



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
<http://www.nps.gov/wrst>



WRANGELL-ST. ELIAS NATIONAL PARK AND PRESERVE SUBSISTENCE AND ANTHROPOLOGY REPORT FALL 2023

Barbara Cellarius, Cultural Anthropologist and Subsistence Coordinator
(907) 822-7236 or barbara_cellarius@nps.gov

Federal subsistence hunting permits issued for Wrangell-St. Elias in 2023

Table 1 lists the preliminary numbers of caribou, goat, moose, and sheep permits issued by park and Tetlin National Wildlife Refuge staff for 2023 federal subsistence hunts on Wrangell-St. Elias lands in Units 11 and 12. As of August 30, 158 permits had been issued for these hunts. Park staff had additionally issued 21 Unit 13 moose permits and 26 Unit 13 caribou permits at the Slana Ranger Station and numerous joint state/federal permits (RM291) for the moose hunt in portions of Units 11 and 12 in the northern part of the park.

What is next? Harvest information will be provided in the Spring 2024 report.

Upper Copper River communities surveyed about subsistence harvests

Chistochina and Mentasta residents were surveyed in Spring 2023 about their harvest and use of wild fish, wildlife and plant resources, and Slana and Nabesna Road residents will be surveyed in early 2024. Once data from all three communities have been analyzed, a technical paper will be produced. These surveys are a cooperative project in collaboration with the Alaska Department of Fish and Game and the Ahtna Intertribal Resource Commission.

New publications address changes in winter environmental conditions and impacts on subsistence access

Two new publications provide results from projects regarding changes in winter environmental conditions, especially river ice and snow conditions, and their impacts on subsistence access.

- Dana R. N. Brown, Christopher D. Arp, Todd J. Brinkman, Barbara A. Cellarius, Melanie Engram, Mark E. Miller, and Katie V. Spellman. 2023. Long-term change and geospatial patterns of river ice cover and navigability in Southcentral Alaska detected with remote sensing, *Arctic, Antarctic, and Alpine Research*, 55:1, <https://doi.org/10.1080/15230430.2023.2241279>
- Odin Miller. 2023. Winter travel, access, and changing snow and ice conditions in Alaska's Copper River basin. Natural Resource Report NPS/WRST/NRR—2023/2508. National Park Service, Fort Collins, Colorado. <https://doi.org/10.36967/2298854>

Table 1. Federal Subsistence Registration Permits in Wrangell-St. Elias NPP, 2013-2023

Unit 11 Goat (FG1101)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	30	31	29	22	26	30	27	27	20	8	6
Individuals Hunting	7	10	6	4	3	8	8	4	2	1	-
Animals Harvested	0	0	0	0	0	0	1	0	0	0	-
Success Rate (%)	0.0	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	-

Unit 11 Remainder Moose -- Fall Hunt in part of unit outside of the RM291 hunt area (FM1106)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	146	123	128	138	132	144	107	156	140	139	103
Individuals Hunting	78	70	70	75	72	85	45	68	71	66	-
Animals Harvested	12	10	13	16	13	12	10	15	11	15	-
Success Rate (%)	15.4	14.3	18.6	21.3	18.1	14.1	22.2	22.1	15.5	22.7	-

Unit 11 Moose -- Winter Hunt in southern part of unit (FM1107) (Began in 2014)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	n/a	32	17	20	14	11	8	8	7	10	9
Individuals Hunting	n/a	3	3	4	4	2	2	1	2	4	-
Animals Harvested	n/a	0	0	1	0	0	0	1	0	1	-
Success Rate (%)	n/a	0.0	0.0	25.0	0.0	0.0	0.0	100.0	0	25.0	-

Unit 11 Elder Sheep (FS1104)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	20	25	25	32	34	38	34	38	26	25	21
Individuals Hunting	5	10	8	12	13	18	14	12	12	10	-
Animals Harvested	0	1	3	3	4	1	1	1	3	2	-
Success Rate (%)	0.0	10.0	37.5	25.0	30.8	5.6	7.1	8.3	25.0	20.0	-

Unit 11 Elder/Junior Sheep (FS1103)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	0	0	0	1	2	1	0	1	1	2	1
Individuals Hunting	-	-	-	1	2	0	-	0	0	0	-
Animals Harvested	-	-	-	0	0	-	-	-	-	-	-
Success Rate (%)	-	-	-	0.0	0.0	-	-	-	-	-	-

Unit 12 Caribou -- Chisana (FC1205) -- Closed in 2022 due to conservation concerns

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	9	11	11	8	8	6	4	7	5	n/a	6
Individuals Hunting	7	8	7	8	3	3	3	4	1	n/a	-
Animals Harvested	3	2	0	1	0	2	1	3	0	n/a	-
Success Rate (%)	42.9	25.0	0.0	12.5	0.0	66.7	33.3	75.0	0.0	n/a	-

Table 1. Federal Subsistence Registration Permits in Wrangell-St. Elias NPP, 2013-2023 (cont.)

