



United States Department of the Interior NATIONAL PARK SERVICE



Wrangell-St. Elias National Park & Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573-0439
907 822 5234 Fax 907 822 3281
www.nps.gov/wrst

WRANGELL-ST. ELIAS NATIONAL PARK AND PRESERVE WILDLIFE, SUBSISTENCE AND ANTHROPOLOGY PROGRAM REPORT October 5, 2016

Judy Putera, Wildlife Biologist, 822-7241 or judy_putera@nps.gov,
and

Barbara Cellarius, Cultural Anthropologist and Subsistence Coordinator, 822-7236 or
barbara_cellarius@nps.gov

Dall's Sheep

Minimum counts in selected survey units:

Table 1. Sheep composition counts from aerial surveys in count areas 1, 5E, and 9 within the Wrangell-St. Elias National Park and Preserve, 2001–2016.

Count Area	Year	Ewes ^a	Lambs	Unknown	Sublegal rams ^b	Legal rams ^c	Unidentified rams	Total rams	Total sheep	Rams /100 ewes ^a	Lambs /100 ewes ^a
1	2002	555	123	0	-	-	-	316	1017	57	22
	2012	664	167	0	321	60	0	381	1212	57	25
	2014	360	81	0	279	45	0	324	765	90	23
	2016	520	171	0	228	54	0	282	973	54	33
5E	2001	215	27	0	109	23	0	132	374	61	13
	2011	142	35	0	58	14	0	72	249	51	25
	2016	183	54	0	88	22	0	110	347	60	30
9	2002	358	125	18	194	40	0	234	735	65	35
	2005	436	107	0	179	30	5	209	757	49	25
	2011	338	114	0	126	20	0	146	597	43	34
	2013	336	65	0	135	27	0	162	563	48	19
	2014	305	109	0	113	12	0	125	539	41	36
	2015 ^d	313	144	0	125	24	0	149	606	48	46
	2015 ^e	380	169	0	103	42	0	145	694	38	44
2016^d	375	152	0	142	19	0	161	688	43	41	

^a Ewe classification also includes yearlings of both sexes and rams of ¼ curl or less.

^b Greater than ¼ curl but less than full curl.

^c Full curl or larger.

^d Survey conducted during mid-June

^e Survey conducted during early-August

Distance Sampling: Aerial distance sampling is a new method to determine sheep abundance with sightability and error estimates. A multi-park project has been funded to conduct distance sampling in reference areas in Denali, Gates of the Arctic, Lake Clark, Western Arctic, and Wrangell-St. Elias National Parks, 2016 - 2020. Our reference area will include survey units 3 and 4W (Figure 1).

Table 2. Sheep population estimates from distance sampling aerial surveys in count areas 3 and 4W, Wrangell-St. Elias National Park and Preserve, 2010 and 2016.

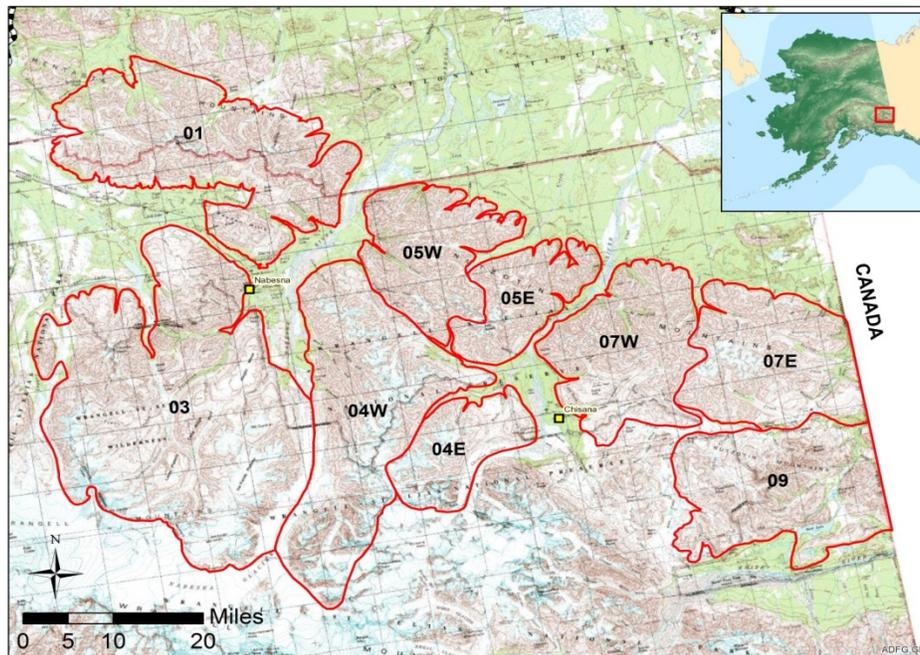
Count Area	Year	Ewes ^a	Lambs	< Full Curl Rams ^b	Full Curl Rams ^c	Total Rams	Total Sheep	95% CI Total Sheep	Rams /100 Ewes ^a	Lambs /100 Ewes ^a
3 & 4W	2010	1470	549	-	-	944	2963	2435-3692	65	38
	2016	1848	620	321	60	1114	3581	2832-4601	61	34

