Mentasta	no data								
Nabesna Road	no data								

Harvest by Community by year

Community	Regyear	Species	Issued	State Res	Non-Res	Hunted	Male	Female	Ukn Sex
Mentasta Lake	2010	Goat	1	1	0	0	0	0	0
	2009	Goat	2	2	0	2	0	0	0
	2007	Goat	1	1	0	1	0	0	0
	2006	Goat	2	2	0	2	0	0	0
	2005	Goat	3	3	0	3	0	0	0
FG1101	report total:		9	9	0	8	0	0	0

Community	Regyear	Species	Issued	State Res	Non-Res	Hunted	Male	Female	Ukn Sex
Slana	2010	Goat	3	3	0	0	0	0	0
	2009	Goat	1	1	0	0	0	0	0
	2007	Goat	1	1	0	0	0	0	0
	report total:		5	5	0	0	0	0	0

the Tok Cutoff road), 12 permanent households were identified. Seven households were interviewed and use-area mapping conducted. Of these seven households, three households hunted for or harvested goats during 2010, in all cases in Unit 11. Two households in the Mentasta Pass area currently have individual customary and traditional use determinations for goat in Unit 11 (Cellarius 2011, pers. comm.). Thus, at least one household not recognized with an individual customary and traditional use determination for goat in Unit 11 hunted there for this species in 2010.

Community Characteristics

The settlement patterns of the Upper Tanana and Copper Basin areas are diverse; some residents live in "recognized" communities and many households are dispersed along the road system between communities (Cellarius 2010, pers. comm. *in* staff analysis for WP10-29/30.). It is difficult to describe the community characteristics of Tok Cutoff Road (Mentasta Pass) and Nabesna Road because they are not communities per se. They are not census designated places (U.S. Census 2000). Neither is listed in the State of Alaska, Division of Community and Regional Affairs Community Database Information Summaries (DCRA 2011). Though Mentasta Pass and Nabesna Road were not listed as 'communities' in the DCRA database, they are considered a 'community' in the ADF&G new 'draft' Division of Subsistence community database (ADF&G 2011).

Tok Cutoff Road or Mentasta Pass

For the purposes of this analysis, the area of milepost 79–110 was designated by the proponent because this segment of the road extends north from the boundary of Units 12 and 13. The Mentasta Pass area of

the Tok Cutoff Road was described as "homesites along the Tok Cutoff from milepost 79–110" (McMillan and Cuccarese 1988:127; NPS 1995:323).

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 11 households in the Tok Cutoff Road area with an estimated population of 26 people (ADF&G 2011). The Mentasta Pass or Tok Cutoff Road survey unit for the 1987 study was the area between mileposts 79–110 (McMillan and Cuccarese 1988: 127). These households harvested an estimated 187 pounds of subsistence resources per person or approximately 4,962 pounds for the Tok Cutoff Road area (ADF&G 2011). At the Fall 2009 EISRAC meeting, one member stated,

> *…the community around the Tok Cutoff, it is where I live, I know, but I can tell you that the surrounding area from Mentasta on the Tok Cutoff Road and Nabesna Road, we're like all one. We all kind of do the same thing. So I just wanted to align the people where we live (EISRAC 2009:322).*

Although there is no 2010 census information specifically for Mentasta Pass, the 2011 NPS/ADF&G harvest survey of Mentasta Pass identified 12 households, which is one more household than was present during the 1987 study. Additional information on the subsistence activities of these households will be available following analysis of the 2011 survey results (Cellarius 2011, pers. comm.). Nabesna Road

For the purposes of this analysis, the area of milepost 25–46 was designated by the proponent because this segment of the road falls within Unit 12. Mileposts 1–24 of the Nabesna Road are in Unit 11.

Like Mentasta Pass, this area is primarily comprised of homesites along the Nabesna Road. Nabesna Road is a state maintained road, much of which is located in Wrangell-St. Elias National Park and Preserve. The road was constructed to access the Nabesna gold mine in the 1930s although the area was used traditionally by Upper Ahtna and Upper Tanana Athabascans. The road follows a historic route, also used by early homesteaders, between Upper Ahtna and Upper Tanana territory (Stratton and Georgette 1984:155). Generally, when people refer to "Nabesna," they are referring to the end of the road where the mine was located. There are a number of localities along the road that are culturally significant, including the Ahtna Athabascan family settlement of Twin Lakes in the Unit 12 portion of the road and Batzulnetas (Ahtna) in Unit 11 (Cellarius 2010, pers. comm.; Reckord 1983:146–150).

In her early 1980s study on subsistence in Wrangell-St. Elias National Park, Reckord described the Nabesna Road area:

> *At Slana, a dirt road parallels the Copper River and its mass of arteries for 20 miles…to the Old Nabesna Mine…Approximately 10–12 families live along the road...most live in the area year round. At least seven of the families are involved principally in the guiding business (1983:269–270).*

According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 13 households in the Nabesna Road area with an estimated population of 37 people (ADF&G 2011). The "Nabesna Road" survey unit of the 1987 study was from mile 7 of the Nabesna Road to the end of the road at the Nabesna mine site, referred to as Nabesna (McMillan and Cuccarese 1988:132). In 1987, these households harvested approximately 250 pounds of subsistence resources per person or 9,212 pounds total for the Nabesna Road study area (ADF&G 2011).

Although there is no 2010 census information specifically for the Nabesna Road, the 2011 NPS/ADF&G harvest survey of the area identified nine households residing along the Unit 12 portion of the road. (This

is a smaller area than the 1987 Nabesna Road survey unit.) Additional information on the subsistence activities of these households will be available following analysis of the 2011 survey results.

Mentasta Lake

The proponent stated that the subsistence harvest patterns of the residents of the Tok Cutoff Road (mileposts 79–110, Mentasta Pass) and Nabesna Road (mileposts 25–46), both located in Unit 12, are similar to those of Mentasta Lake and Slana, both located in Unit 13. For this reason, the characteristics of these two communities are reviewed here.

Not to be confused with Mentasta Pass, Mentasta Lake, also referred to as Mentasta, is a distinct community and a census designated place located in Unit 13. According to the Alaska Division of Community and Regional Affairs (DCRA) community database, the current 2010 population is approximately 112 and it is located 6 miles off the Tok Cutoff Road on the west side of Mentasta Pass. Mentasta Lake is further described as "primarily Athabascan and subsistence activities are important…the families in Mentasta Lake come from Nabesna, Suslota, Slana and other villages with the area" (DCRA 2009). According to ADF&G Subsistence Division surveys conducted in 1987, there were approximately 25 households in the Mentasta Lake area with an approximate population of 77 people (ADF&G 2011). In 1987, these households harvested approximately 125 pounds of subsistence resources per person or a total community harvest of 9,672 pounds (ADF&G 2011). Mentasta Lake is situated on the northern border between the Ahtna Athabascan (Copper Basin) communities or territory and the Upper Tanana Athabascan communities or territory (Map in Haynes and Simeone 2007:9). This border also bisects the Nabesna Road as does the border between Units 11 and 12.

Slana

Slana, according to DCRA, had a population of 107 people in 2010, "the community is comprised primarily of homesteaders…it stretches along the Nabesna Road" (to approximately mile 4) (DCRA 2010). Slana has also been described as "a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads (McMillan and Cuccarese 1988:142). According to ADF&G Subsistence Division surveys, conducted in 1987, there were approximately 25 households in the Slana area with an approximate population of 57 people (ADF&G 2011). In 1987, these households harvested approximately 249 pounds of subsistence resources per person or a total community harvest of 14,185 pounds (ADF&G 2011).

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)).

During past regulatory cycles, the Board has determined that the residents of the Tok Cutoff Road (mileposts 79–110 Mentasta Pass), and the Nabesna Road (mileposts 25–46) should have positive customary and traditional use determination for a number of species, including, but not limited to sheep, black bear, and brown bear. It logically follows that these residents' positive customary and traditional uses be recognized for goat as well, given the residents' reliance on subsistence resources and as guided by the eight factors for customary and traditional use determinations.

The Board previously determined that residents (in many communities) 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 not whether there is a customary and traditional pattern of use of goat, but rather whether or not the residents of the proposal area have a pattern of use goat in Unit 11. As such, 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 (Proposal 22), 1998 (Proposals 24 & 25), 1999 (Proposals 9 & 11) and 2000 (Proposals WP00-11 and WP01-15) (FSB 1997, 1998; FWS 1997a, 1997b, 1998, 1999, 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. The discussion of the eight factors in the analyses for Proposals 22 in 1997, 24/25 in 1998, 25/27 in 1999, WP00-11, and WP01-15 indicates that the residents of Unit 11 generally exhibit the eight factors for harvesting goat in Units 11 and the Board has recognized the customary and traditional uses of these residents for goat (FSB 1997).

Some of the Board's decision for limiting customary and traditional determinations in these areas to the communities already recognized was partially based on the premise that the Unit 12 boundary is not only a boundary of management units, but also a boundary between Native cultures and harvest areas. Unit 12 residents, however, are not limited to Athabascan residents. In the early 1980s, Reckord noted:

> *Subsistence resources have played a major role in the history of white people in the Copper River Valley. From the very first visit of Russian-Aleut explorers in 1848 through the gold rush and mining period at the turn of the century and into the present, subsistence resources have contributed to the diet of the residents of the valley…Over the years an indigenous white culture developed which highly valued the use of subsistence foods such as moose, caribou, sheep and fish. At first some of the white settlers learned from the Native people; they were educated by young Natives in the local species and where these species could be taken…Contrary to the belief*

> *of some observers, the use of subsistence resources by white people in the region extends beyond mere recreation (1983:166).*

Further, Reckord described the Tok Cutoff area:

> *The people living along the Tok Cutoff often live several miles from their nearest neighbors. Small settlements are found at Gakona, Chistochina, and Mentasta (Lake). The Tok Cutoff people are often oriented to businesses serving the tourists and hunters who regularly travel this route between the Copper River Valley and the Alaska Highway. Homesteaders, retired people, and guides are also found living along the road. Some of these residents have lived here for 20 or 30 years and suddenly find the area developing around them…Most of the permanent residents along the Tok Cutoff utilize a number of subsistence species each year. Most people are oriented to the highway…It is obvious when talking to the Tok Cutoff residents that it is the bush lifestyle that has brought them to this place (1983:256–257).*

The ADF&G harvest ticket database was searched for harvest information for the proposal area, but the database does not accurately reflect harvests for the areas of consideration in this proposal because of the difficulties in identifying location of hunter residence by mailing address. Residents in the proposal area get their mail in communities near the area, so there is no way to distinguish their harvests from others in these communities. However, recent harvest surveys conducted by the NPS and ADF&G reveals new information, as noted under the harvest history section above, indicating some harvest of goats by some residents of the area. Although ADF&G and NPS had hoped to survey all residents of the proposal area, refusals and unsuccessful contacts resulted in less than 100 percent samples. Consequently, the data are not conclusive (Cellarius 2011, pers. comm.).

The proponent states that the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) share similar subsistence patterns with the residents of Slana and Mentasta, which are both in close proximity to the proposal area (see **Map 1**). Mentasta Lake is located only 6 miles to the west of the Tok Cutoff Road. Slana is a dispersed community that is centered on the intersection of the Tok Cutoff and Nabesna roads. Slana is in Unit 13 on the border between Units 11 and 13. Mentasta Lake also is in Unit 13, but close to the border of Unit 12. The proposal area is in Unit 12. Mentasta Lake and Slana are both included in the positive customary and traditional use determinations for goat (and other species) in Unit 11 see **Map 1).** 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. The Tok Cutoff Road extends between Slana and Tok, which are resident zone communities, and the Nabesna Road extends between Slana and Nabesna, which also are resident zone communities. A designation by the National Park Service as a resident zone community indicates that the residents in these communities are recognized as having customary and traditional uses of the Wrangell-St. Elias National Park. Thus, the National Park Service recognizes Slana and Mentasta as resident zone communities and these communities are also including in the customary and traditional use determination for goat for Unit 11. The people living in the proposal area in close proximity to Slana and Mentasta Lake should not be excluded from being eligible to hunt in the same areas that Slana and Mentasta Lake hunt in just because they live along a road and not in Slana or Mentasta Lake. Therefore, the residents of the proposal area should have the same customary and traditional use determinations as Slana and Mentasta. Finally, because positive customary and traditional use determinations have been added for these same communities for other species, it follows that goat should also be included along the same rationale.

Effects of the Proposal

If this proposal is adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would be able to hunt goat in Unit 11, similar to the communities closest to their area of residence, Mentasta Lake and Slana. Residents of the proposal area would still have to comply with National Park Service regulations for engaging in subsistence activities in Wrangell-St. Elias National Park, which requires that subsistence users live within the Park's resident zone or have been issued a subsistence permit (13.440 permit) by the park superintendent.

If this proposal is adopted, there would be minimal effects on nonsubsistence users because goat hunting in Unit 11 includes National Preserve lands where nonrural residents may hunt under State of Alaska regulations.

If this proposal is adopted, no effects on goat populations are anticipated as it is not expected that goat harvests would increase substantially. There are approximately 21 households estimated to be in the areas under consideration (Cellarius 2011, pers. comm.).

If this proposal is not adopted, the Unit 12 residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass), and the Nabesna Road (mileposts 25–46) would not be able to harvest goat in Unit 11 that is Park land, however, they could request from the Board individual customary and traditional use determinations for goat in this area.

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 general State hunting regulations.

OSM CONCLUSION

Support Proposal WP11-27.

Justification

The residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) may have been inadvertently excluded during in the previous customary and traditional use determinations for goat as the determinations were reviewed by community, not household. These areas are not within any specific community. The proponent states that the residents of the proposal area have subsistence use patterns more similar to those of Slana and Mentasta, which are in close proximity to the proposal area. While there is little available information on the use of goats by residents of the proposal area, the use by residents of Slana and Mentasta, generally exhibit the eight factors for harvesting goat in Unit 11. Residents of Slana and Mentasta have positive customary and traditional use determinations for 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. Consideration should be given to include the people living along a road close to a community in the customary and traditional use determinations of the closest community or communities. The customary and traditional uses of the residents of the Tok Cutoff Road and Nabesna Road also have been recognized by the Federal Subsistence Board for black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River. Recognizing the customary and traditional uses for goat in Unit 11 by the residents of the Tok Cutoff Road (mileposts 79 –110, Mentasta Pass) and Nabesna Road (mileposts 25–46) 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 RECOMMENDATION

Southcentral Subsistence Regional Advisory Council

Support Proposal WP12-27**.** The Council finds the analysis information adequately establishes a pattern of customary and traditional use.

Eastern Interior Subsistence Regional Advisory Council

Support Proposal WP12-27. The Council finds the analysis justifies support of the determination and notes that the exclusion appears to be the result of oversight.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP12-27
December 5, 2011, Page 1 of 1

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-27 (GMU 11 C&T Goats): This proposal was submitted by the Upper Tanana Fortymile Fish and Game Advisory Committee to establish a positive Federal Customary and Traditional Use determination for mountain goats in Unit 11 for the residents of the Tok Cutoff Road (mileposts 79-110 Mentasta Pass) and Nabesna Road (mileposts 25-46).

Introduction: This proposal seeks a positive customary and traditional use determination for the residents of Tok Cutoff Road (mileposts 79 -110, Mentasta Pass) and Nabesna Road (mileposts 25-46). Customary and traditional uses of these residents have already been recognized by the Federal Subsistence Board for black and brown bear, sheep, and wolf in Unit 11 and caribou and moose in Unit 11 north of the Sanford River.

Impact on Subsistence Users: If adopted, federally qualified subsistence users who reside within the identified area will be granted opportunity to harvest in the federal subsistence goat hunt in Unit 11.

Opportunity Provided by State: The State provides a resident and nonresident goat hunt in Unit 11 from September 1 through November 30 with a bag limit of one goat by registration permit. Harvests are low, averaging only 11 goats per year (range = e.g.4 – 17) between 2001 and 2010. Local residents averaged < 1 goat per year (range = e.g. 0-2). Much of GMU 11 remains lightly hunted for goats because of difficult access and the limited availability of goats in the Wrangell Mountains.

Other Comments: The Nebesna residents proposing this change purport that they were originally omitted from the previous Customary and Traditional finding by accident. This is the first time this question has been posed before the Federal Subsistence Board.

Recommendation: Support

WRITTEN PUBLIC COMMENTS

Support. The commission unanimously supports the proposal for the reasons stated in the justification for the OSM staff recommendation. The commission heard testimony from two residents who live in the proposal area and hunt goats as well as other species in Unit 11. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-34/35/36 Executive Summary	
General Description	Proposal WP12-34, submitted by the Defenders of Wildlife, seeks to shorten wolf seasons and lower the harvest limit for wolves in Unit 13D. Proposals WP12-35 and -36 submitted by the Defenders of Wildlife, seek to close the Unit 14C wolf hunting and trapping seasons.
Proposed Regulation	**WP12-34** **Unit 13D—Wolf Hunting** ~~*10*~~*5 Wolves* — ***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~ **WP12-35** **Unit 14C—Wolf Hunting** ~~***5 Wolves***~~ — ***No open season*** ~~*Aug. 10–April 30*~~ **WP12-36** **Unit 14C—Wolf Trapping** ~~*No limit*~~ — ***No open season*** ~~Nov. 10–Feb. 28~~
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the 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
WP12-34/35/36

ISSUES

Proposal WP12-34, submitted by the Defenders of Wildlife, seeks to shorten wolf seasons and lower the harvest limit for wolves in Unit 13D. Proposals WP12-35 and -36 submitted by the Defenders of Wildlife, seek to close the Unit 14C wolf hunting and trapping seasons.

DISCUSSION

Proposal WP12-34 requests that wolf hunting season in Unit 13D be changed from August 10–April 30 to November 1–March 31, and that the harvest limit be reduced from 10 wolves to five. The proponent notes that by late April, in Units 13D, hides are rubbed and pregnant females are approaching full term. The proponent notes that pups are only half grown at the start of the current wolf hunting seasons in Unit 13D and that in August, hides are not suitable for commercial sale or trophies.

Proposals WP12-35 and -36 request that wolf hunting and trapping seasons be closed in Unit 14C to provide for more wildlife viewing opportunities.

Existing Federal Regulation

Unit 13D—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 14C—Wolf Hunting	
5 Wolves	*Aug. 10–April 30*
Unit 14C—Wolf Trapping	
No limit	*Nov. 10–Feb. 28*

Proposed Federal Regulation

Proposal WP12-34

Unit 13D—Wolf Hunting	
~~*10*~~***5*** *Wolves*	***Nov. 1–Mar. 31***
	~~*Aug. 10–April 30*~~

Proposal WP12-35

Unit 14C—Wolf Hunting	
~~***5 Wolves***~~	***No open season***
	~~*Aug. 10–April 30*~~

Proposal WP12-36

Unit 14C—Wolf Trapping

~~*No limit*~~	***No open season*** ~~Nov. 10–Feb. 28~~

Existing State Regulation

Unit 13D—Hunting

10 Wolves per day	*Aug. 10–April 30*

Unit 14C remainder (outside special management areas)—Wolf Hunting

5 Wolves	*Aug. 10–May 31*

Unit 14C (Glacier Creek, Twentymile River, drainages of the Knik River outside Chugach State Park)—Wolf Trapping

20 Wolves	*Dec. 1–April 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 8% of Unit 13D and consist of 86% U.S. Forest Service (USFS) and 14% Bureau of Land Management (BLM) managed lands (see **Unit 13 Map**). Federal public lands comprise approximately 17% of Unit 14C and consist of 75% USFS, 25% BLM and <0.1% U.S. Fish and Wildlife Service (FWS) managed lands (see Unit 14 Map).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Unit 13D. All rural residents have a positive customary and traditional use determination to harvest wolves in Unit 14C.

Regulatory History

The Federal subsistence wolf trapping season in Unit 13D extended from November 1–March 31 in regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Southcentral Alaska Subsistence Regional Advisory Council (Council) changed the season to November 10–March 31 beginning in regulatory year 1994/95. Action taken on a proposal from the Office of Subsistence Management (Proposal 2), and supported by the Council, changed the season to October 15–April 30 in regulatory year 2000/2001. There has been no harvest limit under wolf trapping regulations in Unit 13D since 1990.

