

# Co-Management Plan for Subsistence Use of Marine Mammals on St. Paul Island, Alaska

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The St. Paul Island Co-management Council

## PREFACE

Co-management of subsistence use of marine mammals between local organizations and federal agencies can be viewed as an issue of human rights and environmental justice, rather than just a legal or governance issue (Mengerink et al. 2017). The need for a more significant role of co-management rather than federal regulations was the single-most critical local issue identified throughout the laaquadan (northern fur seal) subsistence use federal regulation changes scoping process on St. Paul Island, Alaska.

The National Marine Fisheries Service (NMFS) entered into a co-management agreement with the Aleut Community of St. Paul Island Tribal Government (ACSPI) in 2000 under Section 119 of the Marine Mammal Protection Act (MMPA). The co-management agreement provided the basis for NMFS and ACSPI to partner and share decision-making regarding subsistence use of marine mammals under the MMPA. The co-management agreement established the St. Paul Island Co-management Council with equal membership between NMFS and ACSPI to work cooperatively in the conservation and management of laaquadan, qawan or Steller sea lions, and isuġin or harbor seals on St. Paul Island.

In 2019, NMFS deregulated subsistence use of the Eastern Pacific stock of laaquadan based on a petition from the ACSPI. The revised regulation under the Fur Seal Act changed the prior prescriptive and complicated regulatory process to a shared and flexible in-season management framework on St. Paul Island, Alaska. Recent studies of subsistence harvest management have shown that locally implemented monitoring is more cost-effective and samples a significantly greater proportion of the available subsistence users (Rist et al. 2010).

NMFS and ACSPI revised and aligned the co-management agreement with the new subsistence use regulation governing laaquadan on St. Paul Island in 2020. This annual in-season co-management plan specifies details of hunting and harvest management, monitoring, and reporting that the St. Paul Island Co-management Council, with input from the community via a Tribal subsistence use advisory committee, will implement via consensus within the parameters of the regulations and goals of the co-management agreement. This plan provides a flexible framework to make non-regulatory in-season adjustments to the locations, timing, and methods of subsistence use of laaquadan, qawan, and isuġin on St. Paul Island.

This plan represents a cooperative effort to identify, prioritize, and implement management measures necessary to improve food security on St. Paul Island and conserve marine mammal species used for subsistence purposes. The St. Paul Island Co-management Council members are:

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## LIST OF UNANAGAM TUNUU WORDS

Words ending in - $\hat{x}$ , -x, and -n are nouns. - $\hat{x}$  = 1 (singular form), -x = 2 (dual form), -n = 3 or more (plural form). Words ending in -lix are verbs.

ana $\hat{g}$ isnikan – clubbers (ana $\hat{g}$ i $\hat{x}$  = club)

ana $\hat{g}$ i-lix – to club (fur seals)

chasavyasnikan – watchers/watchmen/guards (Russian)

chasavya-lix – to watch (fur seals)

chuhnisnika $\hat{x}$  – sticker (one who stabs, pierces...in this case, the heart)

chuhni-lix – to stick or stab (the heart)

isu $\hat{g}$ in – harbor seals

laa $\hat{q}$ uda $\hat{x}$  – northern fur seal

laa $\hat{q}$ udan – northern fur seals

laa $\hat{q}$ udaada $\hat{x}$  – northern fur seal pup

laa $\hat{q}$ udaadan – northern fur seal pups

lastax – flippers

qawa $\hat{x}$  – Steller sea lion

qawan – Steller sea lions

qayu $\hat{x}$  – retrieving hook or ‘sea dog’

udugunusnikan – rounduppers; as in individuals rounding up the fur seals

udugunu-lix – to round up fur seals

unangam tunuu – Aleut language

unangan – the Aleut people

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## **INTRODUCTION**

This co-management plan is prepared as described in the co-management agreement between the Aleut Community of St. Paul Island Tribal Government (ACSPI) and the National Marine Fisheries Service (NMFS) on St. Paul Island, Alaska. Guided by the St. Paul Island Co-management Council, the ACSPI and NMFS will share responsibilities regarding the management, monitoring, and research of laaquadan or northern fur seals, qawan or Steller sea lions, and isuġin or harbor seals on St. Paul Island. This shared responsibility is cooperative management, hereafter referred to as co-management. This plan represents the implementation of co-management and equal representation of ACSPI and NMFS in decisions about food security and subsistence use of marine mammals.