^a Ewe classification also includes yearlings of both sexes and rams of ¼ curl or less.

^b Greater than ¼ curl but less than full curl.

^c Full curl or larger.

Figure 1. Aerial Dall sheep count areas within Wrangell-St. Elias National Preserve and Game Management Unit 12.



Dall’s Sheep Research

A project to evaluate Dall’s sheep ram energetics, survival and dispersal under different harvest management regulations will begin late October 2016. Captured sheep will be fitted with radiocollars, energetic parameters will be measured, and disease screening will be conducted. The study area will coincide with the survey unit 3 and 4W reference area and may also include the eastern part of survey unit 2 (Drop Cr. – Copper River). A NASA-funded snow modeling project will also be conducted in the study area and will help to evaluate how snow conditions affect sheep movements and habitat use.

Other Wildlife Program Updates:

Moose: The Central Alaska Network, Geospatial Moose Population Estimate, will be conducted October-November, 2016. This moose survey was previously conducted in 2007, 2010, and 2013.

Wolf: A wolf population survey will be conducted within the range of the Chisana caribou herd in March-April, 2017. This is an action item in the Chisana Caribou Herd Management Plan.

Chisana Caribou Herd: The Chisana caribou herd composition count will be conducted this fall. A project to evaluate caribou habitat and winter diet was completed in 2016. A report will be produced in 2017.

Chisana Caribou Herd Harvest Update

A limited subsistence harvest of the Chisana caribou herd, located in the southeast portion of Unit 12, was established by the Federal Subsistence Board in January 2012. The herd had been closed to all harvest for a number of years due to conservation concerns. The board delegated to the Wrangell-St. Elias National Park and Preserve (WRST) Superintendent the authority to open the season; to announce the harvest quota, the number of permits and the reporting period; and to close the season. Due to the small harvest quota, eligibility to participate in the hunt was initially limited to those communities most dependent on the resource, under Section 804 of the Alaska National Interest Lands Conservation Act (ANILCA); however, eligibility was expanded in 2016 to all communities and areas with a positive customary and traditional use determination (C&T) for caribou in Unit 12. The hunt area remains closed to the harvest of caribou under state regulations.

This harvest is managed consistent with the management plan for the herd. Consistent with the plan, the harvest quota has been set at seven bull caribou each of the last five years. Due to the small quota, the maximum number of permits to be issued has been limited, and hunters are required to report successful harvests within three days. A telephone hotline facilitates the reporting. Each year, the hunt has opened and closed on the dates set in regulation. The most commonly used means of access have been off-road vehicles and horses. The table below summarizes the permit and harvest information from 2012 to 2016. One Chisana caribou had been reported harvested in 2016 as of October 5, 2016.

Table 3. Federal Subsistence Registration Permits for the Chisana Caribou Herd (FC1205)

	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016*</i>
Harvest quota	7	7	7	7	7
Maximum number of permits available	14	14	18	18	25
Permits issued	9	9	11	11	8
Individuals hunting	8	7	8	7	4
Animals harvested	2	3	2	0	1
Success rate (%)	25.0	42.9	25.0	--	25.0

* 2016 figures as of October 5, 2016.

New Subsistence Cabin Permit

During May, WRST received an application from a local resident for a permit for use and occupancy of an existing cabin for subsistence hunting and trapping during the fall and winter. The cabin is located on an un-named lake between the Cheshnina and Kotsina Rivers. Consistent with the subsistence cabin regulations, notice was provided to the public about the request and public comments were accepted through July 20, 2016. In July a permit was issued, authorizing shared subsistence use during the fall hunting season (August/September) and exclusive use during the trapping season.