The Federal subsistence wolf hunting season in Unit 13D has extended from August 10–April 30 since 1990. There was no harvest limit for wolf hunters in Unit 13D in regulatory years 1990/91 and 1991/92. The harvest limit was reduced to ten wolves in regulatory year 1992/93. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council reduced the Unit 13D harvest limit to five wolves in regulatory year 1994/95. Action taken on a proposal from the Eastern Interior Alaska Subsistence Regional Advisory Council (Proposal 24) and supported by the Southcentral Alaska Subsistence Regional

Advisory Council increased the harvest limit for hunters in Unit 13D to ten wolves in regulatory year 2000/01.

The Federal subsistence, Unit 14C, wolf hunting season has been August 10–April 31 since 1990. The Unit 14C wolf hunting harvest limit was one wolf for regulatory years 1990/91 to 1993/94. Action taken on a proposal from ADF&G (Proposal 2) and supported by the Council changed this harvest limit to 5 wolves in regulatory year 1994/95.

Trappers may shoot a free ranging wolf on USFS, BLM and FWS lands in these units during trapping season. The Federal subsistence wolf trapping season in Unit 14C is November 10–February 28. Hunters and trappers may harvest wolves under State regulations on USFS, BLM, and FWS lands in these units.

The proponent of WP12-35 and -36 is seeking to provide more wildlife viewing opportunities in Unit 14C. The Federal Subsistence Board restricted subsistence to provide for wildlife viewing once before. In 1996, the U.S. Department of Agriculture, U.S. Forest Service submitted a proposal to close a portion of Anan Creek in Unit 1B to brown bear hunting and to modify a closure to black bear hunting to provide for wildlife viewing. The change was requested to align with State regulations and to address potential safety hazards of bear hunting near a viewing area. The Southeast Alaska Subsistence Regional Advisory Council supported that proposal and it was adopted by the Board in April 1997.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southcentral Alaska Subsistence Regional Advisory Council opposed that proposal, as did seven other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Council's March 2005 meeting in Anchorage, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005).

In 2009, Defenders of Wildlife and the Alaska Wildlife Alliance submitted Proposals WP10-36 and -37 to shorten wolf seasons and lower harvest limits for wolves in Unit 13D. That year the Alaska Wildlife Alliance also submitted Proposal WP10-41 to close the Unit 14C wolf hunting season. The Southcentral Regional Advisory Council opposed Proposals WP10-36, -37 and -41 noting that there were no wolf conservation concerns in these units and that wolf populations are healthy. The Federal Subsistence Board rejected these proposals (WP10-36, -37 and -41).

Biological Background

Wolves (*Canis lupus)* have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are found throughout most of Units 13D and 14C. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, beaver, and salmon. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs and territories when they locate dispersers of the opposite sex from another pack and an unoccupied territory (Rothman and

Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. Kelleyhouse (2006) noted that radio-collared wolves from the Kenai Peninsula, Denali National Park, and Units 20 and 12 have been observed or harvested in Unit 13.

The home range size is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008).

Unit 13D

Kelleyhouse (2006) presented the wolf population data for Unit 13 as a whole, and did not break out the information for Unit 13D. While information is limited, she estimated that in Unit 13 there were 220–520 wolves in 50–70 packs in regulatory years 1997/98 to 2004/05. This represented a density of approximately 14–32 wolves/1000 mi.^{2}. Wolf territory, size and productivity are thought to be primarily a function of moose density (Kelleyhouse 2006).

Unit 14C

ADF&G (2010) reported that based on an aerial survey in 1995 and anecdotal reports, Unit 14C has at least 25–30 wolves in 4–5 packs. One of these packs uses the Twentymile River drainage in the southeastern corner of the subunit, which is in the Chugach National Forest. ADF&G noted that a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide refugium for one of the subunit's packs and partial refugium for at least two other packs. Peltier (2006) noted that ADF&G's objective was to maintain a minimum population of 20 wolves in Unit 14C.

Harvest History

Stratton and Georgette (1984) provide some subsistence harvest information for communities in the Copper River Basin. Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. Once snow-cover and ice are adequate for snowmachine travel, trappers began establishing and maintaining trap lines. Wolf harvest by trappers is normally spread throughout the winter and declines as snow and ice conditions deteriorate. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by

other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are low.

Unit 13D

From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Unit 13D ranged from 7 to 22 wolves per year (**Table 1**). Of the 153 wolves harvested during these years, 90 were taken using traps or snares, and 63 were shot. Forty one wolves (26%) were taken during the months of August, September, October and April (**Table 1)**. Since 2001, the estimated annual harvest rate of wolves in Unit 13D has been 9–38% (average 23%) (ADF&G 2010). Wolf numbers in Unit 13D are stable (ADF&G 2010).

Table 1. Reported wolf harvest and method of take for Unit 13D, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Aug.–Oct. & April harvest	Method of take for total harvest from Unit 13D				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	10	3	4	40	6	60	0
2000/01	8	2	6	75	2	25	0
2001/02	19	2	13	69	6	31	0
2002/03	13	3	7	54	6	46	0
2003/04	8	3	4	50	4	50	0
2004/05	8	4	3	43	5	57	0
2005/06	22	9	17	77	5	23	0
2006/07	19	4	10	53	9	47	0
2007/08	16	4	11	69	5	31	0
2008/09	17	6	13	76	4	24	0
2009/10	13	1	2	15	11	85	0

Unit 14C

From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Unit 14C ranged from 0 to 4 wolves per year (**Table 2**). Most of these wolves were shot. Peltier (2006) estimated that Unit 14 wolf harvest rates were approximately 22–35% in regulatory years 2002/03 to 2004/05. He observed that weather and trapping conditions can greatly affect the number that are taken with traps and snares, whereas the number shot is more dependent on travel conditions. In Unit 14, hunters take a significant portion of the annual wolf harvest incidental to hunting for other species.

Table 2. Reported wolf harvest and method of take for Unit 14C, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Method of take for total harvest from Unit 14C				
		Trap/snare	%	Shot	%	Unknown
1999/2000	1	0	0	0	0	1
2000/01	1	0	0	1	100	0
2001/02	0	0	0	0	0	0
2002/03	0	0	0	0	0	0
2003/04	0	0	0	0	0	0
2004/05	2	1	100	0	0	1
2005/06	0	0	0	0	0	0
2006/07	1	0	0	1	100	0
2007/08	4	0	0	4	100	0
2008/09	0	0	0	0	0	0
2009/10	1	0	0	0	0	1

Effects of the Proposal

If adopted, these proposals will decrease the opportunity to harvest wolves under Federal subsistence regulations in Units 13D and 14C.

If proposal WP10-34 is adopted the Federal wolf hunting seasons in Unit 13D will be shortened and harvest limits will be reduced. Proposal WP10-34 will eliminate the opportunity for subsistence users to harvest wolves under Federal regulations during the fall and early spring when they are hunting other species. Between regulatory years 1999/2000 and 2009/10, 26% of the reported Unit 13D wolf harvest occurred in August, September, October and April (**Table 1)**. Proposal WP10-34 will make the Federal subsistence wolf hunting season shorter than the State season. WP10-34 will also make the Federal subsistence wolf hunting harvest limit lower than the State regulations.

If Proposal WP10-35 is adopted, the Federal wolf hunting season in Unit 14C will be closed. If Proposal WP10-36 is adopted, it will close Federal wolf trapping in Unit 14C. The proposed closures of wolf hunting and trapping in Unit 14C will make the Federal subsistence regulations more restrictive than the State regulations.

OSM CONCLUSION

Oppose Proposals WP12-34, -35 and -36.

Justification

The wolf populations in Subunits 13D and 14C are thought to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds;

these individuals are abundant and available to be harvested. The wolf populations in these units are thought to be regulated more by natural factors than by hunters and trappers.

Wolves are an important subsistence resource in Units 13D and 14C. The harvest of wolves and the use, barter, and sale of wolf pelts is a long standing component of the subsistence economy.

Even if these proposals are adopted by the Federal Subsistence Board, hunters will still be able to take wolves under State regulations on USFS, BLM, and FWS lands in these two units. Therefore, adoption of these proposals by the Federal Subsistence Board will not have the effect sought by the proponent.

Of these three proposals, two (WP12-34 and -35) ask for regulatory changes that are the same as those requested two years ago. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed the regulatory changes requested in WP12-34 and -35 and the Federal Subsistence Board rejected them.

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SOUTHCENTRAL SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposals WP12-34/35/36. The Council feels that there are no conservation concerns for wolves that warrant these proposals.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-34: This proposal shortens the federal subsistence wolf hunting season in Unit 13D by 113 days with season dates changed from August 10 through April 30 to November 1 through March 31.

Introduction: This proposal was submitted to reduce the federal subsistence wolf hunting season in Unit 13D to prevent harvest of pregnant females, prevent yearlings without adult mortalities, prevent discard of harvested hides, and increase wolf reproduction rates. This proposal incorrectly assumes federal subsistence wolf hunting seasons opening August 10 are solely for predator control and were established to benefit prey species. August openings are traditional, allowing federal and state subsistence hunters the opportunity to take a wolf while hunting other big game. Hide value depends on what the wolf will be used for.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the opportunity to take a wolf for subsistence while big game hunting, specifically during the fall. This loss of fall hunting opportunity could seriously impact federally qualified subsistence users who have limited means to hunt during winter months.

Opportunity Provided by State: The State provides an August 10 through April 30 hunting season with a bag limit of 10 wolves in Unit 13D.

Conservation Issues: Wolf numbers in 13D are not controlled under a predator management program and wolf numbers are stable. Unit 13D was not included in the predator program because it is heavily timbered which makes airplane based management very difficult. However, wolves are important predators in 13D, with sheep and moose numbers low enough to be impacted by wolf predation. Since 2001, the average annual take of wolves in 13D has been 23% (range = 9% – 38%). It is well documented that this range is sustainable. The long season dates provide maximum opportunity for hunters and have no impact on population health in 13D.

Enforcement Issues: Differences in federal and state regulations resulting from adoption of these proposals will create enforcement issues in areas with mixed land ownership.

Other Comments: It is unlikely that all adults would be taken out of a pack by federally qualified subsistence hunters addressed in this proposal. Adult wolves have learned to avoid humans through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adult wolves kill large prey, and are subject to injury and death. In cases of natural adult mortality, the pack social structure provides support to pups.

Recommendation: Oppose

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-35: This proposal requests the federal subsistence wolf hunting season in Unit 14C be closed.

Wildlife Proposal WP12-36: This proposal requests the federal subsistence wolf trapping season in Unit 14C be closed.

Introduction: The proponent requests the Federal Subsistence Board close both federal subsistence wolf hunting and trapping in Unit 14C to increase the value of the resource for wildlife viewers, workers who commute to Anchorage, and urban residents that do not hunt. The proponent justifies these proposals by feeling the wolf population in Unit 14C is much more valuable to wildlife viewers than federally qualified subsistence users. Additionally, the proponent incorrectly assumes federal subsistence wolf hunting and trapping seasons and bag limits in Unit 14C were established to benefit prey species.

Impact on Subsistence Users: Adoption of these proposals would have an unknown impact as the department is unaware if federal subsistence wolf hunting or trapping effort and harvest in 14C is tracked by federal land managers. If these proposals are adopted, federally qualified subsistence users would be required to hunt and trap wolves in 14C under state regulation.

Opportunity Provided by State: In Unit 14C, the state wolf trapping season is from November 10 through February 28 with no annual limit. In Unit 14C, the state wolf hunting season is from August 10 through April 30 with an annual limit of five wolves.

Conservation Issues: Based on an aerial survey in 1995 and anecdotal reports, the department estimates Unit 14C has at least 25-30 wolves in 4-5 packs. One pack uses the Twentymile River drainage in the southeastern corner of the subunit, which is in Chugach National Forest. The territory of a second pack from the Kenai Peninsula may occasionally include the Twentymile River drainage. Fur sealing records indicate 37 wolves were sealed from Unit 14C during 1984–2007. Eleven of these wolves were harvested in the Twentymile River drainage. Nearly half of the wolves (16/37) were taken by hunters and 6 of these wolves were shot in the Twentymile River drainage. Thus, in the past 24 years an average of 1.5 wolves per year were reported harvested by all methods, including 4 killed by vehicles, in Unit 14C. A wolf population of 25-30 individuals will not be reduced by annual harvest rates of 1.5 wolves (5-6%). Since statehood, there has been no effort to reduce wolf populations in Unit 14C under the state's predator control programs. Wolf hunting and trapping is prohibited in adjacent Chugach State Park and on the local military reservations, which provide a refugium for one of the subunit's packs and partial refugium for at least two other packs.

Other Comments: The department does not possess documentation of federal subsistence activities targeting wolves in Unit 14C as federal agencies have not shared any wolf related data regarding harvest or effort for the federal subsistence program with the department's wildlife managers responsible for sound management of all Unit 14 wildlife resources. The department is still awaiting the last 21 years of 14C federal subsistence wolf harvest and effort data.

ADF&G Comments on WP12-35 and 36
December 5, 2011, Page 1 of 2

Enforcement Issues: If adopted, enforcement issue would be reduced or eliminated as all wolf hunting and trapping in Unit 14C would be governed by state regulation.

Recommendation: Oppose.

WP12-07 Executive Summary	
General Description	Proposal WP12-07 requests an extension of the deer hunting season on the lower Chilkat Range (Unit 1C) through January and an increase in the harvest limit to six deer. *Submitted by Monte Mitchell*
Proposed Regulation	**Unit 1C — Deer** ***That portion of Unit 1C on the Chilkat Range south and west of a boundary established by the unnamed creek that enters Lynn Canal at approximately 58° 22' 45.03" N, 135° 04' 36.67 W, then west to the watershed divide ridge, then north to the Glacier Bay National Park boundary and west to where the GBNP boundary meets Excursion Inlet.*** *~~4 deer~~* ***6 deer****; however, female deer may be taken only from Sept. 15–~~Dec.~~* ***Jan.*** *31* *Aug. 1 – ~~Dec.~~* ***Jan.*** *31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-07

ISSUES

Proposal WP12-07, submitted by Monte Mitchell, requests an extension of the deer hunting season on the lower Chilkat Range (Unit 1C) through January and an increase in the harvest limit to six deer.

DISCUSSION

Residents of Excursion Inlet are eligible to harvest deer in Unit 4 through January but crossing Icy Strait can be treacherous in winter months. The proponent states that extending the season and increasing the harvest limit in a portion of Unit 1C would allow residents of Excursion Inlet to more safely harvest deer closer to home.

Existing Federal Regulation

Unit 1C — Deer

4 deer; however, female deer may be taken only from Sept. 15–Dec. 31 *Aug. 1 – Dec. 31*

Proposed Federal Regulation

Unit 1C — Deer

That portion of Unit 1C on the Chilkat Range south and west of a boundary established by the unnamed creek that enters Lynn Canal at approximately 58° 22' 45.03" N, 135° 04' 36.67 W, then west to the watershed divide ridge, then north to the Glacier Bay National Park boundary and west to where the GBNP boundary meets Excursion Inlet.

~~4 deer~~ ***6 deer****; however, female deer may be taken only from Sept. 15–~~Dec.~~* ***Jan.*** *31* *Aug. 1 – ~~Dec.~~* ***Jan.*** *31*

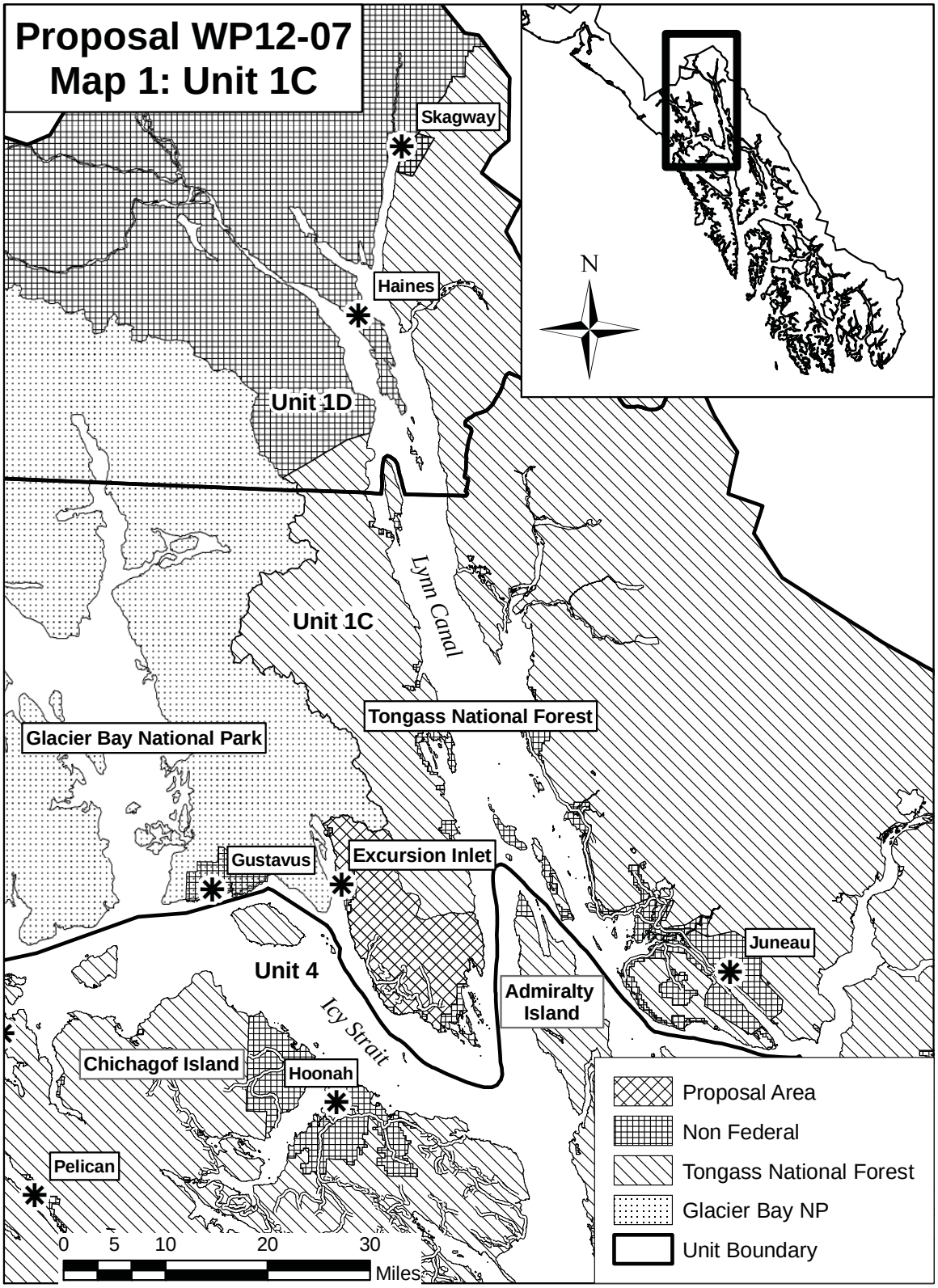
Existing State Regulation

Unit 1C — Deer

Remainder — 2 bucks *Aug. 1 – Dec. 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 97% of Unit 1C. The U.S. Forest Service manages 65% of those lands as part of the Tongass National Forest. The National Park Service manages 35% of those lands as part of the Glacier Bay National Park which is closed to subsistence hunting (see **Unit 1C Map**). The Tongass National Forest comprises 93% of the proposal area (**Map 1**).


Proposal WP12-07
Map 1: Unit 1C
Skagway
Haines
Unit 1D
Unit 1C
Lynn Canal
Tongass National Forest
Glacier Bay National Park
Gustavus
Excursion Inlet
Juneau
Unit 4
Icy Strait
Admiralty Island
Chichagof Island
Hoonah
Pelican
N
0 5 10 20 30
Miles
Proposal Area
Non Federal
Tongass National Forest
Glacier Bay NP
Unit Boundary

Customary and Traditional Use Determinations

Rural residents of Units 1C, 1D, Hoonah, Kake, and Petersburg have a positive customary and traditional use determination for deer in Unit 1C.