## **PURPOSE AND GOALS**

The purpose of this co-management plan is to provide a framework for the St. Paul Island Co-management Council to make in-season decisions regarding marine mammal subsistence use on St. Paul Island consistent with federal laws and regulations, the co-management agreement between the ACSPI and NMFS, and Tribal ordinances. This includes monitoring and research to collect data regarding subsistence user behavior, effectiveness, level of take, and other information to support the St. Paul Island Co-management Council's decision-making process and inform the public. The goals of this plan are to ensure that: (1) the subsistence needs of St. Paul tribal members are met; (2) subsistence users comply with laws and regulations, the agreement, and Tribal ordinances; (3) the effects of subsistence activities are minimized to ensure sustainability of marine mammal resources; and (4) female laaquadan mortality is minimized. The St. Paul Island Co-management Council will strive to balance and achieve these goals.

## **MANAGEMENT AND REGULATORY AUTHORITY**

The ACSPI is the federally recognized tribe representing the conservation and co-management interests of marine mammal subsistence hunters, harvesters, users, and the customary traditional practices of the tribal members of the ACSPI. The ACSPI co-manages marine mammal subsistence use through its Ecosystem Conservation Office (ECO) department. The tribal members of ACSPI gain cultural and dietary sustenance by obtaining wild foods in the region. The process of obtaining wild foods in the context of co-management represents subsistence activities, and these activities may be implemented by an individual or a group of individuals. ACSPI supports subsistence activities by designating the ECO to communicate with the community to understand their interests and preferences in subsistence activities related to laaquadan, qawan, and isuġin. The ECO closely monitors hunts and harvests of laaquadan, qawan, and isuġin to characterize and record subsistence practices, success, and struck and lost animals. The ECO will share this information with the Council to inform their decision making and implement this co-management plan. NMFS independently monitors subsistence activities to verify species-specific subsistence reports provided by ACSPI ECO. NMFS is the congressionally mandated federal agency responsible for the protection, conservation, and management of laaquadan, qawan, and isuġin within the jurisdiction of the United States of America. NMFS has the authority to manage and regulate laaquadan, qawan, and isuġin under the Marine Mammal Protection Act (MMPA) of 1972. In addition, the Fur Seal Act (FSA) of 1966 (16 U.S.C. 1151 et seq.) provides statutory authority to manage and regulate actions affecting laaquadan and is the specific authority for the subsistence use regulations for

laaquadan. The Endangered Species Act (ESA) provides additional statutory authority for the management and regulations of activities affecting qawan. NMFS co-manages marine mammal subsistence use on the Pribilof Islands through the Protected Resources Division of the Alaska Regional Office of NMFS and Alaska Ecosystem Program of the Marine Mammal Laboratory. NMFS staff work with ACSPI staff and community members to understand subsistence activities, marine mammal availability, and preferences.

NMFS partnership with ECO allows for additional quality assurance and quality control of data analysis and interpretation. NMFS will share similar information related to subsistence use or population data with the Council. This co-management plan includes management measures deemed necessary by the Council for the maintenance of sustainable subsistence use of marine mammals and their habitat on St. Paul Island. The Council delegated the day-to-day coordination of subsistence use on St. Paul Island to a sub-committee of the Council that is responsible for drafting this plan and implementing the plan once consensus on the plan is obtained from the Council.

The MMPA provides an exception to the prohibition on taking marine mammals to authorize subsistence use by Alaska Natives. The statutory exception of the MMPA is implemented by regulations at 50 CFR 216.23(a). The regulations authorize taking without a permit if taking is: (1) By Alaskan Natives who reside in Alaska for subsistence, or (2) For purposes of creating and selling authentic Native articles of handicraft and clothing, and (3) In each case, not accomplished in a wasteful manner. Additional restrictions related to subsistence can be found at 50 CFR 216.23(b) and (c).