Harvest Assessments in Park-Affiliated Communities

In cooperation with the Alaska Department of Fish and Game (ADF&G), Division of Subsistence, WRST is working to collect updated information about the harvests and uses of subsistence resources for park-affiliated communities. NPS provided financial support for surveys of Chistochina, Chitina, Copper Center, Gakona, Kenny Lake/Willow Creek, McCarthy, Mentasta Lake, Mentasta Pass, and Slana/Nabesna Road. ADF&G has also recently surveyed other Copper Basin communities as well as a few Upper Tanana ones with other funds. Reports from all of these projects are available electronically from the ADF&G website (<http://www.adfg.alaska.gov/sf/publications/>) and printed copies of the reports from the NPS funded projects are available from the park subsistence coordinator. ADF&G is currently finalizing the report for a similar project in the Upper Tanana community of Northway, and the report is expected to be available in late 2016. In addition, ADF&G has secured funding from the North Pacific Research Board to conduct a study of subsistence and community resilience in Yakutat. The park is a partner on that project and work is underway.

Hunters, Trappers, Miners, and Homesteaders: An Ethnographic Overview and Assessment

The goal of this project is document the cultures and traditions of occupational groups traditionally associated with lands that are now in WRST, including small-scale miners, hunting guides, trappers, and homesteaders. The report will be based primarily on ethnographic literature, existing oral history interviews and other previously collected material; however several new oral history interviews were conducted for the project this spring and summer. The project is being done by staff of the Oral History Program at the University of Alaska Fairbanks in cooperation with NPS staff. It is scheduled for completion in late 2017.

Federal Subsistence Hunting Permits

During fall 2016, park staff in Chitina, Copper Center, McCarthy/Kennecott, and Slana issued 225 federal registration permits for caribou, goat, moose, and sheep in Units 11 and 12. Tetlin National Wildlife Refuge staff issued 2 Unit 12 caribou permits. A table summarizing permit numbers for these units is included at the end of this report. Some hunts are still open and additional 2016 permits may be issued.

The table does not include 44 Unit 13 moose permits and 106 Unit 13 caribou permits issued at the Slana Ranger Station, 2 Unit 5B goat permits issued at the Yakutat Ranger Station, 9 designated hunter permits, and 194 joint state/ federal permits issued by WRST staff for the moose hunt for portions of Units 11 and 12 in the northern part of WRST (RM291). Additional RM291 permits were issued by ADF&G.

Table 4. Federal Subsistence Registration Permits in Wrangell-St. Elias NPP, 2006-16*

Unit 11 Moose -- Fall Hunt (Starting 2012, FM1106 is for Unit 11 remainder, not the entire unit)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	251	282	277	253	244	217	189	146	123	128	137
Individuals Hunting	170	184	179	141	151	131	75	78	65	70	43
Animals Harvested	19	24	28	19	20	27	9	12	10	13	10
Success Rate (%)	11.2	13.0	15.6	13.9	13.2	20.6	12.0	15.4	15.4	18.6	23.3

Unit 11 Moose -- Winter Hunt in southern part of unit (Started in 2014)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	-	-	-	-	-	-	-	-	32	17	17
Individuals Hunting	-	-	-	-	-	-	-	-	3	3	
Animals Harvested	-	-	-	-	-	-	-	-	0	0	
Success Rate (%)	-	-	-	-	-	-	-	-	--	--	

Unit 11 Goat

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	37	52	67	50	39	53	42	30	31	28	22
Individuals Hunting	16	18	21	10	7	14	6	7	10	5	2
Animals Harvested	2	2	4	0	1	1	0	0	0	0	0
Success Rate (%)	12.5	11.1	19.0	-	14.3	7.1	-	--	--	--	

Unit 11 Elder Sheep

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	16	11	18	27	19	23	32	20	25	25	32
Individuals Hunting	7	6	5	13	5	10	11	5	9	8	6
Animals Harvested	2	0	0	0	0	0	1	0	1	3	3
Success Rate (%)	28.6	-	-	-	-	-	9.1	--	11.1	37.5	50.0

Unit 11 Elder/Junior Sheep (Started in 2005)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	0	0	1	5	0	2	1	0	0	0	1
Individuals Hunting			0	1		1	0				
Animals Harvested			0	0		0	0				
Success Rate (%)				-		-	-				

