ALEUT COMMUNITY OF ST. PAUL
ECOSYSTEM CONSERVATION

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Memorandum for the Record: Subsistence Use of Qawan (Steller sea lions) on St. Paul Island, Alaska in 2021

Aang (Greetings):

The Aleut Community of St. Paul Island, through the Ecosystem Conservation Office (ECO), monitors the subsistence use of qawan, or Steller sea lions (*Eumetopias jubatus*), as a function of our co-management agreement with the National Marine Fisheries Service (NMFS). Our primary co-management responsibility for the subsistence use of qawan is to collect subsistence monitoring data and to report annual subsistence levels to our community and to NMFS. The real-time subsistence monitoring method established by the ECO under its Tanam Amgignaa (Island Sentinel) Program allows for the collection of local subsistence data within a 48-hour period via voluntary hunter reporting and reporting requirements outlined in the Co-Management Agreement (https://www.fisheries.noaa.gov/resource/document/co-management-agreement-between-aleut-community-st-paul-island-and-national). ECO collects subsistence data directly from hunters in a standardized format and enters quality-controlled data into our BeringWatch database. Subsistence data are obtained at a high rate through active monitoring by ECO Island Sentinels and one-on-one communication with hunters. Over the years, ECO Island Sentinels have developed an effective and positive working relationship with subsistence hunters and continue to improve communication with hunters through active and consistent interactions. All of the active qawax̂[1] hunters on St. Paul Island agreed to participate in the ECO real-time monitoring process in 2021.

Enclosed below, please find a Memorandum for the Record reporting on subsistence use of qawan on St. Paul Island from December 1, 2020 to November 30, 2021. The qawax̂ hunting monitoring log for 2021 is attached as an appendix. We are reporting the 12-month period based on the complete qawax̂ subsistence season rather than on the calendar year. This memorandum was made possible through the Alaska Native Co-Management Funding Program award No. NA19NMF4390120 and NA20NMF4390060 with the NOAA AK Region.

Hunting mortality

Subsistence hunters took a total of 23 qawan from **December 1, 2020 to November 30, 2021.** Of the total taken, 15 (65%) were retrieved and 8 (35%) were struck and lost. This annual retrieval rate is slightly lower but remains consistent with the mean annual retrieval rate of 72% from 2005-2016. Of the 15 qawan retrieved, 13 were juvenile males and one was female. Hunters may report the sex and age class of a struck and lost animal based on their knowledge of sexing and aging qawan from previous hunting experience, but for analysis purposes, the sex and age class

[1] Singular form of qawan.

of the 8 struck and lost qawan were recorded as unknown.

Hunting seasons

Hunting occurred in all four seasons. Winter (December of the previous year – February), spring (March – May), summer (June-August) and fall (September – November) in 2021. Of the 3 total animals taken in the winter, 2 (66%) qawan were retrieved and 1 (33%) were struck and lost (Table 1). A total of 10 animals were taken in the spring, with 4 (40%) qawan retrieved and 6 (60%) struck and lost. Only two animals were taken in the summer, with 2 (100%) qawax̂ retrieved and no qawax̂ (0%) stuck and lost. Of the 8 animals taken in the fall, 7 (88%) qawan were retrieved and 1 (12%) was stuck and lost.

Table 1. Qawan hunting performance by season on St. Paul Island, Alaska, during the 2021 season.

Season	Retrieved		Struck and Lost		Total
	Number	Percent (%)	Number	Percent (%)	
Winter	2	66%	1	33%	3
Spring	4	40%	6	60%	10
Summer	2	100%	0	0%	2
Fall	7	88%	1	12%	8
Total/Average %	15	65%	8	35%	23

Hunting locations

Hunting effort was higher for qawan hunted in the water than on land due to qawax̂ behavior and the increased likelihood of encountering a harvestable animal while it is swimming versus resting on land. A total of 12 (52%) qawan were taken when the animal was in the water and 11 (48%) were shot when the animal was hauled out on land. All hunters are on land when they shoot qawan (i.e., no hunting from vessels occurs). The retrieval rate for qawan shot while the animal is in the water was 33% and 100% for qawan shot on land (Table 2). Qawan hunted in the water were hunted from two locations in 2021: Northeast Point and Reef (Fig. 1). At Northeast Point, 2 qawan (100%) were struck and lost. At Reef, 4 (40%) qawan were retrieved from the water and 6 (60%) were struck and lost. Thus, the total retrieval rate for qawan shot in the water was 33%, owing to higher effort at Reef in the winter (when this hunting location is the most accessible to hunters) when environmental conditions make recovery from water less favorable (Table 3).

Table 2. Hunting performance of qawan taken (inclusive of animals shot in the water and on land) on St. Paul Island, Alaska, in the 2021 season.

Qawax̂ Location	Retrieved		Struck and Lost		Total
	Number	Percent (%)	Number	Percent (%)	
Water	4	33%	8	66%	12
Land	11	100%	0	0%	11
Total/Average %	15	65%	8	35%	23

Figure 1. Map of St. Paul Island, Alaska with qawan hunting locations where animal was hunted while in the water in 2021.

Table 3. Hunting performance of qawan shot while the animal was in the water at hunting locations on St. Paul Island, Alaska, in 2021.