Unit 12 Elder Sheep (FS1201)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	9	9	7	11	12	14	14	12	13	8	11
Individuals Hunting	3	5	3	6	4	8	6	4	6	4	-
Animals Harvested	0	1	0	1	1	0	0	1	0	0	-
Success Rate (%)	0.0	20.0	0.0	16.7	25.0	0.0	0.0	25.0	0.0	0.0	-

Unit 12 Elder/Junior Sheep (FS1204)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023*
Permits Issued	0	0	0	0	0	0	0	0	0	1	1
Individuals Hunting	-	-	-	-	-	-	-	-	-	0	-
Animals Harvested	-	-	-	-	-	-	-	-	-	-	-
Success Rate (%)	-	-	-	-	-	-	-	-	-	-	-

Source: Federal Subsistence Permit Database.

* 2023 data are as of 9/1/2023.

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

Traditional Knowledge, Ethnographic, and Subsistence Projects:

Work is underway on several traditional knowledge, ethnographic and subsistence projects, with most of the work being carried out by project partners through cooperative agreements.

Ahtna Ethnographic Overview and Assessment (EOA): This baseline cultural anthropology study includes an annotated inventory of ethnographic and related materials relevant to the Ahtna Athabascans; a narrative synopsis of our current understanding of these materials, with a focus on connections to Wrangell-St. Elias; and a discussion of data gaps and additional research needs. It is being carried out through a cooperative agreement with the Ahtna Intertribal Resource Commission and is now scheduled for completion in late spring 2024.

Documenting Traditional Ecological Knowledge about Historic Dynamics of Caribou Herds Associated with Wrangell-St. Elias: This project includes a literature review/data mining regarding traditional ecological knowledge (TEK) and historic information (e.g., seasonal movement patterns; and herd sizes, interactions, and habitat relations) of the three caribou herds (Chisana, Mentasta and Nelchina) that spend time in Wrangell-St. Elias as well along with new traditional knowledge interviews about caribou with knowledgeable long-term residents. Topics covered in the new interviews include long-term knowledge about seasonal movement patterns, herd sizes, and observations regarding caribou in relation to the larger ecosystem and the other caribou herds. The information will be summarized in a report designed to inform management decisions about caribou. This project is being carried out through a cooperative agreement with the Ahtna Intertribal Resource Commission and is scheduled for completion in late spring 2024.

Local Knowledge of Winter Environmental Conditions and their Impacts on Subsistence Access: This project documents local knowledge of winter environmental conditions through interviews with trappers and other Copper Basin residents who are out on the landscape during the winter about environmental conditions (e.g., temperatures, snow and ice conditions), how conditions have changed over their lifetimes/careers, other traditional ecological knowledge about

winter environmental conditions, and the way in which these conditions have impacted access to subsistence resources. This project was carried out through a cooperative agreement with the Ahtna Intertribal Resource Commission and was recently completed. The technical report summarizing project results can be accessed using the link below.

Odin Miller. 2023. Winter travel, access, and changing snow and ice conditions in Alaska's Copper River basin. Natural Resource Report NPS/WRST/NRR—2023/2508. National Park Service, Fort Collins, Colorado. <https://doi.org/10.36967/2298854>

Quantify Changing Environmental Conditions to Inform Decisions about Allowed Means of Winter Access to Subsistence Resources: This project quantifies temporal and spatial patterns of river freeze-up, winter ice conditions, and break-up using remote sensing data and evaluates the implications of changing environmental conditions for temporal and spatial patterns of winter subsistence access in the park. The analysis focuses on the Copper and Chitina Rivers. In addition to a recently published peer-reviewed journal article (see below), an interpretive product for the general public will be produced. This project is being completed through a cooperative agreement with the University of Alaska Fairbanks (UAF) and is scheduled for completion in 2024. The recently published journal article can be accessed using the link below.

Dana R. N. Brown, Christopher D. Arp, Todd J. Brinkman, Barbara A. Cellarius, Melanie Ingram, Mark E. Miller, and Katie V. Spellman. 2023. Long-term change and geospatial patterns of river ice cover and navigability in Southcentral Alaska detected with remote sensing, *Arctic, Antarctic, and Alpine Research*, 55:1, <https://doi.org/10.1080/15230430.2023.2241279>

Assessing Subsistence Harvests in Upper Copper River Communities: Chistochina and Mentasta residents were surveyed in early 2023 about their harvest and use of wild fish, wildlife and plant resources, and Slana and Nabesna Road residents will be surveyed in early 2024. Ethnographic interviews are also conducted in each community. Once data from all three communities have been analyzed, a technical paper will be produced. This is a cooperative project being carried out in collaboration with the Alaska Department of Fish and Game and the Ahtna Intertribal Resource Commission.

Dall Sheep Local Knowledge Interviews: Anthropology and wildlife staff at Wrangell-St. Elias are working on a series of local knowledge interviews about Dall sheep with long-time hunters and others with a long history of observing sheep in Wrangell-St. Elias. One interview took place in summer 2023 and additional interviews are planned for this fall. A summary report will be prepared once the interviews are complete. Funding for this work comes from the NPS Alaska Subsistence Advisory Council and Alaska Geographic.

Report updated 9/1/2023