Unit 12 Chisana Caribou (Started in 2012)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	--	--	--	--	--	--	9	9	11	11	8
Individuals Hunting	--	--	--	--	--	--	8	7	8	7	4
Animals Harvested	--	--	--	--	--	--	2	3	2	0	1
Success Rate (%)	--	--	--	--	--	--	25.0	42.9	25.0	--	25.0

Unit 12 Elder Sheep

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	8	6	7	14	13	9	13	9	9	7	10
Individuals Hunting	3	3	2	3	3	3	3	3	5	3	2
Animals Harvested	0	0	0	0	0	0	0	0	1	0	1
Success Rate (%)	-	-	-	-	-	-	-	--	20.0	--	25.0

Unit 12 Elder/Junior Sheep (Started in 2005)

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016*
Permits Issued	0	0	0	1	1	1	1	0	0	0	0
Individuals Hunting				0	0	1	0				
Animals Harvested				0	0	0	0				
Success Rate (%)				-	-	-	-				

Source: Federal Subsistence Permit Database.

* 2016 permit numbers as of October 5, 2016. 2016 harvest information will be provided at the spring meeting.

Note: Success rate is calculated based on the number of individuals hunting, not the total number of permits issued.



United States Department of the Interior

NATIONAL PARK SERVICE

Wrangell-St. Elias National Park & Preserve
Mile 106.8 Richardson Hwy. P.O. Box 439
Copper Center, AK 99573-0439
907 822 5234 Fax 907 822 7216



Wrangell-St. Elias National Park and Preserve 2016 Fisheries Project Summary

Dave Sarafin, Fisheries Biologist

TANADA CREEK WEIR

The Tanada Creek weir is located in the northern part of Wrangell-St. Elias National Park, 2 miles off the Nabesna Road just downstream of Batzulnetas. In 2016, the Tanada Creek weir was installed on June 2 and the first fish passed through the weir on June 27. Three local fisheries technicians were hired as crew. The cumulative count of sockeye salmon in 2016 was 13,790 and there were 2 Chinook salmon. The water in the creek was again extremely low during the early season; fish were unable to enter the creek until the water level responded to rains of late June. There were no periods of flooding.



Tanada Creek Weir, low water, June 12, 2016.



Male sockeye salmon passing camera.

Salmon escapement counts at Tanada Creek weir, Miles Lake sonar estimates of the total inriver salmon run for the Copper River, and contribution percentage of Tanada Lake sockeye salmon stocks to the total inriver run estimate for the Copper River, since 1979.

Year	Miles Lake Sonar Estimates			Tanada Creek Chinook Salmon Count
	Tanada Creek Sockeye Salmon Count	Total Inriver Salmon Run	Tanada Stock Contribution	
1979	10,244 ¹	237,173	N/A	5
1997	27,521 ²	1,148,079	N/A	5
1998	28,992 ³	866,957	N/A	2
1999	N/A	848,921	N/A	N/A
2000	N/A	587,592	N/A	N/A
2001	1,649 ⁴	833,569	N/A	16
2002	6,186 ⁵	816,825	N/A	5
2003	5,856	695,233	0.8%	2
2004	17,120	669,646	2.6%	0
2005	4,659 ⁶	854,268	N/A	1
2006	4,514	959,731	0.5%	4
2007	11,103	926,438	1.2%	7
2008	2,850 ⁷	717,799	N/A	137
2009	38,208	709,330	5.4%	9
2010	5,226	924,010	0.6%	16
2011	8,969	914,285	1.0%	1
2012	20,022	1,271,354	1.6%	2
2013	52,162	1,267,060	4.1%	0
2014	28,258	1,177,005	2.4%	5
2015	9,271	1,341,545	0.7%	0
2016	13,790	801,593	1.7%	2
Average from 2003-2015 ⁸	18,246	986,876	1.8%	14
Range from 2003-2015 ⁸	4,514 - 52,162	669,646 - 1,341,545	0.5% - 5.4%	0 - 137

¹ Partial season weir count from June 25 to August 21, weir was located upriver.

² Weir count includes estimates from periods without monitoring; the season was also shortened due to flooding.

³ Breach in weir and an estimate of 1,030 fish passing during that time; weir counts ended early on August 21.

⁴ Incomplete total count due to short period of weir operation and breach in weir.

⁵ Escapement estimate based upon mark-recapture sampling; weir count was 2,489.

⁶ Weir compromised by flooding; partial count estimate from review of overhead video; weir count was 739.