Regulatory History

Since its inception in 1990, the Federal subsistence deer season in Unit 1C has been from Aug. 1 – Dec. 31 with a four deer harvest limit and female (antlerless) deer may be taken only from Sept. 15–Dec. 31. The State season has been Aug. 1–Dec. 31 since 1982. The State harvest limit has varied from one to four, but has been four for all or part of the unit since 1959. Since 1991, the State has had a two bucks harvest limit on the mainland portions of the unit, with a four deer limit on the major islands of the unit (Douglas, Shelter, Lincoln, and Sullivan).

Biological Background

Sitka black-tailed deer spend the winter and early spring at low elevation where 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. Migratory deer follow the greening vegetation up to alpine for the summer. Resident deer remain at lower elevations. Summer and fall are periods of active foraging as deer accumulate fat reserves to help them through the winter and early spring. The breeding season, or rut, generally occurs in October through November and peaks in late November (ADF&G 2009). All major predators of deer (wolves, brown bears, and black bears) are present in Unit 1C, and may affect deer populations. However, deer population fluctuations in southeast Alaska are primarily influenced by winter snow depths (Olson 1979).

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. The USFS has harvested old growth forests in the proposal area in the past and, as of 2006, estimated that between 84% (west side of southern Chilkat Range) and 97% (east side of southern Chilkat Range) of suitable deer habitat remained compared to 1954 (USFS 2008). Associated with this harvest is a developed road system that improves access to alpine and interior forested habitats in the area.

Recent population indices

There are no population estimates for deer in the proposal area, or in all of Unit 1C (Scott 2009). 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 2010). Deer pellet survey data for Unit 1C indicate a cyclical pattern with a recent high in 2005–06 and a decline since then (McCoy 2010). However, most of these data are from North Douglas and Shelter Islands, which lack wolves. Only one transect has ever been surveyed in the proposal area (Couverden, in 1993). The pellet density on this transect in 1993 was approximately one-half and one-third of the pellet densities on North Douglas and Shelter Islands, respectively, during the

same year. This is consistent with the expectation that mainland deer populations are generally lower than island populations due to lower habitat quality, higher snow loads, and the presence of all three major predators (ADF&G 2009). However, population trends are expected to be similar.

Harvest History

Table 1 summarizes deer harvest and hunter effort for Unit 1C. Harvests peaked in the early 1990s and again in 2005–06. Since most deer harvest in Unit 1C occurs on the islands, this data may not provide an accurate picture of harvest in the proposal area. Within the proposal area, only 21 deer were reported as being harvested from 2005–09 (McCoy 2011, pers. comm.). However, ADF&G survey techniques are not designed to provide accurate data at this scale. The low numbers of hunters using this area make it likely that they were not adequately sampled.

Table 1. Unit 1C hunter effort and harvest success, 1990 through 2007 (Scott 2009). Harvest information is expanded from hunter surveys. Data is not available for 1996 due to changes in the survey.

Regulatory Year	Hunters	Days Hunted	Deer Killed	Males	Females	Deer/hunter	Days/deer
1990	948	3,262	499	330	169	0.5	6.5
1991	827	2,993	417	245	172	0.5	7.2
1992	959	3,202	511	358	153	0.5	6.3
1993	904	2,950	579	302	277	0.6	5.1
1994	1,017	4,151	659	427	232	0.6	6.3
1995	990	3,968	311	210	101	0.3	12.8
1996	257	n/a	n/a	n/a	n/a	n/a	n/a
1997	861	3,819	438	342	96	0.5	8.3
1998	950	3,396	388	272	116	0.4	8.7
1999	851	2,327	335	196	139	0.4	7.0
2000	803	2,312	241	172	69	0.3	9.6
2001	881	2,764	345	274	71	0.4	8.0
2002	795	2,612	367	226	141	0.5	7.1
2003	910	3,038	472	335	137	0.5	6.4
2004	872	3,262	343	257	86	0.4	9.5
2005	928	3,601	500	279	221	0.5	7.2
2006	784	2,783	640	391	249	0.8	4.4
2007	611	2,403	155	129	26	0.3	15.5

Effects of the Proposal

Adopting this proposal would increase opportunities for Federally qualified subsistence users to harvest deer by adding a month to the Federal season and increasing the harvest limit from four to six in the proposal area.

Adopting this proposal would likely increase harvest in the proposal area. The level of increase is unknown, although it seems unlikely that very many hunters would come to the area to harvest six deer due to the low deer population density. Most Federally qualified subsistence users have closer access to Unit 4 with higher deer densities (Map 1), but potential communities would include Excursion Inlet, Haines, Skagway, and Gustavus. The stated intent of the proponent is to be able to harvest deer close to home late in the season when access to more plentiful deer in Unit 4 is hindered. Harvesting deer early in

the season in Unit 4, with a six deer limit, then harvesting additional deer later in the season in Unit 1C can only be practical if the harvest limit in Unit 1C is increased from four to six. Extending the season through January could increase harvest because deer would be most concentrated along beaches and susceptible to harvest.

Adopting this proposal could lead to a conservation concern. The impact of increased harvest on the deer population in this area is hard to quantify. Deer populations on the mainland are not considered sufficient to sustain a six deer, either sex harvest, although without population data it is not possible to determine the sustainable harvest. No other mainland area in southeast Alaska has a six deer limit. However, there is not a conservation concern at current harvest levels.

OSM CONCLUSION

Oppose Proposal WP12-07.

Justification

This proposal is not consistent with established principles of wildlife conservation because a six deer, either sex harvest limit is not considered sustainable on the southeast Alaska mainland. Extending the season is not consistent with other mainland areas of southeast Alaska, and may not provide a benefit if subsistence users have previously harvested four or more deer in nearby Unit 4.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-07. The Council determined that this proposal was not supported by the evidence. The area is subject to the same harsh winter conditions as the Northeast Chichagof Controlled Use Area and it is likely the deer have been similarly negatively impacted. Although there is no conservation concern for deer under current regulations, the population cannot withstand additional harvest.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-07: Liberalize the federal subsistence deer hunting season by one month and increase the bag limit from four to six deer in a portion of Unit 1C on the lower Chilkat Peninsula.

Introduction: This proposal seeks to lengthen the federal subsistence deer hunting season on the Lower Chilkat Peninsula in Unit 1C by one month to include the month of January. The proponent indicates extending the hunting season in this area through January will allow federally qualified subsistence users residing in Excursion Inlet the ability to hunt closer to home during the winter and avoid dangerous winter travel to other areas open during the month of January. The proposal also seeks to liberalize the bag limit from four to six deer per year.

Impact on Subsistence Users: Federally qualified subsistence hunters would have four additional weeks (24 weeks instead of 20 weeks) to harvest up to 6 deer if this proposal is adopted. The season is sufficiently long to acquire deer for subsistence use, whereas if the deer population declines, then further reductions in season length or bag limit will be necessary. Increasing harvest limits and lengthening hunting seasons, as proposed may result in declining deer numbers and localized depletions, which will require significant hunt restrictions and reduce subsistence opportunity in the long-term.

Opportunity Provided by State: The state deer hunting season for the identified portion of Unit 1C is August 1 through December 31, with a bag limit of two buck deer.

Conservation Issues: Conservation concerns exist for portions of the deer populations in Unit 1C due the relatively low density of deer in these areas as compared with many of the island populations. Reasons for this lower density stem from harsher winters, less optimal habitat, and the presence of wolves, coyotes, black bears and brown bears, all of which can play a role in limiting deer numbers. Because of these limiting factors, the department manages deer in much of the mainland SE Alaska with a bucks only, 2 deer bag limit because of concerns with maintaining these populations at sustainable levels. The present federal subsistence hunting season in this area that allows for 4 deer (females included) already surpasses what the department believes is wise management of this resource. To add another month to the season, and increase the bag limit to 6 deer is not a recommended, and may ultimately lead to fewer subsistence opportunities if the deer population in this area becomes overexploited.

Little deer population and hunter harvest data is available for mainland areas of Unit 1C. Deer pellet surveys were conducted in the Point Couverden area in 1993. Pellet densities were extremely low (.35 groups/plot) with a range of .27-.44 groups per plot. This pellet group density is considered extremely low when compared to densities found on nearby islands that approach 2.0 groups per plot. While pellet survey data does not directly correlate with deer populations, the low densities found at Point Couverden suggest a small number of deer utilize the area. The negative impacts of an extended deer season, compounded by potential female harvest, can be significant.

Deer hunter survey data is collected by randomly sampling approximately 33% of deer harvest ticket holder. Survey data for the period 1997-2009 indicate very little hunter effort. Buck deer were taken in both Excursion Inlet and along the southern tip of the Chilkat Peninsula. Deer harvests are recorded for only two years (2006 & 2008). In these years, 4-10 successful hunters took an estimated 1 buck deer per hunter. If a high density of deer existed in these areas, capable of supporting an extended, either sex bag limit, the hunter effort would be higher, and likely there would be additional successful hunters.

The federal subsistence deer hunting season for Unit 1C is August 1 through December 31, and the state season is August 1 through December 31. The state season originally also ended January 31 but was reduced in 1993 to protect deer when extremely vulnerable if winter weather concentrates them on the beaches.

Other Comments: The State has long objected to the six deer federal bag limit, (beginning with proposal #3 adopted by the Federal Subsistence Board on July 29, 1992) because the federal subsistence bag limit was based on adopting the State's season in 1990, when the deer populations in Unit 4 were at peak abundance levels. Islands in Unit 4 offer better hunting opportunities than Unit 1C mainland areas. The Chilkat Peninsula, including Excursion Inlet, is in close proximity to areas with higher deer densities, and while winter travel is difficult it is not impossible with appropriate planning and precautions.

As an alternative, the State considered recommending support with modification. The department recommends maintaining the current federal subsistence hunting season dates of August 1 through December 31 and recommends the annual bag limit for the lower Chilkat Peninsula be reduced to two buck deer.

Recommendation: Oppose.

WP12-08 Executive Summary	
General Description	Proposal WP12-08 requests rescinding the Federal requirement that Federally qualified users complete a joint State-Federal deer harvest report in Unit 2. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*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. ~~You are required to report all harvest using a joint Federal/State harvest report.~~ The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.* *July 24 – Dec. 31*
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-08

ISSUES

Proposal WP12-08, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council) requests rescinding the Federal requirement that Federally qualified users complete a joint State-Federal deer harvest report in Unit 2.

DISCUSSION

In November 2010, the Alaska Board of Game adopted proposal 41 to replace the State mail-out deer hunter survey with a deer harvest reporting system in Units 1–5. The Council submitted comments to the Alaska Board of Game supporting this regulatory change. The new State deer harvest reporting system became effective July 1, 2011 for Units 1–5 and adequately replaced the joint State-Federal harvest reporting system for Unit 2. Therefore, the Council asserts that the Federal reporting requirement to hunt deer in Unit 2 is no longer needed.

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. You are required to report all harvest using a joint Federal/State harvest report. The harvest limit may be reduced to 4 deer based on conservation concerns.The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.	*July 24 – Dec. 31*

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. ~~You are required to report all harvest using a joint Federal/State harvest report.~~ The harvest limit may be reduced to 4 deer based on conservation concerns. The Federal public lands on Prince of Wales Island, excluding the southeast portion (lands south of the West Arm of Cholmondeley Sound draining into Cholmondeley Sound or draining eastward into Clarence Strait), are closed to hunting of deer from Aug. 1 to Aug. 15, except by Federally qualified subsistence users hunting under these regulations.	*July 24 – Dec. 31*

Existing State Regulation

Unit 2—Deer

Four bucks *Aug. 1–Dec. 31*

Extent of Federal Public Lands

Unit 2 is approximately 83% Federal public land. The US Forest Service manages 99% of those lands as part of the Tongass National Forest. The US Fish and Wildlife Service manages less than 1% of those lands as part of Alaska Maritime National Wildlife Refuge (Forrester Island).

Customary and Traditional Use Determinations

Rural residents of Units 1A, 2, and 3 have a positive customary and traditional use determination for deer harvest in Unit 2.

Harvest Reporting History

Since 1980, the Alaska Department of Fish and Game (ADF&G) has used a mail out survey to estimate deer harvest in Southeast Alaska. Questionnaires were sent to a stratified random sample of approximately 33% of hunters who obtained deer harvest tickets. Approximately 60% of these were returned. When the survey was initiated, it was less expensive than harvest reports, and was considered superior in acquiring reliable harvest data (Scott 2011, pers. comm.).

In 2004, the Council initiated a cooperative planning process to address Unit 2 deer management issues and Federal harvest regulations. The Council formed a subcommittee, the Unit 2 Deer Planning Subcommittee (Subcommittee), which included several Council members, hunters (local and non-local) and tribal representatives. The Council adopted the recommendations of the subcommittee which are contained in the Unit 2 Deer Management Final Report (Caulfield 2005). The Council determined that better harvest data were needed and recommended to the Federal Subsistence Board (FSB) that a joint State-Federal deer harvest reporting requirement be implemented in Unit 2. The FSB adopted the Council recommendation into regulation in May of 2005 via proposal WP05-04.

In November of 2010, the Alaska Board of Game adopted proposal 41 which replaced the State mail-out deer hunter survey with a deer harvest reporting system in Units 1–5. All deer hunters will receive a harvest report when they obtain their harvest tags. Returning the harvest report is voluntary. Hunters will be able to obtain their harvest tickets and report their harvests via the internet. While more reports will be processed due to the expected increase in reports received, the cost of processing individual reports will be reduced. Based on harvest reporting for other species, 50% of hunters are expected to return their hunt report initially and another 25% after a reminder letter. The initial report and reminder letter will provide a higher level of reported harvest for deer for the entire region than has been available in the past. A follow-up survey of non-respondents will allow extrapolation of the remaining harvest and enable ADF&G to continue to report total harvest with confidence. Harvest data will be compatible with the existing statewide harvest database. (Barten 2011, pers. comm.).

Effects of the Proposal

This change would benefit subsistence users by eliminating the redundant State-Federal deer harvest report in Unit 2. The new State harvest reporting system for Units 1–5 will collect information

comparable to that which has been collected on the joint State-Federal permit system for Unit 2. The new State harvest reporting system will provide a uniform and cost effective method of determining total deer harvest in Units 1–5 and will allow improved access to and analysis of those data. The present State-Federal harvest report for Unit 2 deer does not have an option to report via the internet. With the new State harvest report system, users can return their report by mail and will also gain the option to report harvest via the internet. State harvest data will be more easily shared with Federal managers. ADF&G will fund the harvest reporting system thus saving the Federal Program substantial cost and staff time. The proposal will benefit non-Federally qualified users through improved deer management.

OSM CONCLUSION

Support Proposal WP12-08.

Justification

The State-Federal harvest report requirement for Unit 2 is no longer needed since comparable harvest data will be gathered by the new State deer harvest reporting system. Federally qualified users will benefit by not having to fill out a separate, redundant State-Federal report for deer harvested in Unit 2.

LITERATURE CITED

Caulfield, J. 2005. Unit 2 Deer Management Final Report in U.S. Forest Service Subsistence Library.

Barten, N. 2011. Area Management Coordinator. Personal communication: e-mail. ADF&G Division of Wildlife Conservation. Juneau, AK.

Scott, R. 2011. Juneau Area Management Biologist. Personal communication: e-mail. ADF&G Division of Wildlife Conservation. Juneau, AK.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-08. Adopting this proposal would benefit subsistence users by having a single method of harvest reporting. The new State system is adequate to account for the harvest and incorporates the positive aspects of the outdated Federal reporting system.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-08: Delete the federal subsistence deer harvest reporting forms requirement in Unit 2.

Introduction: This proposal seeks to eliminate the federal subsistence deer harvest reporting form currently required in Unit 2. This proposal was submitted in response to a recent Alaska Board of Game decision to revamp deer harvest reporting requirements in Units 1-5. The Board of Game passed a regulation which requires all deer hunters in Unit 1-6 and 8 fill out an annual harvest report form which will be issued and attached to the deer harvest tags. This new regulation replaces the former requirement to fill out a deer harvest survey post season. Additionally, deer harvest reporting will be made available on line in the near future.

Impact on Subsistence Users: If adopted, federally qualified subsistence hunters would be required to fill out a State of Alaska harvest report form after harvesting a deer or report harvest on line (once programming is available). As federally qualified subsistence hunters in Unit 2 already are required to fill out a federal subsistence harvest report form, subsistence users will be burdened with redundant reporting and will not be able to report harvest on line if this proposal is not adopted.

Opportunity Provided by State: The state deer hunting reporting requirements in Units 1-6 and 8 will change beginning July 1, 2011. The state reporting requirement for deer in these Units will require hunters to fill out harvest reports for deer harvested or enter harvest information on line (once available). This new reporting requirement is similar to many of the moose and caribou reporting requirements statewide.

Conservation Issues: The Board of Game adopted the new deer hunting reporting requirements to provide managers with more timely and accurate harvest data. Having both state and federally qualified subsistence deer hunters participate in the same harvest reporting system will assist managers with more accurate resource management.

Recommendation: Support.

WP12-12 Executive Summary	
General Description	Proposal WP12-12 requests that the Federal moose season in a portion of Unit 1C start one week earlier. *Submitted by Monte Mitchell*
Proposed Regulation	**Unit 1C — Moose** ***That portion of Unit 1C on the Chilkat Range south and west of a boundary established by the unnamed creek that enters Lynn Canal at approximately 58° 22' 45.03" N, 135° 04' 36.67 W, then west to the watershed divide ridge, then north to the Glacier Bay National Park boundary and west to where the GBNP boundary meets Excursion Inlet.*** *1 antlered bull by State registration permit only* *Sept. ~~15~~ **8** – Oct. 15*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-12

ISSUES

Proposal WP12-12, submitted by Monte Mitchell, requests that the Federal moose season in a portion of Unit 1C start one week earlier.

DISCUSSION

The southern end of the Chilkat Range has a road system and relatively easy boat access from nearby communities. Regulatory changes in the nearby Gustavus Forelands hunt on State lands may have shifted some hunting pressure to the Chilkat Range. The proponent believes that competition during the opening of the season reduces the chances for subsistence users to harvest a moose. He believes that opening the season one week early for Federally qualified subsistence users would reduce competition and help them meet their needs for moose.

Existing Federal Regulation

Unit 1C (remainder) — Moose

1 antlered bull by State registration permit only *Sept. 15 – Oct. 15*

Proposed Federal Regulation

Unit 1C — Moose

That portion of Unit 1C on the Chilkat Range south and west of a boundary established by the unnamed creek that enters Lynn Canal at approximately 58° 22' 45.03" N, 135° 04' 36.67 W, then west to the watershed divide ridge, then north to the Glacier Bay National Park boundary and west to where the GBNP boundary meets Excursion Inlet.