The FSA provides a statutory exception in section 103 (b) that laaquadan are taken for subsistence uses as defined in section 109(f)(2) of the MMPA, as amended (16 U.S.C. 1379), and only in canoes not transported by or used in connection with other vessels, and propelled entirely by oars, paddles, or sails, and manned by not more than five persons each, in the way hitherto practiced and without the use of firearms. Section 109(f)(2) of the MMPA defines subsistence uses as: “the customary and traditional uses by rural Alaska residents of marine mammals for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation”. Thus, direct personal or family consumption is the primary use, and the creation of handicrafts is authorized secondary to consumption. These distinctions were discussed in detail in the emergency final rule for the subsistence taking of North Pacific laaquadan on July 9, 1986 (51 FR 24282).

The MMPA section 119 (16 U.S.C. 1388) provides the statutory authority for NMFS to enter into a co-management agreement with the ACSPI. The co-management agreement established a St. Paul Island Co-management Council (hereafter referred to as Council) with equal membership between NMFS and ACSPI to work cooperatively in the conservation and management of the subsistence use of laaquadan, qawan, and isuġin on St. Paul Island. The co-management agreement includes a guiding principle “that provides for full participation and contribution by Unangan of St. Paul, through the ACSPI, in decisions affecting the management of marine mammals used for subsistence purposes,” including the management of subsistence use of laaquadan, qawan, and isuġin. The co-management agreement was amended in 2020 by the Council and approved by authorized representatives from NMFS and ACSPI.

## **MANAGEMENT MEASURES**

The Council is authorized to create management measures (i.e., beyond regulatory restrictions) regarding subsistence use levels, seasons and areas, participation and training requirements,



subsistence hunting and harvest monitoring and reporting, temporary suspension or termination provisions, and other measures deemed necessary to ensure subsistence activities continue to be accomplished in a humane and non-wasteful manner.

The 2020 calendar year is the first full year for the community of St. Paul to attempt to meet subsistence needs for laaquadan under a new regulatory regime specific to laaquadan and an updated co-management framework. The Council recognizes this new process represents a significant change from the previous prescriptive regulatory process for the community to understand how to exercise inherent subsistence rights and associated opportunities to meet those subsistence needs. It is the intent of the Council to provide the opportunity for the community to explore how to exercise subsistence rights within the broad regulatory and co-management framework rather than try to prescribe measures that create unnecessary limitations. NMFS and ACSPI, through participation in the Council, support the development of sustainable and flexible processes of communication, planning, monitoring, and reporting, as well as revision of co-management plans when necessary. These plan revisions may occur annually or in-season once experience is gained and all parties gain a greater understanding of subsistence interests and preferences.

In order to achieve the purpose and goals of this co-management plan the ACSPI and NMFS must collect, analyze, and interpret data on subsistence use to inform in-season decisions consistent with the management measures contained in this plan. ACSPI and NMFS will use real time in-season monitoring to record the numbers of animals killed, struck and lost, injured, and those incidentally disturbed during subsistence activities. New monitoring challenges or needs may require different or amended methods to obtain data to be used by the Council to make in-season management decisions.

Management measures include collecting information through local monitoring and research efforts, interpretation of collected data in a timely manner, using best available information for consensus decision-making, timely and commensurate corrective action, minimizing disturbance, improving communication between ACSPI and NMFS and between ACSPI and subsistence hunters and harvesters, and other measures as needed.

ACSPI and NMFS will establish a process of shared local responsibilities regarding the management and research of marine mammals on St. Paul Island on behalf of the citizens of the U.S. That is, the Council will:

1. Create plan(s) to monitor and manage subsistence use and maintain a process to make consensus decisions about the need to take in-season management actions and enforce regulatory and non-regulatory restrictions;
2. Review hunt/harvest monitoring data and evaluate the application of adaptive management measures within each subsistence season;
3. Evaluate accumulated data and determine measures to track the number of animals killed and injured for subsistence purposes, detect female laaquadan, avoid mortality of female laaquadan, and minimize disturbance to animals;
4. Review relevant data and circumstances that may arise in a given situation, with or without temporarily pausing hunting or harvesting to do so; and,
5. Develop, as necessary, allocation plans for laaquadan intended to minimize sub-lethal effects on seals not hunted or harvested, maximize detection and avoidance of females, minimize struck and lost rates, make in-season allocations among the age groups and locations to be hunted/harvested consistent with applicable regulations (50 CFR 216.71-

72), and make determinations regarding the suspension or termination of hunting or harvesting.