⁷ Partial season count for sockeye through July 8.

⁸ Tanada Creek sockeye average and range exclude years 2005 and 2008 due to weir breach.

LONG LAKE WEIR

The Long Lake weir is located at mile 45 on the McCarthy Road and is in the Chitina River drainage. This weir has been operated since 1974. From 2003 until the present, Wrangell-St. Elias NP has operated the weir with help from the private landowners (Collins family). The NPS seasonal crew at Long Lake consisted of two fisheries technicians and one volunteer. The weir was installed on July 26 and is planned to shut down on October 12. The first fish passed through the weir on August 26. Total escapement counted at the weir through September 26 is at a record low of 212 sockeye salmon. No coho salmon have yet to be recorded passing the weir.

Number of sockeye counted at the Long Lake weir, 1974-2016.

	# Sockeye	Year	# Sockeye	Year	# Sockeye	Year	# Sockeye
1974	4,501	1985	21,431	1996	6,209	2007	7,846
1975	6,786	1986	16,947	1997	4,433	2008	567
1976	24,689	1987	13,323	1998	8,531	2009	4,555
1977	8,772	1988	7,065	1999	12,922	2010	10,876
1978	15,458	1989	17,760	2000	8,665	2011	12,850
1979	46,110	1990	21,399	2001	26,939	2012	25,736
1980	38,978	1991	11,501	2002	50,000	2013	14,494
1981	12,687	1992	10,141	2003	4,604	2014	16,538
1985	28,064	1993	16,101	2004	19,215	2015	9,701
1983	28,003	1994	18,289	2005	7,770	2016	212¹
1984	10,729	1995	17,933	2006	9,239		

¹Weir count through September 26.



Reviewing station at the Long Lake weir.

MILES LAKE SONAR

The Miles Lake sonar, operated by ADFG, is located just downstream of the Million Dollar Bridge at mile 48 of the Copper River Highway out of Cordova, Alaska. In 2016, 801,593 fish passed by the sonar.

Year	Total Salmon						
1978	107,011	1988	488,398	1998	866,957	2008	717,799
1979	237,173	1989	607,797	1999	848,921	2009	709,330
1980	276,538	1990	581,859	2000	587,592	2010	924,010
1981	535,263	1991	579,435	2001	833,569	2011	914,285
1982	467,306	1992	601,952	2002	816,825	2012	1,271,354
1983	545,724	1993	833,387	2003	695,233	2013	1,267,060
1984	536,806	1994	715,577	2004	669,646	2014	1,177,005
1985	436,313	1995	599,215	2005	854,268	2015	1,341,545
1986	507,477	1996	906,867	2006	959,731	2016	801,593
1987	483,478	1997	1,148,079	2007	926,438		

Miles Lake sonar count of salmon migrating past the Miles Lake sonar in the Copper River, 1978-2016 (ADF&G website)

SUBSISTENCE PERMITS ISSUED

We issue federal subsistence fishing permits at four locations in the Park and at Tetlin National Wildlife Refuge in Tok. In 2016, 319 Glennallen permits, 126 Chitina permits, and 0 Batzulnetas permits were issued. For the Chitina Subdistrict, this was the largest number of permits the park has issued.

	Glennallen Subdistrict	Chitina Subdistrict	Batzulnetas area
2002	201	122	1
2003	221	100	1
2004	262	109	1
2005	267	76	1
2006	254	76	0
2007	281	98	1
2008	270	82	1
2009	274	68	0
2010	269	92	3
2011	277	85	3
2012	271	92	2
2013	273	99	3
2014	313	112	2
2015	320	109	4
2016	319¹	126¹	0¹

¹ Number of permits entered into the online database through September 28.

ASSESSMENT OF BURBOT POPULATIONS IN LAKES OF THE UPPER YUKON RIVER DRAINAGE

In 2016, we started a new project designed to acquire baseline data of burbot populations in remote lakes of the Upper Yukon River Drainage within the boundaries of the Park/Preserve. This is a 4 year project that will investigate one lake per year. During 2016, we sampled Beaver Lake near Chisana. Data analysis is in progress.