1 antlered bull by State registration permit only *Sept. ~~15~~ **8** – Oct. 15*

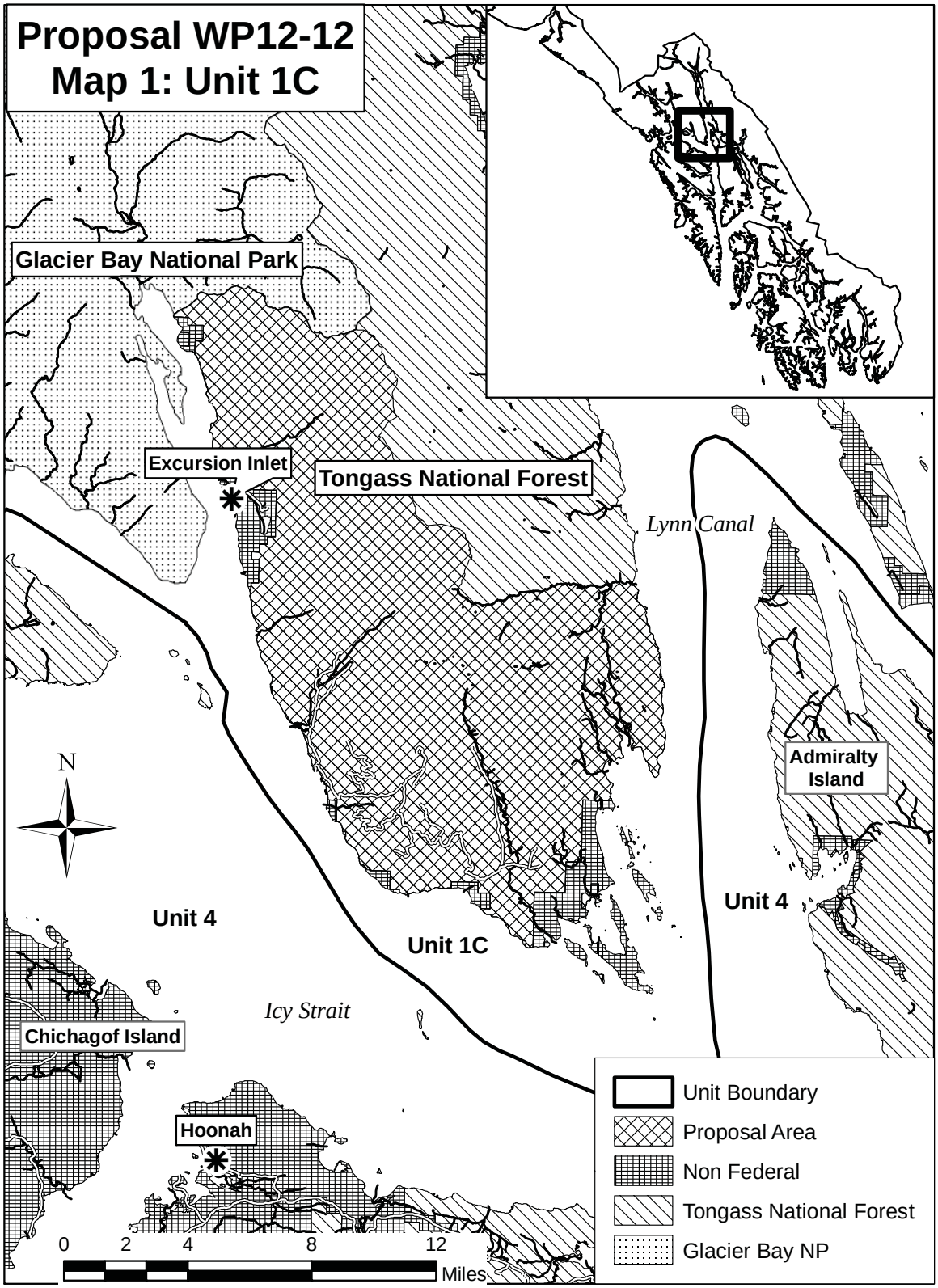
Existing State Regulation

Unit 1C (remainder) – Moose

One bull by permit *Sept. 15 – Oct. 15*

Extent of Federal Public Lands

Federal public lands comprise approximately 97% of Unit 1C. The U.S. Forest Service manages 65% of those lands as part of the Tongass National Forest. The National Park Service manages 35% of those lands as part of the Glacier Bay National Park which is closed to subsistence hunting (see Unit 1C Map). The Tongass National Forest comprises 93% of the proposal area (**Map 1**).


Proposal WP12-12
Map 1: Unit 1C
Glacier Bay National Park
Excursion Inlet
Tongass National Forest
Lynn Canal
Admiralty Island
N
Unit 4
Unit 1C
Unit 4
Icy Strait
Chichagof Island
Hoonah
0 2 4 8 12
Miles
Unit Boundary
Proposal Area
Non Federal
Tongass National Forest
Glacier Bay NP

Customary and Traditional Use Determinations

Rural residents of Units 1–5 have a positive customary and traditional use determination for moose in Unit 1C.

Regulatory History

Since its inception in 1990, the Federal subsistence season, for the portion of Unit 1C addressed in this proposal, has been Sept. 15–Oct. 15, with a harvest limit of one antlered bull by State registration permit. Since 1985, the State season has been Sept. 15–Oct. 15 with a harvest limit of one bull by State registration permit.

In 2006, Chuck Burkhardt of Gustavus, submitted proposal WP06-12 which requested a Federal registration permit hunt for the southern portion of the Chilkat Range in Unit 1C. The Southeast Alaska Subsistence Regional Advisory Council (Council) and the Federal Subsistence Board (Board) took no action on the proposal, with agreement from the proponent, when ADF&G agreed to drop the "super-exclusive" condition on the State registration permit for the Gustavus Forelands hunt in Unit 1C. This "super-exclusive" condition prohibited hunters who registered for moose hunting on the Gustavus Forelands of Unit 1C from hunting moose anywhere else in Unit 1C.

In 2010, the Council, submitted proposal WP10-11 which requested the recognition of customary and traditional uses of moose in Unit 1C for all rural residents of Units 1 through 5. The Board adopted the proposal. Prior to 2010, Unit 1C did not have a specific customary and traditional use determination for moose.

Biological Background

Moose were first observed in the Chilkat Mountain range in 1963 and were probably animals that originated from the Chilkat Valley population near Haines (Barten 2008). They gradually colonized to the southern end of the range which has seen increased harvest in recent years. The densely forested habitat in the area makes it hard to gather survey data (Barten 2008). Moose breed in the fall with the peak of rut in late September and early October. Moose in Unit 1C are subject to predation by brown and black bears, and wolves, which limits moose populations in some areas of Alaska (Rausch *et. al* 2008).

Recent population indices

The status of the moose population on the southern Chilkat Range is unknown (Barten 2008). Barten (2008) thought the population was increasing, as of 2007, based on harvest records and hunter information. Starting with the winter of 2006–07, several consecutive deep snow winters decreased the moose population in the nearby Berners Bay by approximately 30% (White and Barten 2010). During the same period, they found that moose survival was better on the Gustavus Forelands, just west of the Chilkat Range, so the moose population in the proposal area has likely slightly decreased or remained stable since 2007. Harvest effort per moose harvested (**Figure 1**), another indicator of population trend, has remained steady in recent years. There does not appear to be a conservation concern for moose on the Chilkat Range.

Harvest History

Harvest increased dramatically starting in 2003, peaked in 2006, and has remained relatively high (**Figure 2**). This corresponds to a sharp increase in the number of hunters who reported actively hunting in the

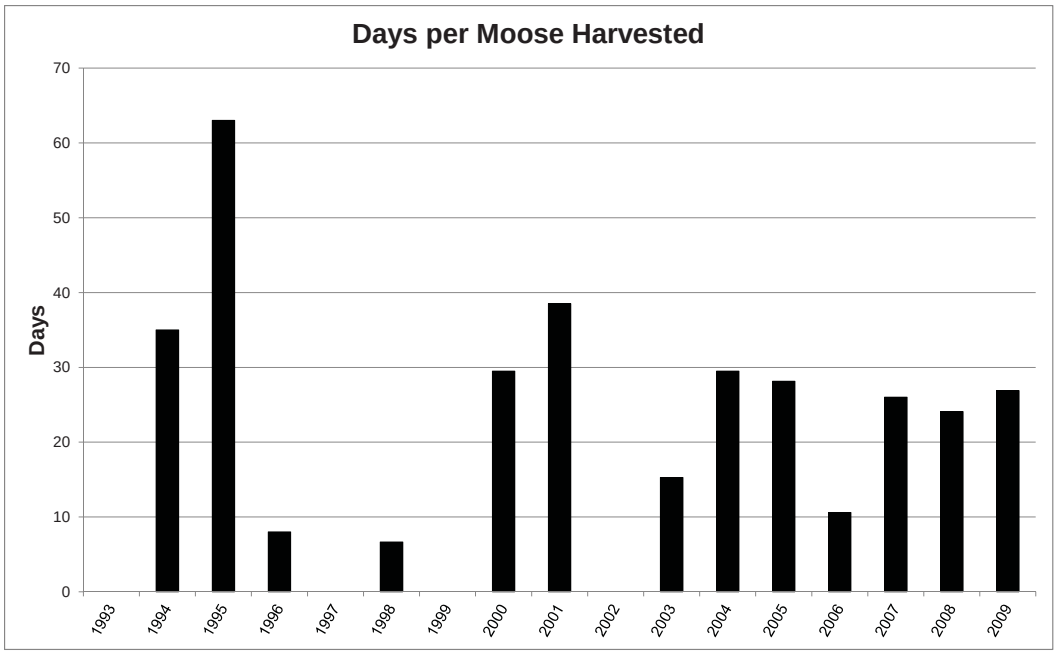


Figure 1. Harvest effort by year on the southern Chilkat Peninsula, proposal area WP12-12 (minor harvest areas 0503–0507 and 0601–0605 within major harvest area X23). ADF&G data accessed through the OSM harvest database.

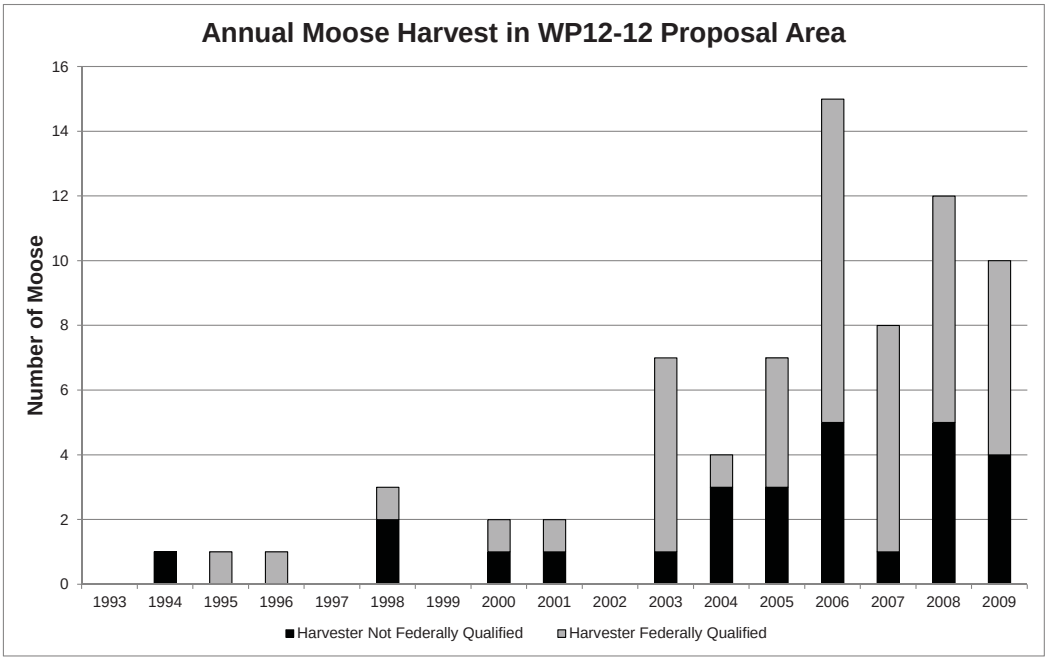


Figure 2. Moose harvest by year and Federal qualification in the WP12-12 proposal area (minor harvest areas 0503–0507 and 0601–0605 within major harvest area X23). ADF&G data accessed through the OSM harvest database.

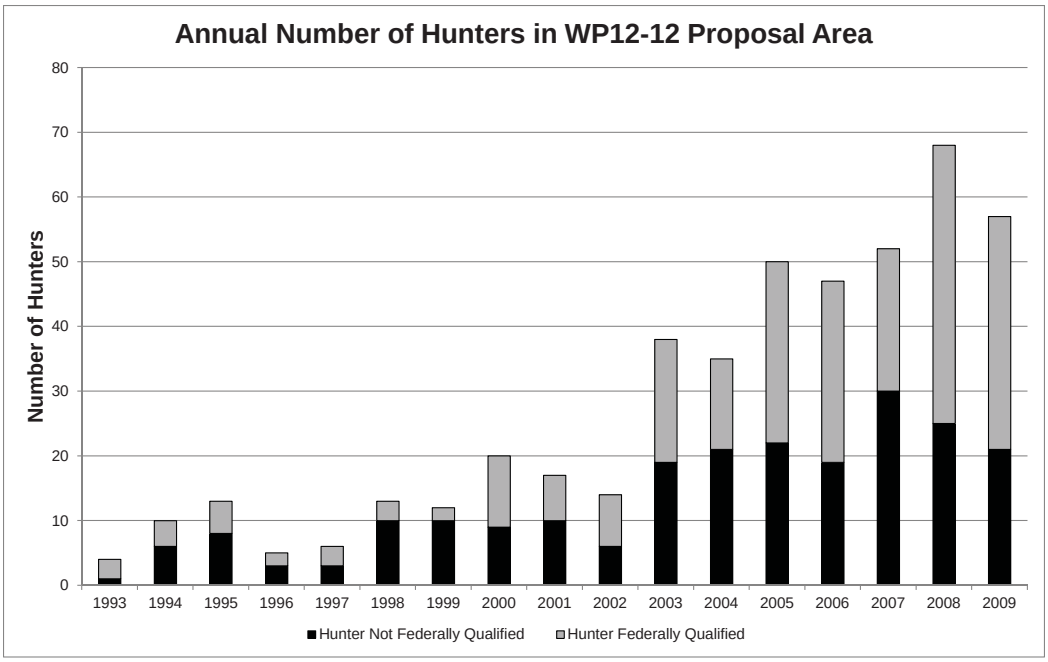


Figure 3. Moose hunters by year and Federal qualification on the WP12-12 proposal area (minor harvest areas 0503–0507 and 0601–0605 within major harvest area X23). ADF&G data accessed through the OSM harvest database.

Table 1. Community of residence and Federal eligibility for hunters in the WP12-12 proposal area from 1993-2009. ADF&G data accessed through the OSM database.

Residence Community	Number of Hunters
Federally Eligible	
Elfin Cove	1
Excursion Inlet	3
Funter Bay	2
Gustavus	34
Haines	5
Hoonah	147
Naukati Bay	1
Pelican	1
Sitka	27
Skagway	13
Swanson Harbor	1
Tenakee Springs	3
Subtotal	238
Not Federally Eligible	
Anchorage	3
Auke Bay	9
Chugiak	1
Douglas	4
Fairbanks	1
Juneau	189
Ketchikan	1
Seward	1
Non-resident	14
Subtotal	223
Total	**461**

proposal area (**Figure 3**). The number of hunters peaked in 2008 and remains relatively high. Juneau and Hoonah residents reported had the highest use of the area (**Table 1**). Juneau residents are not qualified to harvest moose under Federal subsistence regulations, while Hoonah residents are. Approximately 52% of the past users are Federally qualified under current regulations. Most harvest occurs during the first week of the season and the first weeks' harvest is fairly evenly split between Federally qualified and non-Federally qualified users (**Figure 4**). Overall, Federally qualified users have harvested 63% of the reported moose taken since 1993.

Effects of the Proposal

Implementing this proposal would increase opportunities for Federally qualified subsistence users to harvest moose by adding a week to the Federal season and reducing competition about 50% during that week.

By increasing the length of the Federal season, implementing this proposal could increase the moose harvest. Since the population is unknown, the sustainable harvest in the area is unknown, and the potential impact on the population is unclear. Current harvest appears to be sustainable, although harvest has increased in recent years and long-term sustainability is uncertain.

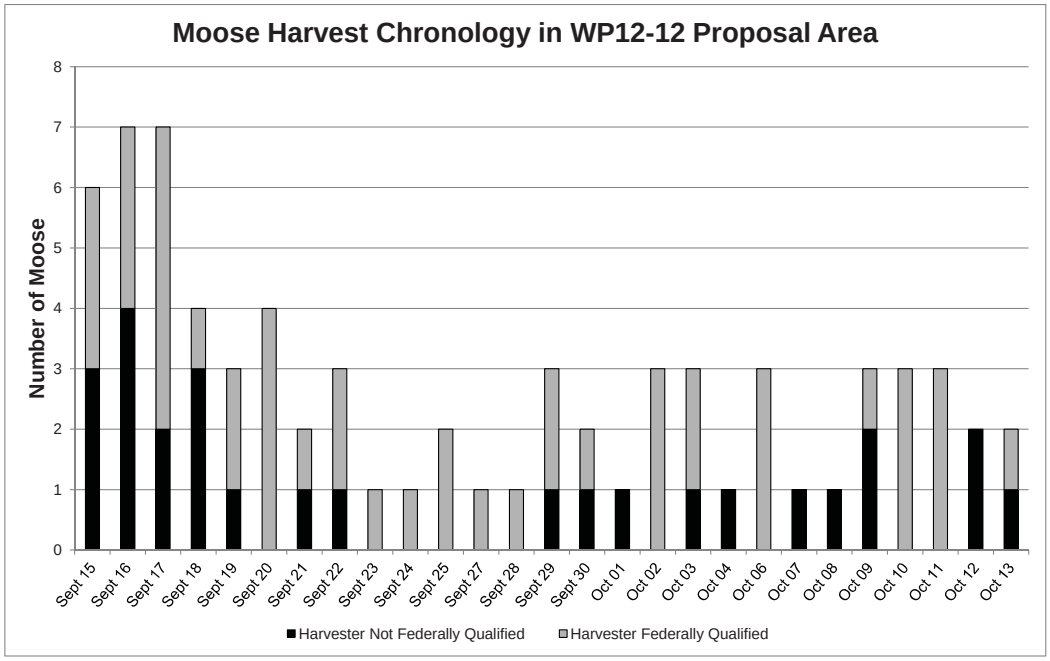


Figure 4. Chronology of moose harvest in the WP12-12 proposal area (minor harvest areas 0503–0507 and 0601–0605 within major harvest area X23) by Federal qualification from 1993–2009. ADF&G data accessed through OSM database.

Implementing this proposal could increase participation within the proposal area by attracting Federally qualified subsistence users who would normally hunt elsewhere, but could now hunt the southern Chilkat Range before the season in nearby areas begins. If this occurs, although all early season harvest would be by Federally qualified subsistence users, competition among individuals could be similar to the existing condition. Reducing the early season opening to three days might reduce this attraction by reducing the time to hunt the early season in the southern Chilkat area before moving to other hunting areas for their season opening. Daily harvest is highest during the first three days of the existing season.

OSM CONCLUSION

Support proposal WP12-12 **with modification** to start the Federal moose season three days early on the southern Chilkat Range and provide a Federal registration permit.

The modified proposal should read:

> **Unit 1C — Moose**
>
> ***That portion of Unit 1C on the Chilkat Range south and west of a boundary established by the unnamed creek that enters Lynn Canal at approximately 58° 22' 45.03" N, 135° 04' 36.67 W, then west to the watershed divide ridge, then north to the Glacier Bay National Park boundary and west to where the GBNP boundary meets Excursion Inlet.***
>
> *1 antlered bull by ~~State~~ **Federal** registration permit only* *Sept. ~~15~~ **12** – Oct. 15*

Justification

The number of hunters has increased in recent years, creating increased competition especially during the early season. This change would disperse hunting pressure through time and provide an opportunity for Federally qualified users to harvest moose under less competitive circumstances. Current harvest pressure appears sustainable; however, this modification would lessen the possibility of increased harvest and impacts to the population by reducing the likelihood of attracting hunters from other areas.

A Federal registration permit with appropriate conditions would be necessary to allow harvest outside the State season and track the harvest.

LITERATURE CITED

Barten, N.L. 2008. Unit 1C moose management report. Pages 27–52 *in* P. Harper, editor. Moose management report of survey and inventory activities 1 July 2005–30 June 2007. ADF&G. Project 1.0. Juneau, Alaska.

Rausch, R.A., B. Gasaway, and C. Schwartz. 2008. Moose. Revised by J. Crouse and S. Crouse 2008. Wildlife Notebook Series. ADF&G.

White, K.S., and N.L. Barten. 2010. Moose assessment and monitoring along the Juneau Access Road corridor, Southeast Alaska. Wildlife Research Annual Progress Report. ADF&G. 13 pages.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-12. The Council determined that this proposal, as originally submitted or as modified in the OSM Preliminary Conclusion, would not benefit subsistence users and may have unintended negative consequences. There is a strong possibility that hunters that normally hunt in the Gustavus area would also hunt in this area if the area was opened earlier. An early season would also attract non local hunters that traditionally would not hunt in this area. The result would be displacement of long-time subsistence users and a transfer of moose away from local users.