Region	Retrieved		Struck and Lost		Total
	Number	Percent (%)	Number	Percent (%)	
Northeast Point	0	0%	2	100%	2
Reef	4	40%	6	60%	10
Total/Average %	4	33%	8	66%	12

Biological sample collections

In addition to subsistence monitoring data, ECO Island Sentinels collect biological samples from retrieved qawan immediately following the butchering process whenever possible. Since 2005, Island Sentinels have collected a standard suite of samples consisting of the snout or upper jawbone (upper right canine and upper right 2nd premolar tooth) and 3-4 vibrissae or whiskers. Teeth are used to age the retrieved qawan and whiskers are archived in ECO for stable isotope analysis of diets pending future funding. In 2021, Island Sentinels collected snouts from 11 subsistence hunted qawan (73% of total retrieved animals) and whiskers from 7 subsistence hunted qawan (47% of total retrieved animals). Three sets of whiskers from a sampled animal were taken by the hunter for traditional arts and crafts. No branded or tagged qawan were reported to ECO Island Sentinels from hunters in 2021. All canines and premolars have been

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processed via the Steam Kettle protocol and sent to Matson's Laboratory for analysis. ECO will provide these data to NMFS when available.

We thank the St. Paul Island qawax̂ hunters for their continued active participation and cooperation in ECO's subsistence monitoring program as data collection and high reporting would not be possible without their collaboration, our ECO Island Sentinels, and NMFS for their continued partnership in co-management of subsistence use of qawan. If you have any questions, please contact the ECO department at 907-546-3200, or via email at lmdivine@aleut.com.

Qaĝaalakux̂…Thank you,

Lauren Divine

Lauren Divine, ECO Director

CC: St. Paul Island Qawax̂ Hunters

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Appendix – Qawax̂ hunting monitoring log for St. Paul Island, Alaska in 2021. All samples were collected in accordance with NMFS Permit 19436-02.

Harvest ID	Hunt Date	Region	Retrieved/Struck-lost	HV/SL Date	Sex	Age Class	Hunter Location	SSL Location	Sample Number	Sample Type
SSL 2101	10-Feb-21	REEF	Retrieved	10-Feb-21	Male	Juvenile	Land	Water	SNPSSL 2101	SN
SSL 2102	16-Feb-21	REEF	Retrieved	16-Feb-21	Male	Juvenile	Land	Water	SNPSSL 2102	SN
SSL 2103	27-Feb-21	REEF	Struck-lost	2-Mar-21	Unknown	Unknown	Land	Water		
SSL 2104	20-Mar-21	REEF	Retrieved	20-Mar-21	Male	Juvenile	Land	Water	SNPSSL 2104	SN/WH
SSL 2105	21-Mar-21	REEF	Struck-lost	23-Mar-21	Unknown	Unknown	Land	Water		
SSL 2106	23-Mar-21	REEF	Retrieved	25-Mar-21	Male	Juvenile	Land	Water	SNPSSL 2106	SN/WH
SSL 2107	12-Apr-21	REEF	Struck-lost	16-Apr-21	Unknown	Unknown	Land	Water		
SSL 2108	18-Apr-21	REEF	Struck-lost	19-Apr-21	Unknown	Unknown	Land	Water		
SSL 2109	19-Apr-21	REEF	Struck-lost	22-Apr-21	Unknown	Unknown	Land	Water		
SSL 2110	19-Apr-21	REEF	Struck-lost	23-Apr-21	Unknown	Unknown	Land	Water		
SSL 2111	22-Apr-21	NEPT	Struck-lost	24-Apr-21	Unknown	Unknown	Land	Water		
SSL 2112	28-May-21	NEPT	Retrieved	28-May-21	Female	Juvenile	Land	Land		
SSL 2113	31-May-21	NEPT	Retrieved	31-May-21	Male	Juvenile	Land	Land		
SSL 2114			Retrieved		Male	Juvenile	Land	Land	SNPSSL 2114	SN/WH
SSL 2115	28-Jun-21	SWPT	Retrieved	28-Jun-21	Male	Juvenile	Land	Land		
SSL 2116	15-Oct-21	NEPT	Struck-lost	17-Oct-21	Unknown	Unknown	Land	Water		
SSL 2117	15-Oct-21	NEPT	Retrieved	15-Oct-21	Male	Juvenile	Land	Land	SNPSSL 2117	SN
SSL 2118	15-Oct-21	NEPT	Retrieved	15-Oct-21	Male	Juvenile	Land	Land	SNPSSL 2118	SN
SSL 2119	23-Oct-21	NEPT	Retrieved	23-Oct-21	Male	Juvenile	Land	Land	SNPSSL 2119	SN/WH
SSL 2120	30-Oct-21	NEPT	Retrieved	30-Oct-21	Male	Juvenile	Land	Land	SNPSSL 2120	SN/WH
SSL 2121	4-Nov-21	POLO	Retrieved	4-Nov-21	Male	Juvenile	Land	Land	SNPSSL 2121	SN/WH
SSL 2122	9-Nov-21	NEPT	Retrieved	9-Nov-21	Male	Juvenile	Land	Land	SNPSSL 2122	SN/WH
SSL 2123	8-Nov-21	NEPT	Retrieved	8-Nov-21	Male	Juvenile	Land	Land		