CURRENTLY FUNDED FISHERIES RESEARCH PROJECTS AT WRST, 2017 FIELD SEASON

2017 fisheries projects:

1. Abundance and Run Timing of Adult Salmon in Tanada Creek (Tanada Creek weir).
2. Abundance and Run Timing of Adult Salmon in Long Lake Creek (Long Lake weir).
3. Burbot population assessments in remote Upper Yukon Lakes within the Park/Preserve boundaries.
4. Grizzly Lake burbot population reassessment.
5. Copper Lake kokanee genetics study, in progress.
6. Continued freshwater fish inventory and Copper Lake kokanee genetic research funded with whatever money we have left over.

Subsistence Resource Commission (SRC) Briefing Statement

Bureau: National Park Service
Issue: Backcountry/Wilderness Stewardship Plan
Park Site: Wrangell-St. Elias National Park and Preserve (WRST)
Date: October 11, 2016

Background:

Wrangell-St. Elias National Park and Preserve (WRST) is in the process of preparing a Backcountry and Wilderness Stewardship Plan. The purpose of the plan is to guide the management of backcountry and wilderness, comply with NPS policy regarding wilderness management, and update the 1986 General Management Plan. The plan will cover all 9.4 million acres of wilderness in the park and preserve along with 1.7 million acres of backcountry (see accompanying map of the area covered by the plan). The term “backcountry” describes remote areas of the park outside of highly developed front-country zones that are most often accessed by aircraft. The plan would only apply to NPS-managed land.

This plan covers areas in WRST that are remote and difficult to access. Most lands covered by this plan are accessible only by aircraft or motorboat. This plan does NOT cover frontcountry areas of the park, including the McCarthy or Nabesna road corridors and associated trails; the Nugget Creek trail and the non-wilderness portion of the Kotsina trail; and the lands along the face of Mt. Drum and Mt. Sanford with a heavy component of Ahtna Inc. and Chitina Corporation lands.

Planning Process:

Extensive public scoping was done from May 2015 through November 2015, including public meetings and structured interviews with stakeholders. A Public Scoping Report summarizing the scoping process and the comments received was released to the public in December of 2015. We have also summarized backcountry/wilderness visitor use for 2010 – 2015, based on commercial operators and concessions actual use reporting. An update on the planning process was made available to the public in a project newsletter, released January 2016.

WRST released a Proposed Action document for management of backcountry/wilderness in May 2016. It consists of management zones, indicators, standards, and management actions that address issues identified during scoping. An SRC working group reviewed the Proposed Action prior to its release for public review. Based on discussion and questions during that review, several changes were made to the document to clarify how it relates to subsistence activities. The Proposed Action document was open for public comment through August 30, 2016.

A quick summary of the Proposed Action as it relates to subsistence activities follows:

- Airstrips: Identifies specific backcountry and wilderness airstrips that would be maintained by NPS or other entities under permit. Pilots can still land at airstrips that are not on the list, dependent on pilot skills. Some level of maintenance can be done without permit (removal of brush <3”, use of hand tools).
- Subsistence cabins: Allows continued use of cabins for subsistence purposes, through designation of shared use subsistence cabins.
- Subsistence ORV use: Current management at Black Mountain would continue (designated trails with corridors for game retrieval). For other areas in wilderness (upper Kotsina, Beaver Lake), ORV trails for subsistence use will be monitored. If monitoring shows growth of ORV trail networks in wilderness, management would include

designation of trails; with travel off trails only allowed for game retrieval. No change from current management of subsistence ORV use outside of designated wilderness.

- Subsistence snowmachine use: No change from current management. Snowmachines are used for subsistence activities such as trapping, firewood cutting, ice fishing, and hunting.
- Subsistence firewood harvest: No change. Firewood harvest for subsistence purposes using a chainsaw is permitted under park-wide permit.
- Other management actions: Management actions to address issues such as campsite impacts or human waste would be phased in based on monitoring. These actions would be applied first to recreational and commercially supported visitors. If standards are still not met, then management actions would be applied to subsistence users.