INTERAGENCY STAFF COMMITTEE COMMENT

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 on WP12-12
December 5, 2011,, Page 1 of 2

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-12: Liberalize federal subsistence moose hunting season on the Chilkat Peninsula within Unit 1C by adding one week to the beginning of the season.

Introduction: This proposal was submitted to liberalize the federal subsistence moose hunting season on the Chilkat Peninsula by moving the season opening date up to September 7. The proponent indicates the current federal subsistence moose hunting season dates reduces hunter success rates due to concentrated pressure on the herds, chaotic competition with other non-federally qualified hunters, and presence of other hunters on the hunting grounds. The proponent indicates adoption of this proposal will potentially increase federal subsistence harvest success, result in larger antlered moose availability to non-federally qualified users, increase the success of all hunters, and increase the moose population in the identified area.

Impact on Subsistence Users: If this proposal is adopted, all residents of rural communities in Southeast Alaska will have an additional week to hunt moose in the identified area prior to the opening of the general hunt.

Opportunity Provided by State: The state moose hunt is by registration permit and the season in the Chilkat Peninsula (Remainder of Unit 1C) is from September 15 through October 15 with a bag limit of one bull moose. The Gustavus area registration moose hunt is from September 15-October 15 with a bag limit of one bull moose meeting spike/fork, or 3 brow tine, or 50 inch antler width requirements. Proxy hunting regulations provide the opportunity to harvest moose in any-bull hunts for residents meeting the requirements for a proxy authorization.

Conservation Issues: Outside the Gustavus area little population level data is available for moose on the Chilkat Peninsula. The majority of the Chilkat Peninsula is heavily forested precluding aerial survey data collection for moose because they cannot be detected and counted. Aerial survey data is a key component in moose management strategies. Without aerial survey data information such as overall harvest and the age structure of the harvest are used to make management decisions. During the period 2001-2010, an average of 108 hunters (range 75-121) hunted moose on the Chilkat Peninsula (excluding Gustavus); the harvest averaged 17 moose annually (range 11-28). In 2010, 106 hunters hunted taking 11 bull moose; this years' harvest is the lowest in ten years. Beginning in 2006 severe winter weather impacted ungulate herds across Southeast, Alaska. Collared moose mortality rates in Gustavus and Berners Bay approached 20% resulting in closing the Berners Bay hunt, and reducing the harvest level in Gustavus. Higher than anticipated winter related mortalities continued in 2007-2008 and 2008-2009. Without collared moose in the proposal hunt area the impacts of the recent severe winters in unknown but it is likely this herd is experiencing similar levels of winter related mortalities. The low bull moose harvest on the Chilkat Peninsula in 2010 may be the result of winter related mortalities and any increase in the current harvest level must be monitored closely for signs of a continuing population decrease; changes to the current hunt strategies should not promote a significant increase above the current harvest level.

ADF&G Comments on WP12-12
December 5, 2011,, Page 1 of 2

Other Comments: During the period 2001-2010, the overall success rate for Chilkat Peninsula (excluding Gustavus) moose hunters was 16%. This level of success is the surpassed only by Unit 5 in Southeast, Alaska. Federally qualified subsistence hunters represent 26% of the hunters, with a success rate of 18%. Between 2001 and 2010, 33 hunters took 2 or more moose in the proposal area. Moose taken by designated and proxy hunters are credited to the original permit holder, not the proxy hunter. Therefore, the harvest data does not reflect multiple moose being taken by an individual in a given regulatory year though this is known to occur.

If adopted, federal land managers will be required to issue federal moose hunting permits because the current state registration permit is not be valid when an area is closed to moose hunting by state regulation.

There is no information to suggest this proposal will impact the size of antlers available to any group of hunters participating in the moose hunt. Generally speaking, moose in Southeast Alaska do not attain the antler size of moose in southcentral and interior. Regardless of the status of a hunter, moose hunts in southeast are focused on taking game for consumption and recreation.

The impacts of this proposal will not increase the moose population on the Chilkat Peninsula. Population size is dependent on habitat capability, weather, predation and harvest. The status of the moose population is unknown. Current harvest levels have remained relatively stable over the last ten years with variability that is expected in any hunt.

The level of success for all hunters (16%) in this area indicates there is a high likelihood that hunters will have an opportunity to harvest a moose. Federally qualified hunters are well represented the successful hunter data with 18% of federally qualified hunters taking a moose; federally qualified hunters as a group succeed in taking a moose at a higher rate than that of all hunters in aggregate.

Recommendation: Oppose.

WP12-14 Executive Summary	
General Description	Proposal WP12-14 requests that traps and snares be marked with trapper identification in Southeast Alaska (Units 1–5). *Submitted by James F. Baichtal*
Proposed Regulation	**Units 1–5—Trapping (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.***
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP12-14

ISSUES

Proposal WP12-14, submitted by James F. Baichtal, requests that traps and snares be marked with trapper identification in Southeast Alaska (Units 1–5).

DISCUSSION

The proponent states that Federal subsistence regulations should match the existing State regulation(s) requiring the identification of traps or snares. The proponent also contends that there are increasing incidents of traps and snares being set prior to the start of the trapping season and especially traps and snares left in the field after the season is over, and that many of the public and State and Federal personnel have encountered these illegal sets. Furthermore, the proponent states that there are documented cases of bear and deer being caught and killed in these illegal sets, and that guides and hunters are increasingly reporting animals with snares attached or with snare wounds. It is unclear whether these incidents are the result of negligence due to inexperience, an ethical issue, or the result of purposeful intent. The proponent contends that the inconsistency between the Federal and State regulations with regard to trap and snare identification makes enforcement problematic. The proponent believes that passage of this proposal will help law enforcement personnel identify trappers responsible for placing/leaving traps and snares in the field illegally, which may help to modify unethical trappers behavior and limit the waste of resources.

Existing Federal Regulation

Units 1–5—Trapping

N/A; currently no relevant regulation

Proposed Federal Regulation

Units 1–5—Trapping (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—Trapping

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.

Extent of Federal Public Lands

Federal public lands comprise approximately 95% of the Southeast Region which includes Units 1–5. The Forest Service manages the Tongass National Forest. The National Park Service manages the Glacier Bay National Park and Preserve, Sitka National Historical Park, Klondike Gold Rush National Historical Park and the Wrangell-St. Elias National Park and Preserve. There is no subsistence hunting allowed within the Glacier Bay National Park, Sitka National Historical Park or the Klondike Gold Rush National Historical Park. 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. The U.S. Fish and Wildlife Service manages the Alaska Maritime National Wildlife Refuge. The Bureau of Land Management manages lands near Icy Bay.

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for trapping beaver, coyote, Arctic fox, red fox, lynx, marten, mink, weasel, muskrat, river otter, wolf, and wolverine in Units 1–5.

Regulatory History

The current State requirement for marking traps and snares was passed at the 2006 Alaska Board of Game meeting, and was implemented during the 2007/2008 (State) regulatory year.

Effects of the Proposal

Title 50 (Wildlife and Fisheries) 100.6.3 of the Code of Federal Regulations (CFR) requires subsistence users to "Possess and comply with the provisions of any pertinent permits, harvest tickets, or tags required by the State unless any of these documents or individual provisions in them are superseded by the requirements in subpart D of this part". There is no reference to the marking of traps in subpart D. Further, CFR 50 100.14a, states that "State fish and game regulations apply to public lands and such laws are hereby adopted and made a part of the regulations in this part to the extent they are not inconsistent with, or superseded by, the regulations in this part." Section 816 (a) of ANILCA states that "All national parks and monuments in Alaska shall be closed to the taking of wildlife except for subsistence uses to the extent specifically permitted by this Act. Subsistence uses and sport fishing shall be authorized in such areas by the Secretary and carried out in accordance with the requirements of this title and other

applicable laws of the United States and the State of Alaska." Consequently, the State regulations for trap and snare marking also apply to subsistence users on public lands throughout Units 1–5, with the exception of Wrangell St. Elias National Park. Adoption of this proposal would, therefore, extend the trap marking requirement to subsistence users trapping within Wrangell St. Elias National Park. Although the marking requirement is currently applicable on Federal public lands within Unit 1–5 because of the State regulations, most subsistence users are probably not aware of this, and adopting this proposal would clarify the requirement for both subsistence users and law enforcement. Additionally, the following effects apply to subsistence users trapping in Wrangell St. Elias National Park:

Subsistence users will be required to purchase and install metal name tags on their traps and snares, or to place a sign near their snare site(s). Copper tags stamped with the trapper's identification information, including fasteners, cost approximately $26 per 100 tags (including shipping), or less (approximately $15–$20) for "write your own" tags. This proposal should have minimal affect on subsistence users because of the minimal additional expense and time involved with marking traps. Many trappers operate on both State and Federal land and already have their traps identified to meet State trapping requirements. This proposal may reflect positively on subsistence trappers through demonstrated responsibility and trapping ethics. This proposal will not affect other (State) users, and subsistence users trapping in areas outside of Wrangell St. Elias National Park, since they are already required to mark their traps. Indeed, two State trappers in Southeast voiced their support for consistency between State and Federal regulations on this issue, citing conservation and enforcement reasons including eliminating the possibility of trappers using the lack of a federal marking requirement as an excuse for not abiding by the State marking requirement (ADF&G 2010). Adoption of this proposal has the potential to benefit all users by promoting responsible and ethical trapping techniques and practices.

Adoption of this proposal may help protect and conserve wildlife populations by making trappers more accountable for their sets as well as providing enforcement officers a way to contact trappers concerning a particular set or sets should the need arise. Enforcement officers would, for example, be better able to contact subsistence trappers and educate them on trapping rules and regulations in the case of unintentional violations. Illegal trappers will, however, likely continue these practices with un-marked illegal sets.

The marking of traps has an added public safety benefit; if non-trappers, including parents and dog owners, encounter a set while recreating, they can contact the trapper for more information on trapping activity in the area, thus reducing the potential for user conflicts including injured children and pets. Minimizing user conflicts also helps prevent negative public attitude regarding trapping. A potential negative effect of the proposal may be harassment of trappers and theft of traps and snares by persons opposed to trapping who encounter the marked traps.

OSM CONCLUSION

Support Proposal WP12-14.

Justification

Adoption of this proposal will align State and Federal regulations within Wrangell St. Elias National Park, and clarify the alignment of State and Federal regulations throughout the remainder of Units 1–5. In regards to the extension to Wrangell St. Elias National Park lands, although not likely to result in the intended effect of reducing intentional illegal trapping, it will allow better communication with and education of well-intended subsistence trappers, thereby promoting responsible and ethical trapping techniques and practices, and potentially improve public safety. Adoption of this proposal may reflect

positively on the subsistence trapper through demonstrated responsibility and trapping ethics and reduced user conflicts. There will be no effect to other users and minimal effects to subsistence users. Although there is potential for subsistence trappers to be targeted by anti-trapping persons encountering their marked traps, these effects are expected to be minimal.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-14. The Council agreed that there was a benefit to aligning Federal and State regulations and reducing the uncertainty whether current regulations required traps to be marked. They expressed a concern that there was a lack of evidence why traps should be marked in either State or Federal regulations. Regulations should be adopted for a good reason and that does not include one bear caught in a snare; set by an unknown person for an unknown reason.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-14: Requests all traps and snares used for federal subsistence trapping in Units 1-5 be marked with trapper's identification.

Introduction: This proposal seeks marking requirements for all traps used by federal subsistence users in Southeast Alaska. The proposal requests federal subsistence used snares and traps 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 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.

The proponent indicates an increasing trend of traps and snares being set prior to the start of trapping season and traps being left in the field after the season is over is illegal. The proponent indicates this illegal activity might be committed by negligent inexperienced trappers or intentionally by experienced trappers and is resulting in wasting of game resources. The proponent indicates adoption of this proposal will make Federal and State trap marking regulations consistent which will assist with enforcement efforts and should limit the waste of resources.

Impact on Subsistence Users: If adopted, federally qualified subsistence trappers in Units 1-5 would be required to individually mark each trap or snare used for subsistence or post a sign near the traps as outlined above.

Opportunity Provided by State: The state trap identification regulations for Units 1-5 follow:

> 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.

ADF&G Comments on WP12-14
December 5, 2011, Page 1 of 2

Conservation Issues: The Board of Game adopted trap marking requirements for Units 1-5 in 2006 in response to concerns by Alaska Wildlife Troopers, Department of Fish and Game personnel, and members of the public that trapping as a whole would benefit from having some way of identifying ownership of traps and snares. This was prompted by traps being placed in areas where trapping was not allowed, or in some cases where pets were caught and contacting the trapper was not possible due to no required marking on the traps. In the case of this proposal, it makes sense for federally qualified trappers to also have to mark their traps and snares to address these same types of problems. In addition, there have been numerous cases of unattended snares being found on Prince of Wales Island without any way of contacting the responsible trapper. In some cases snares were found after the season closed and still capable of capturing a passing deer, bear, or wolf. In these cases, it is essential for conservation of these species that the owner of the snares be identified for both educational and enforcement purposes.

Recommendation: Support.

WRITTEN PUBLIC COMMENTS

Oppose. The proposal would be an undue burden on trappers. Additionally, it might not have the desired result – trappers who leave their traps and snares in place outside of open seasons would likely not comply with the identification regulation. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-16/17/20/21 Executive Summary	
General Description	Proposals WP12-16, -17, -20 and -21 request changes in the wolf hunting and trapping seasons in Southeast Alaska. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**Proposal WP12-16** **Units 1, 3, 4 and 5—Wolf Hunting** *5 Wolves* — ***Sept. 1–Mar. 31*** ~~*Aug. 1–April 30*~~ **Proposal WP12-17** **Units 1, 3 and 4—Wolf Trapping** *No limit* — *Nov. 10–**Mar. 31*** ~~*April 30*~~ **Proposal WP12-20** **Unit 4—Wolf Hunting** ~~***5 Wolves***~~ — ***No open season*** ~~*Aug. 1–April 30*~~ **Proposal WP12-21** **Unit 4—Wolf Trapping** ~~***No limit***~~ — ***No open season*** ~~*Nov. 10–April 30*~~
OSM Conclusion	**Oppose** Proposals WP12-16, -17, -20, -21
Southeast Regional Council Recommendation	**Oppose** Proposals WP12-16, -17, -20, -21
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** Proposals WP12-16, -17, -20, -21
Written Public Comments	**1 Oppose** Proposal WP12-16

STAFF ANALYSIS
WP12-16/17/20/21

ISSUES

Proposals WP12-16, -17, -20 and -21 were submitted by the Defenders of Wildlife and request changes in the wolf hunting and trapping seasons in Southeast Alaska.

DISCUSSION

Proposal WP12-16 requests that wolf hunting not be allowed in Units 1, 3, 4 and 5 in the months of August and April. Proposal WP12-17 requests that wolf trapping not be allowed in Units 1, 3 and 4 in the month of April. Proposals WP12-20 and -21 seek to close wolf hunting and trapping seasons in Unit 4.

The proponent states that wolf hides harvested in April are rubbed, have reduced value on the fur market, and make poor trophies. The proponent notes that by late April, female wolves are nearly at full term. The proponent states that in August, at the start of the wolf hunting season, pups are totally dependent on adults for survival. The proponent also states that hides harvested in August are nearly worthless on the fur market and make very poor trophies. The proponent believes that the wolf hunting and trapping seasons in Unit 4 should be closed since wolves do not currently occur there. The proposed regulations will make Federal seasons shorter than State seasons, in some areas.

Existing Federal Regulations

Units 1, 3, 4 and 5—Wolf Hunting	
5 Wolves	*Aug. 1–April 30*
Units 1, 3 and 4—Wolf Trapping	
No limit	*Nov. 10–April 30*

Proposed Federal Regulations

Proposal WP12-16

Units 1, 3, 4 and 5—Wolf Hunting	
5 Wolves	***Sept. 1–Mar. 31*** ~~*Aug. 1–April 30*~~

Proposal WP12-17

Units 1, 3 and 4—Wolf Trapping	
No limit	*Nov. 10–**Mar. 31*** ~~*April 30*~~

Proposal WP12-20

Unit 4—Wolf Hunting	
~~***5 Wolves***~~	***No open season*** ~~*Aug. 1–April 30*~~

Proposal WP12-21

Unit 4—Wolf Trapping

~~No limit~~	***No open season*** ***~~Nov. 10–April 30~~***

Existing State Regulations

Units 1B, remainder, 1C, 1D, 4 and 5—Wolf Hunting

5 Wolves	*Aug. 1–April 30*

Units 1A, 1B, that portion south of the Bradfield Canal and the east fork of the Bradfield River, and Unit 3—Wolf Hunting

5 Wolves	*Aug. 1–May 31*

Units 1, 3 and 4—Wolf Trapping

No limit	*Nov. 1–April 30*

Extent of Federal Public Lands

Federal public lands comprise approximately 89% of Unit 1 and consist of 80% U.S. Forest Service (USFS) and 20% National Park Service (NPS) managed lands (see **Unit 1 Map**). All of the NPS managed lands are part of Glacier Bay National Park, which is closed to subsistence.

Federal public lands comprise approximately 94% of Unit 3 and are 100% USFS managed land (see **Unit 3 Map**).

Federal public lands comprise approximately 96% of Unit 4 and are nearly 100% USFS managed land (see **Unit 4 Map**).

Federal public lands comprise approximately 96% of Unit 5 and consist of 65% NPS, 34% USFS and 1% Bureau of Land Management managed lands (see **Unit 5 Map**). Glacier Bay National Park and Preserve managed lands are closed to subsistence.

Customary and Traditional Use Determinations

All rural residents are eligible to harvest wolves in Units 1, 3 and 4.

Rural residents of Unit 5A have a positive customary and traditional use determination to harvest wolves in Unit 5. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf trapping seasons in Units 1, 3 and 4 were December 1–February 15 with no harvest limit in regulatory year 1990/91. The wolf trapping seasons in these units were changed to November 10–April 30 in regulatory year 1991/92.

In regulatory year 1990/91 there was no closed season and no harvest limit for wolf hunting in Units 1, 3, 4 and 5. Action taken on a proposal from ADF&G (Proposal 2) changed the wolf hunting season to August 1–April 30 and established a harvest limit of 5 wolves in regulatory year 1994/95.

In 2004, Defenders of Wildlife submitted Proposal WP05-02 requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southeast Alaska Subsistence Regional Advisory Council (Council) opposed that proposal, as did seven other Regional Advisory Councils. In its comments concerning Proposal WP05-02, the Council noted that this proposal was not necessary, would adversely affect subsistence use, and was not supported by substantial evidence (FSB 2005). Consistent with Regional Advisory Council recommendations, the Federal Subsistence Board rejected Proposal WP05-02.

In 2009, the Alaska Wildlife Alliance requested these same regulatory changes (WP10-23, -24, -25 and -26). The Southeast Alaska Regional Advisory Council opposed Proposals WP10-23, -24, -25 and -26 noting that there were no wolf conservation concerns and that these actions would result in unnecessary restrictions on subsistence users. The Federal Subsistence Board rejected Proposals WP10-23, -24, -25 and -26.

In 2011, the Alaska Board of Game (Proposal 27) extended the wolf hunting season to May 31 in Units 1A, 1B, that portion south of the Bradfield Canal and the east fork of the Bradfield River and Unit 3.

Current Events Involving Species

In August of 2011, the Department of the Interior received a petition from the Center for Biological Diversity and Greenpeace to list the Alexander Archipelago wolf (its range includes Units 1-5) as threatened or endangered under the Endangered Species Act. The U.S. Fish and Wildlife Service has initiated the petition review process (details can be found at: http://library.fws.gov/Pubs9/es_petition01.pdf).

Additionally, the Tongass National Forest has initiated the formation of a Wolf Task Force to address wolf conservation on Prince of Wales and surrounding islands (Unit 2). Partners include Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service.

Biological Background

Wolves (*Canis lupus)* likely moved into Southeast Alaska following postglacial immigration and establishment of Sitka black-tailed deer populations (Lowell 2006a). Wolves are found throughout most of Units 1, 3 and 5. Wolves are well adapted to the island and mainland environment of Southeast Alaska, although densities on the mainland are generally lower than on maritime-influence islands. Wolves are capable swimmers and regularly travel between adjacent islands in search of prey (Porter 2006). Deer are the primary food source of wolves in Southeast Alaska (Lowell 2006a). Other prey species include mountain goat, moose, small mammals, beaver, salmon and waterfowl.

Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after pups are about eight weeks old and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979).

Meier et al. (2006) observed that wolves sometimes disperse great distances. Porter (2006) reported that one radio-collared wolf from Kupreanof was observed moving more than 120 miles overland and making several saltwater crossings.

Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

Unit 1

The wolf population in Unit 1A appears to be stable (Porter 2006). Though data were limited, Lowell (2006b) estimated that the population in Unit 1B was 45–85 wolves in approximately 8 packs. While wolves are common throughout most of Units 1C and 1D, there are not sufficient data to provide meaningful population estimates (Barten 2006a, Scott 2006).

Unit 3

Lowell (2006a) estimated that the Unit 3 wolf population was 125–235 animals in approximately 21 packs and noted that recent increases in moose abundance had probably helped sustain relatively high wolf numbers.

Unit 4

Wolves are not established in Unit 4. There have been confirmed reports of wolves on Pleasant Island near Gustavus (Cunning 2010, pers. comm.) and along the east side of Admiralty Island (Grossman 2009). At the nearest points, it is only about three miles from the mainland to both of these islands.

Unit 5

Barten (2006b) reported that while there had been no attempts in recent years to quantify wolf numbers, it appears that the population is stable throughout the unit. In 1977, it was estimated that there were 45–50 wolves at a density of 67/1000 mi^2 in Unit 5A. In 1979 the Unit 5A and 5B minimum population estimates were 35 and 10 wolves respectively. In 1980 the estimates were 50 wolves in Unit 5A and 12 in Unit 5B (Barten 2006b). It appears that salmon are an important food source for wolves in late fall and early winter (Barten 2006b).

Harvest History

Wolf pelts have long been important for subsistence uses in Southeast Alaska (Smythe 1988, Mills and Firman 1986, Firman and Bosworth 1990, and Cohen 1989). Hunters occasionally take wolves opportunistically in the fall and early spring when they are hunting other species. Fur prices and weather conditions affect wolf trapping effort. Unusually mild winters can contribute to reduced trapper success (Lowell 2006a). The harvest by trappers is normally spread throughout the winter and declines in late-winter. Wolf hides in Southeast Alaska are generally considered to be of relatively poor quality by fur buyers, so there is little financial incentive to harvest wolves (Lowell 2006b). Porter (2006) and Lowell (2006a and b) observed that recent low harvest and low effort has likely been related to high gas prices.

Table 1. Reported wolf harvest and method of take for Units 1, 3 and 5, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	April harvest	Aug. harvest	Method of take for total harvest from Units 1, 3 and 5				
				Trap/ snare	(%)	Shot	%	Unknown
1999/2000	129	16	3	77	60	49	38	3
2000/01	141	15	1	97	69	44	31	0
2001/02	113	12	4	77	68	33	29	3
2002/03	139	13	0	84	60	52	37	3
2003/04	90	0	2	55	61	35	39	0
2004/05	77	0	0	51	66	26	34	0
2005/06	96	6	4	56	58	40	42	0
2006/07	103	2	2	53	51	23	20	26
2007/08	67	13	1	35	52	32	48	0
2008/09	126	22	0	72	57	53	42	1
2009/10	81	7	3	43	53	37	47	1

The cost of gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined.

Wolves harvested either by trapping or hunting in Alaska must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Between regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves ranged from 67 to 141 wolves in Units 1, 3 and 5 (**Table 1**). Of the 1162 cumulative harvest during that period, 126 (10.8%) were taken during the months of August and April (**Table 1)**. Lowell (2006a and b) reported that the wolf harvest in Units 1B and 3 probably under represented the actual wolf harvest. He suspected that some poaching was occurring and that some wolves are shot and left. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake

rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008).

Unit 1

Porter (2006) observed that trapping effort and catch per trapper in Unit 1A were relatively low. Lowell (2006b) noted that much of Unit 1B is not hunted or trapped. Barten (2006a) stated that there is little effort exerted toward taking wolves in Unit 1C, and that the harvest remains well below the level that would negatively influence the population. Scott (2006) observed that there is little pressure from either hunters or trappers to take wolves in Unit 1D.

Unit 3

Lowell (2006a) observed that most of Unit 3 is not trapped for wolves and that hunters/trappers harvested the majority of the wolves off the road system. He noted that reduced harvests in regulatory years 2003/04 and 2004/05 were the direct result of actions taken by the Alaska Board of Game to shorten the wolf hunting and trapping seasons.

Unit 5

Barten (2006b) reported that people hunting other species shot most of the wolves taken in the fall, and that during the winter and spring, the harvest is mostly limited to trappers. He observed that hunting and trapping pressure on wolves will probably remain low due to difficult access and inclement weather throughout the unit.

Effects of the Proposal

If any of these proposals are adopted, opportunity to harvest wolves under Federal subsistence regulations in Southeast Alaska will be reduced.

If Proposal WP12-16 is adopted, the Federal wolf hunting season in Units 1, 3, 4, and 5 will be closed August 1–31 and April 1–30, thereby shortening the seasons in these units by 61 days. If Proposal WP12-17 is adopted, the Federal wolf trapping seasons in Units 1, 3 and 4 will be closed during April, thereby shortening the seasons in these units by 30 days. Between regulatory years 1999/2000 and 2009/10, 10.8% of the reported wolf harvest in Units 1, 3 and 5 occurred in August and April (**Table 1)**.

If Proposals WP12-20 and -21 are adopted, the Federal wolf hunting and trapping seasons in Unit 4 will be closed. While there is not an established population of wolves in Unit 4, there have been confirmed reports of wolves in Unit 4. Hunting and trapping could help prevent wolves from becoming established in Unit 4. Wolves would likely have a significant impact on the ecology of Unit 4 and the deer populations that are so important to subsistence users. The deer model for USFS land management in Southeast Alaska incorporates about a 1/3 deer population reduction factor on islands with wolves (Grossman 2009, pers. comm.).

Proposal WP12-16 will further shorten the Federal subsistence wolf hunting seasons for Unit 1, 3, 4 and 5 than the currently longer State seasons. Proposal WP12-17 will make the Federal subsistence wolf trapping seasons for Units 1, 3 and 4 even shorter than the State seasons that have recently been lengthened. The proposed closure of wolf hunting and trapping for Unit 4 will make the Federal subsistence regulations more restrictive than the State regulations.

OSM CONCLUSION

Oppose Proposals WP12-16, -17, -20 and -21.

Justification

Two years ago the Alaska Wildlife Alliance requested these same regulatory changes. The Southeast Alaska Regional Advisory Council opposed those proposals and the Federal Subsistence Board rejected them.

The wolf populations in Units 1, 3, and 5 appear to be healthy. Wolves are prolific and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than harvest by hunters and trappers. Wolves are a very important subsistence resource in Units 1, 3 and 5. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. While wolves are not established in Unit 4, there have been confirmed reports of wolves from this unit.

Even if these proposals are adopted by the Federal Subsistence Board, hunters will still be able to take wolves under State regulations on USFS, Wrangell St. Elias National Preserve lands. Therefore, adoption of these proposals by the Federal Subsistence Board will not have the effect sought by the proponent.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposals WP12-16, -17, -20, -21. Similar regulatory proposals were considered by the Council during the previous regulatory cycle. They were opposed by both the Council and the Board. The wolf population in the Southeast Region is healthy and any wolves observed in any area during the currently authorized season should be available for harvest.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-16: Shorten the federal subsistence wolf hunting season in Units 1, 3, 4, and 5 from the present dates of August 1 through April 30 to September 1 through March 31.

Introduction: The federal subsistence and State of Alaska wolf hunting seasons are identical (August 1 through April 30). During the 2002 and 2004 Alaska Board of Game meetings, proposals were submitted to change the wolf hunting season dates. In 2002, a proposal was adopted to shorten the season, and in 2004 a proposal was adopted to return to the original season dates prior to the 2002 season adjustment. The department did not support shortening the season in 2002 and supported readopting the pre-2002 season dates during the 2004 Board of Game meeting.

Wolf populations are healthy and the hunting seasons length does not compromise sustained yield principles. The August 1 opening allows hunters who are afield for goats or deer to opportunistically harvest a wolf. In spring, the department supported a season extending through April to allow people to shoot or trap wolves. These season dates provide for substantial hunting and trapping harvest opportunity while allowing for sustainable wolf populations. The department opposed extending the trapping season into May because of wolf pupping season and to avoid catching bears after they emerge from dens in early May.

The only portion of Unit 4 where wolves have ever been documented with certainty is Pleasant Island near Gustavus, and this has been only on an occasional basis. The present hunting season dates reflect an interest by the department to keep an open season on wolves in this area should they become established. Unit 4 represents the primary producer of deer for many hunters from many communities in northern Southeast Alaska. Much of the area is subject to substantial snowfall during winter, which concentrates deer near the beaches and leaves them vulnerable to predation. If wolves do become established, the deer population would likely decline dramatically, leaving many fewer animals available for subsistence hunters. By leaving the present season dates intact, hunters can harvest wolves and prevent them from becoming established in Unit 4.

Impact on Subsistence Users: Proposal WP12-16 would shorten the wolf hunting season from 9 months to 7 months, reducing some opportunity for federally qualified subsistence hunters. Federal subsistence hunting opportunities for deer, moose, and goats could be impacted if a shorter wolf season resulted in reduced wolf harvests and increased predation rates on these species.

Given that no wolves have been harvested in Unit 4, adoption of this proposal would have no affect on federal subsistence users. However, the deer populations in Unit 4 are at low levels due to increased mortality during the recent severe winters. Therefore, if wolves were to become established in Unit 4, the combination of vulnerability to predation and mortality due to severe winters would have a significant detrimental effect on deer populations in northern southeast Alaska.

Opportunity Provided by State: The wolf hunting season under state regulation in this area is from August 1 through April 30, with a bag limit of five wolves.

Conservation Issues: This proposal presents no conservation issues for wolves. However, in some areas where wolves prey on deer and other ungulates, a shorter season may result in higher numbers of wolves and fewer of the prey species federal subsistence hunters depend upon.

Enforcement Issues: This proposal could create confusion by federal subsistence users who would have a shorter season than those hunting under state regulations.

Recommendation: Oppose.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-17: Shorten the wolf trapping season in Units 1, 3, and 4 from the present dates of November 10 through April 30 to November 10 through March 31.
Wildlife Proposal WP12-20: Eliminate wolf hunting in Unit 4, ABC Islands.
Wildlife Proposal WP12-21: Eliminate wolf trapping in Unit 4, ABC Islands.

Introduction: These proposals seek to reduce federal subsistence trapping of wolves in Units 1, 3, 4, and close the hunting and trapping seasons on Admiralty, Baranof, and Chichagof Islands (ABC Islands). The proponent of WP12-17 feels the trapping seasons in Units 1, 3, and 4 are excessive long and federal subsistence trapping activities into the spring impact pregnant and denning wolves. The proponent also assumes the Federal Subsistence Board approved the current trapping season as a form of wolf control and the fur quality of trapped wolves in spring renders hides unusable. The same proponent submitted WP12-20 and 21 which request total closure of the federal subsistence hunting and trapping seasons on the Unit 4 ABC Islands because no wolves are currently present on the islands.

Impact on Subsistence Users: Proposal WP12-17 would shorten the federal subsistence wolf trapping season from 5.5 months to 5 months, reducing some opportunity for federally qualified subsistence trappers and WP12-20 and 21 would eliminate wolf hunting and trapping on the ABC Islands all together. Federal subsistence hunting opportunities for deer, moose, and goats could be impacted if a shorter wolf season resulted in reduced wolf harvests and increased predation rates on these species. Given that no wolves have been harvested in Unit 4, proposals WP12-20 and 21 would have no affect on federally qualified subsistence users. However, deer populations in Unit 4 are at low levels due to increased mortality during the past three severe winters. Any additional mortality could inhibit their ability to recover. Therefore, if wolves were to become established in Unit 4, the combination of vulnerability to predation and mortality due to severe winters is likely to have a significant detrimental affect on deer populations in northern southeast Alaska.

Opportunity Provided by State: The wolf trapping season under state regulation in Units 1, 3, and 4 is November 1 through April with no bag limit. The wolf trapping season for Unit 2 is December 1 through March 31 with no bag limit. The wolf hunting season for Unit 2 is from August 1 through April 30, with a bag limit of five wolves.

Conservation Issues: These proposals would not present conservation issues for wolves. However, in some areas where wolves prey on deer and other ungulates, a shorter season may result in higher numbers of wolves and fewer of the prey species federally qualified subsistence hunters depend upon. Wolf populations are healthy and the hunting and trapping season lengths does not compromise sustained yield principles. These current hunting and trapping season dates provide for substantial harvest opportunity while allowing for sustainable wolf populations.

The only portion of Unit 4 where wolves have ever been documented with certainty is Pleasant Island near Gustavus, and this has been only on an occasional basis. The present hunting and trapping season dates reflect an interest by the department to keep an open season on wolves in

this area should they become established. Unit 4 represents the primary producer of deer for many hunters from many communities in northern Southeast Alaska. Much of the area is subject to substantial snowfall during winter, which concentrates deer near the beaches and leaves them vulnerable to predation. If wolves do become established, the deer population would likely decline dramatically, leaving many fewer animals available for subsistence hunters. By leaving season dates intact, hunters and trappers can harvest wolves and prevent them from becoming established in Unit 4.

Enforcement Issues: Adoption of these proposals would likely result in confusion by federally qualified subsistence users who would have a shorter season than those hunting under state regulations.

Other Comments: The suitability of the hides for subsistence uses is best determined by the user. Previous testimony before the Federal Subsistence Board cites that fur which is less than prime still possess many uses such as for trim on garments.

Recommendation: Oppose WP12-17, 20, and 21.

WRITTEN PUBLIC COMMENTS

Oppose Proposal WP12-16. There is not a conservation concern for wolves in this area, and shortening the hunting season would result in a loss of subsistence opportunity. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-18 Executive Summary	
General Description	Proposal WP12-18 requests that in Unit 2, wolf traps and snares be marked with owner's identification, and to close the season when the combined State and Federal harvest reaches 45 wolves. *Submitted by Defenders of Wildlife*
Proposed Regulation	**Unit 2—Wolves (Trapping)** *No Limit. Any wolf taken in Unit 2 must be sealed within 30 days of harvest**. Traps and snares must be marked with owner's identification. The season will be closed when a combined State and Federal harvest for hunting and trapping wolves reaches 45 wolves.*** — *Nov. 15–Mar. 31* **Unit 2—Wolves (Hunting)** *5 wolves. The Federal hunting and trapping season ~~may~~ **will** be closed when the combined Federal-State harvest ~~quota is reached~~ **reaches 45 wolves.*** — *Sept. 1–Mar. 31*
OSM Conclusion	**Oppose**
Southeast Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-18

ISSUES

Proposal WP12-18, submitted by Defenders of Wildlife, requests that in Unit 2, wolf traps and snares be marked with owner's identification, and to close the season when the combined State and Federal harvest reaches 45 wolves.

DISCUSSION

The proponent contends that a lower harvest cap will ensure a sustainable harvest of wolves and that marking traps will decrease illegal harvest.

Existing Federal Regulation

Unit 2—Wolves (Trapping)	
*No Limit. Any wolf taken in Unit 2 must be sealed within 30 days of harvest**.****	*Nov. 15–Mar. 31*
Unit 2—Wolves (Hunting)	
*5 wolves. The Federal hunting and trapping season may be closed when the combined Federal-State harvest quota is reached.**	*Sept. 1–Mar. 31*

Proposed Federal Regulation

Unit 2—Wolves (Trapping)	
*No Limit. Any wolf taken in Unit 2 must be sealed within 30 days of harvest**. Traps and snares must be marked with owner's identification. The season will be closed when a combined State and Federal harvest for hunting and trapping wolves reaches 45 wolves.***	*Nov. 15–Mar. 31*
Unit 2—Wolves (Hunting)	
*5 wolves. The Federal hunting and trapping season ~~may~~ **will** be closed when the combined Federal-State harvest ~~quota is reached~~ **reaches 45 wolves.***	*Sept. 1–Mar. 31*

Existing State Regulation

Unit 2—Wolves (Trapping)

No limit. Wolves taken in Unit 2 must be sealed on or before the 14th day after the date of taking. — *Dec. 1–Mar. 31*

(Units 1–5—Trapping; 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 2—Wolves (Hunting)

5 wolves. — *Dec. 1–Mar. 31*

The season will be closed by Emergency Order when 30% of the estimated fall population is harvested.

Extent of Federal Public Lands

Federal public lands comprise approximately 83% of Unit 2. The U.Ss. Forest Service manages 99% of those lands as part of the Tongass National Forest. The U.Ss Fish and Wildlife Service manages less than 1% of those lands as part of Alaska Maritime National Wildlife Refuge (Forrester Island) (see **Unit 2 Map**).

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination (C&T) for trapping and hunting wolves in Unit 2.

Regulatory History

The current State requirement for marking traps and snares was passed at the 2006 Alaska Board of Game meeting, and was implemented during the 2007/2008 (State) regulatory year.

In 1996, the Alaska Board of Game adopted a harvest cap of 25 percent of the estimated fall Unit 2 wolf population (estimated at 350 wolves at that time), effective with the 1997/1998 hunting and trapping season (Porter 2000). This estimate was based on population modeling augmented by radiotelemetry and demographic data. A harvest in excess of the guideline was determined to be non-sustainable in the long term and could lead to a population decline. In fall 2000, to provide more hunting and trapping opportunity, avoid emergency order closures, and improve harvest reporting, the Alaska Board of Game increased the wolf harvest cap from 25 to 30 percent of the estimated fall population (Porter 2003).

Current Events Involving Species

In August of 2011, the Department of the Interior received a petition from the Center for Biological Diversity and Greenpeace to list the Alexander Archipelago wolf (its range includes Units 1-5) as threatened or endangered under the Endangered Species Act. The U.S. Fish and Wildlife Service has initiated the petition review process (details can be found at: http://library.fws.gov/Pubs9/es_petition01.pdf).

Additionally, the Tongass National Forest has initiated the formation of a Wolf Task Force to address wolf conservation on Prince of Wales and surrounding islands (Unit 2). Partners include Alaska Department of Fish and Game and the U.S. Fish and Wildlife Service.

Biological Background

Wolves (*Canis lupus)* likely moved into Southeast Alaska following postglacial immigration and establishment of Sitka black-tailed deer populations (Lowell 2006). Wolves are found throughout most of Units 1, 2, 3, and 5. Wolves are well adapted to the island and mainland environment of Southeast Alaska, although densities on the mainland are generally lower than on maritime-influence islands. Wolves are capable swimmers and regularly travel between adjacent islands in search of prey (Porter 2006). Deer are the primary food source of wolves in Southeast Alaska (Lowell 2006). Other prey species include mountain goat, moose, small mammals, beaver, salmon and waterfowl.

Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) observed that wolves sometimes disperse great distances. Porter (2006) reported that one radio-collared wolf from Kupreanof was observed moving more than 120 miles overland and making several saltwater crossings.

Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance.

In 1994, the estimated population of wolves in Unit 2 was 336 wolves (Person et al. 1996). The wolf population in Unit 2 is thought to have declined since the mid-nineties when the population was thought to be high (Alaska Board of Game 2010), but no current formal estimate of the population exists.

Harvest History

During the period 2000–2009, 482 wolves were harvested in Unit 2 (**Table 1**). Of this harvest, 4 wolves were harvested by non-residents, and 10 wolves were harvested by Ketchikan residents, neither of whom have a positive customary and traditional use determination for wolves in Unit 2. Average annual harvest by rural residents (and thus Federally qualified subsistence users) was 47 wolves during this time period.

Table 1. Reported harvest of wolves in Unit 2, 2000-2009 (Scott 2011). Harvest year is reflective of hunter license; not the regulatory.