Next Steps:

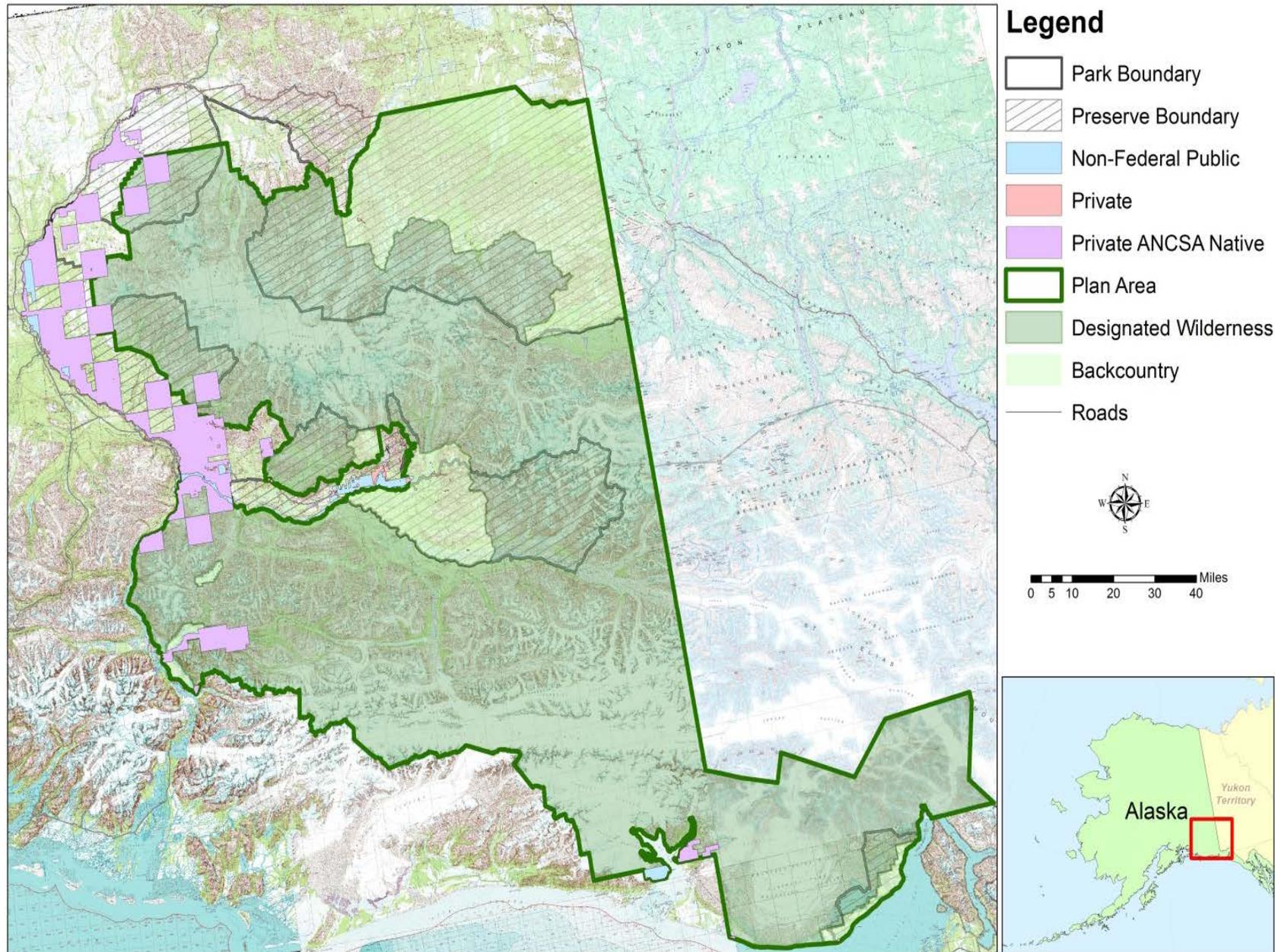
The comment period on the Proposed Action ended August 30. Based on public comments, here are some of the changes being considered for the Proposed Action that would be carried through into a Draft Environmental Assessment:

- Revision of management zones to fall along existing administrative boundaries.
- Focusing proposed management actions where they are needed by identifying high use areas, including “portals” (heavily used airstrips).
- Revision of desired condition statements with an emphasis on management of visitor expectations.

We will be releasing a newsletter this fall or early winter describing the public comments that we received on the Proposed Action, summary of visitor impact assessments from this summer, and a description of next steps in the planning process. A revised Proposed Action and alternatives to it will be analyzed in a Draft Environmental Assessment. The Draft EA is anticipated to be released Spring 2017 and will be available for public review and comment.

Contact: Bruce Rogers, Park Planner and Compliance Specialist; Ben Bobowski, Superintendent, 907-822-5234

Area Covered by Wrangell-St. Elias National Park and Preserve Backcountry and Wilderness Stewardship Plan



Note: Privately owned lands within the Plan Area boundary are not included in the scope of the plan.