Year	Rural Resident	Ketchikan	Non-resident
2000	30	1	0
2001	71	0	1
2002	51	0	0
2003	43	3	2
2004	54	4	0
2005	61	0	0
2006	37	0	1
2007	34	0	0
2008	16	0	0
2009	33	0	0
Unknown	38	0	2

Effects of the Proposal

If this proposal is adopted, Federally qualified subsistence trappers in Unit 2 will have to mark their wolf traps and snares. The effects of marking traps and snares are discussed in detail in WP12-14. Adoption of WP12-14 will make this aspect of WP12-18 moot.

The harvest level set by the Alaska Board of Game is 30% of the estimated fall population. Adoption of a harvest quota of 45 wolves will set a static harvest quota for subsistence harvest of wolves in Unit 2. A special action will be necessary to change the quota if necessary in the future for the Federal quota to be consistent with that of the State. If this proposal is adopted and the quota is reduced to 45, and the State quota remains higher, this proposal will likely have no effect on the total harvest, since subsistence users are eligible to harvest wolves under the State regulations and the individual limits and season end dates are the same

OSM CONCLUSION

Oppose Proposal WP12-18.

Justification

The full justification supporting the marking traps and snares is included in WP12-14, and the same rationale applies to this proposal. Council action on Proposal WP12-14 makes this aspect of WP12-18 moot.

The Alaska Board of Game passed a quota guideline of 30% of the estimated fall population. Because the quota is set and combined for both State and Federal harvest, State and Federal managers need to collaborate to set the quota for each season. A static quota of 45 is not recommended because it does not allow for flexibility in setting the quota. A joint quota cannot be set if the State's quota is flexible and the Federal quota is not. If populations do continue to decline, a quota of 45 may indeed be too high, causing a conservation concern. Leaving the quota flexible will allow for prompt management of the harvest without the possible time delays through the special action process. Setting a static quota of 45 in regulation is not supported since it is contrary to sound wildlife management principles and may create conservation concerns.

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SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Oppose Proposal WP12-18. The Council agreed with the justification contained within the staff analysis. They also noted the studies of wolves on Prince of Wales were conducted more than 10 years ago when the wolf population in Unit 2 was approximately double what could be sustained in the long term and that population estimate should not be used as a benchmark to determine a population goal. There is a need for an independent Federal study to examine the wolf population as it exists now. Feral dogs have been observed running with wolves on Prince of Wales Island and it is likely that hybridization has occurred. Adopting this proposal would not benefit subsistence users, deer or wolves.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-18: Requires traps and snares to be marked with owner's identification and establish hunting and trapping harvest management objective of 45 wolves on Prince of Wales Island in Unit 2.

Introduction: The portion of this proposal requesting federally qualified subsistence trappers mark their traps and snares is addressed in proposal WP12-14. The proponent also seeks to establish an annual harvest limit of 45 wolves between the combined state and federal subsistence wolf hunting and trapping seasons. The proponent indicates they feel the Unit 2 wolf population is being unsustainably managed and are in declined due to multiple reasons.

Impact on Subsistence Users: If adopted, the federal subsistence wolf hunting and trapping seasons could be unnecessarily eliminated on Prince of Wales Islands if the 45 wolf quota is reached during years when the wolf population could sustainably provide additional harvest.

Opportunity Provided by State: The wolf hunting and trapping seasons under state regulation in this area are from December 1 through March 31 with an annual hunting bag limit of five wolves and annual trapping limit. Wolves taken in Unit 2 must be sealed on or before the 30th day after the date of taking. 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.

Conservation Issues: This proposal would not present conservation issues for wolves. However, in some areas where wolves prey on deer and other ungulates, a shorter season may result in higher numbers of wolves and fewer of the prey species federally qualified subsistence hunters depend upon.

Enforcement Issues: If adopted, this proposal might result in some confusion by federally qualified subsistence users in the field who do not receive word the wolf hunting and trapping seasons were closed inseason.

Recommendation: Oppose. Traps and snares marking requirements are addressed by proposal WP12-14.

WP12-19 Executive Summary	
General Description	Proposal WP12-19 requests that the sealing requirement for wolves in Unit 2 be reduced from 30 days after harvest to 14 days after harvest. *Submitted by the Southeast Alaska Subsistence Regional Advisory Council*
Proposed Regulation	*§__.26 Subsistence taking of wildlife. (k) Sealing of beaver, lynx, marten otter, wolf, and wolverine. You may not possess or transport from Alaska the untanned skin of a marten taken in Units 1–5, 7, 13E, or 14–16 or the untanned skin of a beaver, lynx, otter, wolf, or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative in accordance with State or Federal regulations. (1) In Unit 18, you must obtain an ADF&G seal for beaver skins only if they are to be sold or commercially tanned. (2) In Unit 2, you must seal any wolf taken on or before the **14th** ~~30th~~ day after the date of taking.* **Unit 2—Wolves (Trapping)** *No Limit. Any wolf taken in Unit 2 must be sealed within **14** ~~30~~ days of harvest***.*** — *Nov. 15–Mar. 31* **Unit 2—Wolves (Hunting)** *5 wolves. The Federal hunting and trapping season may be closed when the combined Federal-State harvest quota is reached.* ***Any wolf taken in Unit 2 must be sealed within 14 days of harvest.*** — *Sept. 1–Mar. 31*
OSM Conclusion	**Support**
Southeast Regional Council Recommendation	**Support**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendation and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Support**
Written Public Comments	**None**

STAFF ANALYSIS
WP12-19

ISSUES

Proposal WP12-19, submitted by the Southeast Alaska Subsistence Regional Advisory Council (Council), requests that the sealing requirement for wolves in Unit 2 be reduced from 30 days after harvest to 14 days after harvest.

DISCUSSION

The proponent states that this proposed regulation is necessary to allow the management agencies to track the total harvest in Unit 2 to prevent overharvest of this population and align Federal and State regulations.

Existing Federal Regulation

> *§__.26 Subsistence taking of wildlife. (k) Sealing of beaver, lynx, marten otter, wolf, and wolverine. You may not possess or transport from Alaska the untanned skin of a marten taken in Units 1–5, 7, 13E, or 14–16 or the untanned skin of a beaver, lynx, otter, wolf, or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative in accordance with State or Federal regulations. (1) In Unit 18, you must obtain an ADF&G seal for beaver skins only if they are to be sold or commercially tanned. (2) In Unit 2, you must seal any wolf taken on or before the 30th day after the date of taking.*

Unit 2—Wolves (Trapping)	
*No Limit. Any wolf taken in Unit 2 must be sealed within 30 days of harvest***.***	*Nov. 15–Mar. 31*

Unit 2—Wolves (Hunting)	
*5 wolves. The Federal hunting and trapping season may be closed when the combined Federal-State harvest quota is reached.**	*Sept. 1–Mar. 31*

Proposed Federal Regulation

> *§__.26 Subsistence taking of wildlife. (k) Sealing of beaver, lynx, marten otter, wolf, and wolverine. You may not possess or transport from Alaska the untanned skin of a marten taken in Units 1–5, 7, 13E, or 14–16 or the untanned skin of a beaver, lynx, otter, wolf, or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative in accordance with State or Federal regulations. (1) In Unit 18, you must obtain an ADF&G seal for beaver skins only if they are to be sold or commercially tanned. (2) In Unit 2, you must seal any wolf taken on or before the **14th** ~~30th~~ day after the date of taking.*

Unit 2—Wolves (Trapping)

No Limit. Any wolf taken in Unit 2 must be sealed within ***14*** *~~30~~ days of harvest****.***	*Nov. 15–Mar. 31*

Unit 2—Wolves (Hunting)

5 wolves. The Federal hunting and trapping season may be closed when the combined Federal-State harvest quota is reached. ***Any wolf taken in Unit 2 must be sealed within 14 days of harvest.***	*Sept. 1–Mar. 31*

Existing State Regulation

Unit 2—Wolves (Trapping)

No limit. Wolves taken in Unit 2 must be sealed on or before the 14th day after the date of taking.	*Dec. 1–Mar. 31*

Unit 2—Wolves (Hunting)

5 wolves.	*Dec. 1–Mar. 31*
The season will be closed by Emergency Order when 30% of the estimated fall population is harvested. Hides must be sealed within 14 days of kill.	

Extent of Federal Public Lands

Unit 2 is approximately 83% Federal public lands. The Federal public lands are managed primarily by the U.S. Forest Service as part of the Tongass National Forest. Less than 1% of that total is managed by the U.S. Fish and Wildlife Service (Forrester Island) as part of the Alaska Maritime National Wildlife Refuge.

Customary and Traditional Use Determinations

All rural residents have a positive customary and traditional use determination for trapping and hunting wolves in Unit 2.

Regulatory History

From 1915 through the early 1970s, a cash bounty was paid for wolves in Southeast Alaska (ADF&G 1997). Biological and harvest information has been collected on harvested wolves since the early 1960s. Records from 1961–62 and from 1970–71 are from bounty payments. A State mandatory sealing program has been in effect since that time (Alaska Department of Fish and Game 1989).

1n 1997, the Federal Subsistence Board, through proposal WP07-15, adopted a requirement that all wolves taken in Unit 2 must be sealed within 30 days of harvest.

In November 2010, the Alaska Board of Game (BOG) adopted a regulation modifying the time for wolves to be sealed in Unit 2 from 30 days to 14 days (BOG 2010). This action was determined to be necessary to allow the managers to track the harvest and stay within the total allowable harvest.

Current Events Involving the Species

Please refer to WP12-18.

Biological Background

Please refer to WP12-18.

Harvest History

Please refer to WP12-18.

Effects of the Proposal

If adopted, this proposal would align Federal and State regulations by requiring subsistence users to bring wolf hides from Unit 2 into ADF&G offices or to a designated sealer for sealing within 14 days of harvest. Unit 2 wolves are managed under a harvest quota of 30% of the estimated fall population. The shortened sealing requirement will allow the management agencies to more effectively track the harvest of wolves in Unit 2 and avoid exceeding the harvest quota.

Shortening the reporting period would have minimal effects on subsistence users since 14 days is generally considered to be an adequate amount of time to turn in the hides. This proposal would not affect other users because this regulation already exists under State regulations. Both subsistence users and non-Federally qualified users will benefit by this proposal since more effective management will ensure continued long-term availability of this resource.

OSM CONCLUSION

Support Proposal WP12-19.

Justification

The shortened sealing requirement will allow the management agencies to more effectively track the harvest of wolves in Unit 2 and avoid exceeding the harvest quota, with minimal effects to subsistence users. All users should benefit long-term from more effective management of the population.

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Scott, R. 2011. Unit 5 Area Biologist. Personal communication: email. Alaska Department of Fish and Game. Douglas, Alaska.

SOUTHEAST SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATION

Support Proposal WP12-19. The Council considered this proposal as a housekeeping measure that will increase communication and collaboration between trappers and State-Federal managers. Federal users will benefit from a uniform set of State and Federal regulations and wolf management on Prince of Wales Island will benefit by having a timely reporting of harvest. The change from 30 days reporting to 14 days will allow for more effective in-season management of the wolf guideline harvest.

INTERAGENCY STAFF COMMITTEE COMMENT

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.

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-19: Shorten the sealing requirement for wolves harvested by federal subsistence trappers in Unit 2.

Introduction: This proposal was submitted to shorten the total days between harvest and required sealing of wolf hides harvested by federally qualified subsistence trappers in Unit 2 from 30 days to 14 days. The proponent indicates the intent of this proposal is to modify federal subsistence regulations to match the November 2010 Alaska Board of Game adopted sealing requirements for Unit 2. The proponent also indicates adoption of this proposal will assist management agencies with more up to date information to track harvest and stay within the total allowable take goal. If adopted, management agencies will have more timely information available to manage the resource without exceeding the established harvest quota for Unit 2.

The proponent offers the following regulatory language.

> §__.26 Subsistence taking of wildlife. (k) Sealing of beaver, lynx, marten otter, wolf, and wolverine. You may not possess or transport from Alaska the untanned skin of a marten taken in Units 1–5, 7, 13E, or 14–16 or the untanned skin of a beaver, lynx, otter, wolf, or wolverine, whether taken inside or outside the State, unless the skin has been sealed by an authorized representative in accordance with State or Federal regulations. (1) In Unit 18, you must obtain an ADF&G seal for beaver skins only if they are to be sold or commercially tanned. (2) In Unit 2, you must seal any wolf taken on or before the **14** ~~30th~~ day after the date of taking.

Impact on Subsistence Users: If adopted, federally qualified subsistence trappers would be required to bring in harvested wolf pelts from Unit 2 for sealing within 14 days of taking.

Opportunity Provided by State: The wolf trapping season under state regulation in this area is from December 1 through March 31, with no harvest limit.

Conservation Issues: This proposal would assist management agencies with more timely and accurate decision making potentially avoiding overharvests in areas with low wolf concentrations.

Enforcement Issues: Adoption of this proposal will reduce some confusion by federal subsistence users who might participate in both the federal subsistence and state trapping seasons.

Recommendation: Support.

WP12-33 Executive Summary	
General Description	Proposal WP12-33 seeks to shorten wolf hunting seasons in Units 11 and 12. *Submitted by the Defenders of Wildlife*
Proposed Regulation	**Unit 11—Wolf Hunting** *10 Wolves* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~* **Unit 12— Wolf Hunting** *10 Wolves* ***Nov. 1–Mar. 31*** *~~Aug. 10–April 30~~*
OSM Conclusion	**Oppose**
Southcentral Regional Council Recommendation	**Oppose**
Eastern Interior Regional Council Recommendation	**Oppose**
Interagency Staff Committee Comments	The Interagency Staff Committee found the staff analysis to be a thorough and accurate evaluation of the proposal and that it provides sufficient basis for the Regional Council recommendations and Federal Subsistence Board action on the proposal.
ADF&G Comments	**Oppose**
Written Public Comments	**1 Oppose**

STAFF ANALYSIS
WP12-33

ISSUES

Proposal WP12-33, submitted by the Defenders of Wildlife, seeks to shorten wolf hunting seasons in Units 11 and 12.

DISCUSSION

Proposal WP12-33 requests that wolf hunting be prohibited in Units 11 and 12 in the months of August, September, October, and April. The proponent wishes to apply this restriction in the part of Unit 12 that is outside of the State's predator control program [U.S. Fish and Wildlife Service (FWS) and National Park Service (NPS) lands]. The proponent notes that by late April, in Units 11 and 12, hides are rubbed and pregnant females are approaching full term. The proponent notes that pups are totally dependent on adults for food and protection at the start of the current wolf hunting seasons in Units 11 and 12 and that in August hides are not suitable for commercial sale or trophies.

Existing Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*
Unit 12—Wolf Hunting	
10 Wolves	*Aug. 10–April 30*

Proposed Federal Regulation

Unit 11—Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~
Unit 12— Wolf Hunting	
10 Wolves	***Nov. 1–Mar. 31*** ~~*Aug. 10–April 30*~~

Existing State Regulation

Unit 11—Wolf Hunting	
5 Wolves	*Aug.10–April 30*
Unit 12—Wolf Hunting	
5 Wolves	*Aug.10–May 31*

Extent of Federal Public Lands

Federal public lands comprise approximately 81% of Unit 11 and consist of 97% National Park Service (NPS), 3% U.S. Forest Service (USFS) and <0.1% Bureau of Land Management (BLM) managed lands (see **Unit 11 Map)**. Federal public lands comprise approximately 59% of Unit 12 and consist of 82% National Park Service (NPS) and 18% U.S. Fish and Wildlife Service (FWS) managed lands (see **Unit 12 Map**).

Customary and Traditional Use Determinations

Rural residents of Units 6, 9, 10 (Unimak Island only), 11, 12, 13, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, and Chickaloon have a positive customary and traditional use determination to harvest wolves in Units 11 and 12. In order to engage in subsistence in Wrangell St. Elias National Park, the National Park Service requires that subsistence users either live within the park's resident zone (36 CFR 13.430, 36 CFR 13.1902) or have a subsistence permit (36 CFR 13.440) issued by the park superintendent.

Regulatory History

The Federal subsistence wolf hunting seasons in Unit 11 and 12 have been from August 10 to April 30 since 1990. The harvest limit in both Units 11 and 12 was 10 wolves in regulatory year 1990/91. This was reduced to five wolves from regulatory years 1992/93 to 1998/99. In regulatory year 1999/00, the Federal Subsistence Board changed the harvest limits in Units 11 and 12 to 10 wolves based on recommendations from the Eastern Interior Alaska Subsistence Regional Advisory Council and the Southcentral Alaska Subsistence Regional Advisory Council.

In 2004, Defenders of Wildlife submitted a proposal (WP05-02) requesting that wolf hunting seasons in Units 1, 3–4, 5A, 6–7, 9–13, 14C, 15–21, and 24–26 be closed until September 15. The Southcentral Alaska Subsistence Regional Advisory Council and Eastern Interior Alaska Subsistence Regional Advisory Council both opposed that proposal, as did six other Regional Advisory Councils. Consistent with these Regional Advisory Council recommendations, the Federal Subsistence Board rejected proposal WP05-02. In its comments concerning WP05-02, the Southcentral Alaska Subsistence Regional Advisory Council noted that there was no biological reason to reduce the wolf season (FSB 2005). At the Southcentral Alaska Subsistence Regional Advisory Council's March 2005 meeting, it was noted that the Denali Subsistence Resource Commission had reported that early season wolf pelts have low commercial value but are a resource for local subsistence users making crafts and clothing for personal use (SCRAC 2005). At its March 2005 meeting, Eastern Interior Alaska Subsistence Regional Advisory Council member Entsminger noted that, as a skin sewer, she has seen wolf hides from August and September and spring. She noted that in August and September wolf's hair tends to be shorter and is more useful for making hats and other things. She noted that while few wolves are taken in the fall, when they are harvested by subsistence users their hides are used (EIRAC 2005).

In 2009, Defenders of Wildlife submitted a proposal (WP10-38) requesting these same regulatory changes. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed WP10-38. Both Councils noted that there were no conservation concerns for wolves in Units 11 and 12. WP10-38 was rejected by the Federal Subsistence Board.

Biological Background

Wolves (*Canis lupus*) have probably been part of Alaska fauna since the Pleistocene glaciation (Murie 1944). Wolves are currently found throughout most of Units 11 and 12. Prey species include caribou, moose, sheep, small mammals, snowshoe hare, and beaver. Murie (1944) noted that there are times of wolf scarcity and times of wolf abundance and suggested that food supply was probably an important factor affecting wolf abundance. Wolves first breed at age two to four and produce pups in dens during the spring (Mech et al. 1998). Litters average five or six pups. Wolves abandon the den after about eight weeks and live at sites above ground until early autumn when the entire pack roams a large territory for the rest of the fall and winter. Wolves live at low densities in a structured population of territorial packs (Mech and Boitani 2003). Meier et al. (2006) reported that 28% of the wolves leave their packs each year, and that most offspring eventually leave the pack. Dispersing wolves form new packs when they locate

dispersers of the opposite sex from another pack and a vacant area to establish a territory (Rothman and Mech 1979). Meier et al. (2006) reported that wolves sometimes disperse great distances. The longest documented dispersal of a Denali National Park and Preserve wolf was 435 miles.

The size of the home range is believed to be dependent on prey abundance, the activities of neighboring packs, and each pack's individual habits. Wolf pack territories overlap one another and change over time (Meier et al. 2006). As a pack makes its way around its territory, it may encounter and engage with other wolves within its territory at any time. A fight to the death can occur during such encounters. Predation by other wolves is probably the major cause of natural mortality among adult wolves. Meier et al. (2006) observed that at least 60% of the wolf deaths in Denali National Park and Preserve came from wolves being killed by other wolf packs. With high reproductive capacity, good survival of young, and high dispersal rates, wolf populations are able to quickly respond to changes in prey abundance. Creel and Rotella (2010) suggested that, "wolf populations can grow while being harvested. However, point estimates for the maximum offtake rate associated with stable wolf populations are below the threshold identified by recent state wolf management plans" which are based on studies such as Adams et al. (2008).

Unit 11

In the early 1970s, McIlroy (1975) estimated that the wolf density in Unit 11 was 12/1000 mi^2. Kelleyhouse (2006) estimated that there were 10 to 20 wolf packs in regulatory years 1997/98 to 2004/2005. She estimated that there were 70–130 wolves in Unit 11 during that time-period and observed that wolf numbers were higher in the northern portions of the unit because of the higher density of caribou, moose and sheep. In 2008, the spring density of wolves in Unit 11 was approximately 6 wolves/1000 mi^2 (ADF&G 2010).

Unit 12

Hollis (2006) estimated that there were 240–255 wolves in Unit 12. Wolf density estimates for 2001 to 2004 ranged from 14 to 50/1000 mi^2 (Hollis 2006). Hollis (2006) estimated that, in regulatory year 2002/03, there were a total of 31 packs in Unit 12 with an average pack size of 7.0–7.4 wolves. The current fall wolf population estimate for Unit 12 is 179–192 wolves (18 to 19/1000 mi^2) (ADF&G 2010). The Unit 12 wolf population has benefited from high numbers of caribou since 1997 and from the snowshoe hare cycle highs in 1998–2001 and 2007–2009 (ADF&G 2010). The Chisana caribou herd has been a reliable food source for wolves in eastern Unit 12. Caribou from the Mentasta, Nelchina, and Macomb herds also have used portions of the unit and provide a food source for wolves (Hollis 2006)

Harvest History

Halpin (1987) and Stratton and Georgette (1984) provide some subsistence harvest information for communities in Units 11 and 12. Hunters occasionally take wolves in the fall and early spring when they are hunting other species. Once snow-cover and ice are adequate for snowmachine travel, trappers begin establishing and maintaining trap lines. Wolf harvest is spread throughout the winter. Wolf harvest declines in April as snow and ice conditions deteriorate with the spring melt. Fur prices and snow and ice conditions affect wolf trapping effort in any given year. The cost of snowmachines, gas, traps, and other equipment has increased over the last 20 to 25 years, yet the price of wolf pelts has declined. Hollis (2006) observed that in Unit 12, few trappers specifically target wolves, but noted that during years when marten and lynx pelt prices are low and wolf prices are adequate, more trappers concentrate on wolves. Harvest rates in remote areas are dependent on fur prices and weather conditions. Trapping pressure is high along the road system and around communities in Units 11 and 12 (Kelleyhouse 2006, Hollis 2006).

Wolves harvested either by trapping or hunting must be sealed by an ADF&G representative or appointed fur sealer. During the sealing process, information is obtained on the date and location of take, sex, color of pelt, estimated size of the wolf pack, method of take, and access used. Kelleyhouse (2006) observed that in Unit 11, illegal and unreported wolf harvest was probably minimal. Wolves are difficult animals to bring down and it is not unreasonable to assume that some mortality is occurring as a result of wounding loss. Some wolves caught in traps that are not checked regularly are scavenged by other animals, and the hides are so damaged that they are discarded in the field with the harvest going unreported.

There have been a number of wolf control programs in Units 11 and 12 since the 1940s (Kelleyhouse 2006, Hollis 2006). The Alaska Board of Game authorized aerial wolf control in northern Unit 12 in 2004 (Hollis 2006).

Based on an analysis of information from North American wolf populations, Adams et al. (2008) concluded that wolf populations appear to be largely unaffected by human take of ≤29% annually. Given the limited effects of moderate levels of human take, they concluded that the risks of reducing wolf populations through regulated harvest are quite low.

Unit 11

From regulatory years 1999/00 to 2009/10, the reported annual harvest of wolves in Unit 11 ranged from 15 to 35 wolves per year (**Table 1**). Most of the wolves were taken using traps or snares. Kelleyhouse (2006) observed that the reported harvest was relatively low when compared to the estimated Unit 11 wolf population size. She estimated that the annual harvest rate averaged about 14% for regulatory years 2002/03 to 2004/05.

Of a total of 234 wolves taken in Unit 11 during regulatory years 1999/00 to 2009/10, 28 were shot during the months of August, September, October and April (**Table 1**).

Unit 12

From regulatory years 1999/2000 to 2009/10, the reported annual harvest of wolves in Unit 12 ranged from 21 to 58 wolves per year (**Table 2**). Most of the wolves were taken using traps or snares. The harvest was relatively low when compared to the estimated Unit 12 wolf population size.

Of a total of 436 wolves taken in Unit 12 during regulatory years 1999/00 to 2009/10, 46 were shot during the months of August, September, October and April (**Table 2**).

Effects of the Proposal

If Proposal WP12-33 is adopted, the Federal wolf hunting seasons in Units 11 and 12 will be shortened. The proposals seek to close the Federal wolf hunting seasons in these units from August 10–October 31 and April 1–30, thereby shortening the existing season by 113 days. Between regulatory years 1999/00 and 2009/10, in Unit 11 and Unit 12 combined, 11% of the reported wolf harvest occurred in the months of August, September, October and April (**Tables 1 and 2**; ADF&G 2011). Proposal WP12-33 will eliminate the opportunity for Federally qualified subsistence users to harvest wolves under Federal regulations during the fall and spring when they are hunting other species. This proposal will make the Federal subsistence wolf hunting season in Unit 11 shorter than the State season. The Federal hunting season for wolves in Unit 12 is already shorter than the State season; this proposal seeks to make it even shorter.

Table 1. Reported wolf harvest and method of take for Unit 11, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Shot Aug.–Oct. & April harvest	Method of take for total harvest from Unit 11				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	23	2	21	91	2	9	0
2000/01	35	4	31	89	4	11	0
2001/02	23	1	21	91	2	9	0
2002/03	19	1	18	95	1	5	0
2003/04	15	2	11	73	3	20	1
2004/05	15	3	12	80	3	20	0
2005/06	26	2	22	85	4	15	0
2006/07	15	1	14	93	1	7	0
2007/08	23	3	19	83	4	17	0
2008/09	18	1	17	94	1	6	0
2009/10	22	8	12	55	10	45	0

Table 2. Reported wolf harvest and method of take for Unit 12, regulatory years 1999/00 to 2009/10 (ADF&G 2011).

Regulatory year	Reported total harvest	Shot Aug.–Oct. & April harvest	Method of take for total harvest from Unit 12				
			Trap/ snare	(%)	Shot	%	Unknown
1999/2000	54	11	40	74	13	24	1
2000/01	58	2	51	88	7	12	0
2001/02	39	4	32	82	7	18	0
2002/03	53	2	49	92	4	8	0
2003/04	25	2	23	92	2	8	0
2004/05	29	1	27	93	2	7	0
2005/06	39	8	22	56	15	38	2
2006/07	30	2	24	80	6	20	0
2007/08	49	5	40	82	9	18	0
2008/09	39	3	29	74	7	18	3
2009/10	21	6	9	43	12	57	0

OSM CONCLUSION

Oppose Proposal WP12-33.

Justification

Two years ago the Defenders of Wildlife requested these same regulatory changes. The Southcentral Alaska Regional Advisory Council and the Eastern Interior Regional Advisory Council both opposed that proposal and the Federal Subsistence Board rejected it.

The wolf populations in Units 11 and 12 are thought to be healthy. Wolves are prolific reproducers and survival of young is generally high. Young wolves disperse from packs at high rates as yearlings and 2-year-olds; these individuals are abundant and available to be harvested. The wolf population in these units is thought to be regulated more by natural factors than by the harvest by hunters and trappers.

Wolves are an important subsistence resource in Units 11 and 12. The harvest of wolves and the use, barter, and sale of pelts is a long standing component of the subsistence economy. While only a small part of the wolf harvest occurs in the months of August, September, October and April, the opportunity for hunters to take wolves in these months is important to Federally qualified subsistence users.

Even if this proposal is adopted by the Federal Subsistence Board, hunters will still be able to take wolves under State regulations on FWS, BLM, USFS and Wrangell-St. Elias Preserve lands in these two units. Therefore, adoption of this proposal by the Federal Subsistence Board will not have the effect sought by the proponent.

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SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Southcentral Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-33. The Council feels that there are no conservation concerns that warrant these proposals.

Eastern Interior Subsistence Regional Advisory Council Recommendation

Oppose Proposal WP12-33. There is not a conservation concern for wolves in Units 11 and 12, and shortening the season would negatively affect subsistence users by reducing subsistence opportunity. Hides harvested in the fall, when the hair is short, are better for hats and mittens. Spring hides can be used to make good ruffs.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-33: Shorten the federal subsistence wolf hunting season in Units 11 and that portion of Unit 12 not part of the State's predator control program from current season dates of August 10 through April 30 to November 1 through March 31. This proposal is identical to WP10-38 rejected by the Federal Subsistence Board in 2010.

Introduction: This proposal assumes federal subsistence wolf hunting seasons opening August 10 are solely for predator control. August openings are traditional, allowing federal and state subsistence hunters the opportunity to take a wolf while hunting other big game. Hide value depends on what the wolf will be used for, and is best determined by the person who intends to use the hide.

Impact on Subsistence Users: Adoption of this proposal would unnecessarily restrict the opportunity to take a wolf for subsistence while big game hunting, specifically during the fall. This loss of fall hunting opportunity could seriously impact subsistence users who have limited means to hunt during winter months.

Opportunity Provided by State: The State provides an August 1 through April 30 hunting season with a bag limit of 5 wolves in Unit 11 and an August 10 through May 31 hunting season also with a bag limit of 5 wolves in Unit 12.

Conservation Issues: Current seasons and bag limits for wolf hunting in Units 11 and 12 have virtually no impact on wolf numbers. Since 1999, an average of two wolves per year were taken in Unit 11 and seven in Unit 12 by hunting. Hunting accounts for approximately 11% of the total wolf take in Unit 11 and 2% of the total wolf take in Unit 12. Wolf numbers and total harvests have been relatively stable in both units for many years, and there are no current conservation concerns.

Fall wolf population estimates in Unit 11 ranged from 78-122 since the mid 1990s. For the size of the unit (33,112 km^2), this represents a very low natural density of wolves (3.3-3.6 wolves / 1,000 km^2). Given the amount of high elevation terrain in Unit 11, the actual density of wolves in available wolf habitat is slightly higher. The annual harvest rate in Unit 11 since 2001 has averaged 19% (range = 12-24%), well within the range of sustainability regardless of the long hunting and trapping seasons. This stable pattern is due to the low density dynamic equilibrium predator/prey situation among wolves, moose, caribou, and sheep in the area.

The current fall wolf population estimate in Unit 12 is 179–192 wolves (7–7.5 wolves/1,000 km^2). Despite active wolf reduction efforts in a portion of northern Unit 12 and in neighboring units, the minimum fall population of wolves residing entirely within Unit 12 has changed little since 1998. Harvest rates in Unit 12 have been <24% since 1998, well within the range of sustainability. Wolf numbers in Unit 12 have also benefited from higher numbers of Fortymile caribou since 1997, increasing migrating Nelchina caribou, and highs in snowshoe hare cycles in 1998–2001 and 2007–2009.

The proposer states that adjacent Unit 13 and 20E have very low wolf densities due to active predator management. While wolves have been reduced in Unit 13 in recent years, it was not by 80% as the proposer suggests. The unit-wide fall wolf density in Unit 13 has been reduced approximately 50% between 1999 (520 wolves, pre-control) and 2009 (273 wolves); and wolf population objectives are currently being met. For comparison to other units, the most recent fall density of wolves for all of Unit 13 was 4.5 wolves / 1,000 km^2 in 2008.

It is very important to note the difference between fall and spring wolf estimates when discussing wolf population dynamics and comparing areas. Wolf populations decline over the course of a winter due to human take, natural mortality, and dispersal; spring estimates do not yet include new pups. Wolf control areas are evaluated based on spring estimates. The most recent spring estimates for wolves in Unit 13 and the Upper Yukon-Tanana Wolf Predation Control Area in Unit 20E are 2.4 and 3.3 wolves/1,000 km^2 respectively. (These estimates are unit-wide and are not based on available habitat.)

Although Units 13 and 20E have active wolf management programs, the wolf population dynamics of Units 11 and 12 are not significantly affected by these activities. Shortening the wolf hunting or trapping seasons in Units 11 and 12 at this time would have no effect on the wolf populations in these areas. The current hunting seasons are sustainable and allow federally qualified subsistence hunters to take wolves opportunistically.

Enforcement Issues: Significant differences in federal and state regulations resulting from adoption of this proposal would create enforcement issues in areas with mixed land ownership, as well as lands such as the Tetlin Refuge and the Wrangell-St. Elias Preserve where both state and federal regulations apply.

Other Comments: It is unlikely that all adults would be taken out of a pack by the hunting addressed in this proposal. Adult wolves have learned to avoid humans through experience and are the most difficult pack members to take, while pups are the most vulnerable pack members to harvest. Pup starvation is unlikely even if some adults are taken. Wolves have evolved and thrived under natural conditions where adult mortality occurs regularly through intraspecific competition. Also, older adult wolves kill large prey, and thus are subject to injury and death. In cases of natural adult mortality, the pack social structure provides a continuation of normal pack behavior and support to pups. Furthermore, wildlife viewing occurs concurrently with hunting in this area.

Recommendation: Oppose.

WRITTEN PUBLIC COMMENTS

Oppose. There is not a conservation concern for wolves in Units 11 and 12, and shortening the season would negatively affect subsistence users by reducing subsistence opportunity. Hides harvested in the fall, when the hair is short, are better for hats and mittens. Spring hides can be used to make good ruffs. *Wrangell-St. Elias National Park Subsistence Resource Commission*

WP12-52 Executive Summary	
General Description	Proposal WP12-52 of Alakanuk Native Corporation, requests a change in regulations to ban hunting by non-Federally qualified subsistence users along the Yukon River and into Canada. *Submitted by Brian L. Williams*
Proposed Regulation	No regulation language was proposed.
OSM Conclusion	**Oppose**
Yukon-Kuskokwim Delta Regional Council Recommendation	**No action taken.**
Western Interior Regional Council Recommendation	**No action taken.**
Seward Peninsula Regional Council Recommendation	**No action taken.**
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	**None**

STAFF ANALYSIS
WP12-52

ISSUES

Proposal WP12-52, submitted by Brian L. Williams, of Alakanuk Native Corporation, requests a change in regulations to ban hunting by non-Federally qualified subsistence users along the Yukon River and into Canada.

DISCUSSION

The proponent states that subsistence practices need to have priority over sport hunting, in order to preserve wildlife for future generations and their subsistence needs. The proponent also states that sport hunters (i.e., non-Federally qualified users) should not "hunt up and down the Yukon River," and should be fined "for trespassing on our lands." The proponent additionally states that banning sport hunters will result in increased wildlife populations.

For subsistence management purposes, Native Corporation lands are under State management. Neither State nor Federal regulations have jurisdiction in Canada.

Title VIII of the 1980 Alaska National Interest Lands Claim Act (ANILCA) specifically prioritizes subsistence uses over any other consumptive uses such as commercial or sport hunting on Federal public lands. When a conservation concern exists for any resource, commercial and sport uses are restricted before subsistence uses are restricted.

Existing Federal Regulation

In implementing ANILCA, the Federal Subsistence Board was empowered to administer the subsistence taking of fish and wildlife on Federal public lands, while the Secretary of the Interior and the Secretary of Agriculture retained the authority to restrict commercial and sport uses in Alaska on lands other than public lands, as follows:

> *§100.10(a)The Secretary of the Interior and the Secretary of Agriculture hereby establish a Federal Subsistence Board, and assign it responsibility for administering the subsistence taking and uses of fish and wildlife on public lands, and the related promulgation and signature authority for regulations of subparts C and D of this part. The Secretaries, however, retain their existing authority to restrict or eliminate hunting, fishing, or trapping activities which occur on lands or waters in Alaska other than public lands when such activities interfere with subsistence hunting, fishing, or trapping on the public lands to such an extent as to result in a failure to provide the subsistence priority.*

The Federal Subsistence Board was also empowered to implement ANILCA to:

> *§100.10(iv) Allocate subsistence uses of fish and wildlife populations on public lands; (v) Ensure that the taking on public lands of fish and wildlife for nonwasteful subsistence purposes shall be accorded priority over the taking on such lands of fish and wildlife for other purposes; (vi) Close public lands to the non-subsistence taking of fish and wildlife; (vii) Establish priorities for the subsistence taking of fish and wildlife on public lands among rural Alaska residents; (viii) Restrict or eliminate taking of fish and wildlife on public lands.*

Proposed Federal Regulation

The proponent did not propose a regulation.

Extent of Federal Public Lands

Federal public lands affected by this proposal include Yukon Delta National Wildlife Refuge, Innoko National Wildlife Refuge, Nowitna National Wildlife Refuge, Yukon Flats National Wildlife Refuge, Yukon Charley Rivers National Preserve, and Bureau of Land Management lands (see unit maps for Units 18, 20, 21, 25).

Effects of the Proposal

If adopted, the proposal would ban hunting by non-Federally qualified users along the Yukon River on both Federal public lands and other lands. The proposal would affect non-Federally qualified users by not allowing harvests in places where there may not be a conservation issue. The result could be an increase in wildlife populations which would otherwise be taken by non-Federally qualified users. The proposal would not affect large portions of land along the Yukon River that are managed by the State of Alaska; a large percentage of State-managed lands are surrounding villages. There would be no effect in Canada as the Board has no jurisdiction in Canada.

OSM CONCLUSION

Oppose Proposal WP12-52.

Justification

Because the proponent's concerns are addressed in Federal Subsistence Management regulations, the proposed regulatory changes are unnecessary and should be opposed. Subsistence uses, including hunting, already have priority over other consumptive uses, including sport hunting. Moreover, the Secretary of the Interior and the Secretary of Agriculture have the authority to restrict hunting, fishing or trapping in Alaska on other than Federal public lands "when such activities interfere with subsistence" activities. In addition, sport hunting along the Yukon River in Canada is outside the purview of the Federal Subsistence Board.

SUBSISTENCE REGIONAL ADVISORY COUNCIL RECOMMENDATIONS

Yukon-Kuskokwim Delta Subsistence Regional Advisory Council

No action taken on Proposal WP12-52. These issues are already covered in the law. Federal Subsistence Management Program regulations do not apply in Canada for hunting.

Western Interior Subsistence Regional Advisory Council

No action taken on Proposal WP12-52**.** Defer to home region.

Seward Peninsula Subsistence Regional Advisory Council

No action taken on Proposal WP12-52. The Council chose to defer to the Yukon-Kuskokwim Delta Subsistence Regional Advisory.

Eastern Interior Subsistence Regional Advisory Council

Oppose Proposal WP12-52. The Council agrees with concerns about competition for food sources, but finds this proposal as written unnecessary and lacking in specificity.

INTERAGENCY STAFF COMMITTEE COMMENT

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

Alaska Department of Fish and Game
Comments to Federal Subsistence Board

Wildlife Proposal WP12-52: Close all moose hunting on federal public lands along the Yukon River to non-subsistence users.

Introduction: This proposal seeks to close all sport hunting on federal public lands boarding the Alaska portion of the Yukon River. The department's comments are limited to addressing this proposal as it applies to federal public lands along the Yukon River within Alaska as the Federal Subsistence Board does not have authority on non-federal public lands or outside of the United States.

Impact on Subsistence Users: If adopted, federally qualified users would be prohibited from participating in state moose hunting seasons on federal public lands along the Yukon River. If adopted, federally qualified subsistence users moose hunting on federal public lands along the Yukon River may have higher success rates due to less competition with sport hunters. Federally qualified subsistence users may experience lower success rates while hunting non-federal public lands because a shift in effort will likely take place by displaced hunters. Displaced hunters will shift to those lands open to their use which include all lands surrounding communities along the Yukon River.

Opportunity Provided by State: The Yukon River flows through a number of Game Management Units and state moose hunting regulations allow a variety of hunting opportunities. Opportunity varies by Game Management Units and will not be included in these comments for brevity sake (Map 1).

Conservation Issues: Moose population conservation issues vary along the Yukon River depending upon which population is being addressed. The State of Alaska manages each moose hunt under the sustained yield principle.

Enforcement Issues: If adopted, this proposal would create severe confusion. Differences in federal and state regulations resulting from adoption of this proposal create enforcement problems in areas with mixed land ownership. The boundaries between federal and state lands are not marked and often difficult to locate on the ground.

Other Comments: The department opposes this proposal due to lack of substantive evidence that conservation concerns exists drainage wide along the Yukon and no evidence that the closure is necessary for continued subsistence use by federally qualified subsistence users for the entire Yukon River Drainage.

Recommendation: Oppose.