### **Marine Mammals Used by Unangan for Subsistence**

Laaqudan, qawan, and isuġin breed on the Pribilof Islands, Alaska. Of these three species, laaqudan are the most abundant and account for almost all the marine mammals taken for subsistence purposes on St. Paul, with small numbers of qawan taken annually, and extremely low and sporadic take of isuġin in some years. Other species of marine mammals in Alaska have been observed on or near the Pribilof Islands, but they neither breed on the islands nor are actively hunted or harvested for subsistence use. This plan includes measures by which the Council will co-manage subsistence use of laaqudan, qawan, and isuġin on St. Paul Island.

#### **Laaqudan**

Among the most important subsistence resources available to Pribilovians (Indians, Aleuts, and Eskimos who live on the Pribilof Islands) are laaqudan. Laaqudan are used by Unangan for food and traditional handicraft. During the era of intense commercial seal harvest, Unangan were allowed to take a portion of the meat and organs from commercially harvested laaqudan for subsistence use (Osgood et al. 1915). Unangan have traditionally engaged in subsistence hunting with firearms of young male laaqudan in the spring and winter, and subsistence harvesting using clubs of laaqudaadan (pups) in the fall. The overwhelming importance of laaqudaadan as a subsistence resource can be seen in the archaeofaunal assemblage which demonstrates the antiquity of laaqudaadaâ harvesting by the Pribilof Unangan (Eldridge 2016). Subsistence users target age 0-4 year old juvenile laaqudan; laaqudan 5+ years old and older are not targeted. Unangan subsistence users apply the commercial harvest method of rounding up and clubbing from June 23 to July 31 annually to target 2-4 year old juvenile laaqudan. The period after July 31 provides an opportunity for subsistence users to target younger age classes not available in June and July (laaqudaadan and yearlings).

#### **Qawan**

Qawan were historically used by Unangan for food and materials. Historical research indicates that adults were sought as a major source of raw materials (e.g., for skins for baidars; Elliot 1882; Osgood et al. 1915). Adult qawan were hunted primarily during the summer, with the largest number of animals taken in July and August (Veltre and Veltre 1981). Qawan pups are particularly enjoyed by subsistence users in the Pribilof Islands. Today, subsistence hunters primarily target pup (age 0) and juvenile (age 1-2 years) qawan; adult qawan (3+ years old) are not targeted.

#### **Isuġin**

Isuġin are used by Unangan primarily to render seal oil and for their pelts.

### **Marine Mammal Subsistence Hunting**

Marine mammal hunting on the Pribilof Islands is exclusively a land-based activity; pelagic hunting of laaqudan, qawan, and isuġin does not occur. Marine mammals are primarily hunted while they are swimming nearshore, but sometimes are hunted while hauled out on land, using high-powered rifles (minimum 22 caliber for laaqudan and isuġin and .22-250 caliber for qawan) fired from traditional hunting blinds or other vantage points. The methods used for hunting from land vary depending on several factors including but not limited to: time of year, hunting location, presence of other (non-target) marine mammals, whether the animal is on land or in the

water, and weather conditions. Hunting animals that are swimming from a land-based vantage point requires extensive local knowledge of several behavioral characteristics of target species and their habitat.

Animals hunted in the water can sink quickly when shot, making them difficult to recover. However, if the animal is able to be retrieved immediately, hunters use a special process to recover the animal. To recover animals from water, hunters use a qayuû (retrieving hook or ‘sea dog’, pronounced ‘kī-yōō’) to hook the animal in the water and pull it towards shore. A qayuû consists of a wooden grappling or throwing hook attached to a length of rope that is thrown from shore and used to snag and retrieve the animal. Every hunter makes his or her own qayuû. If a struck animal is not able to be retrieved immediately (due to quickly sinking), the hunter will attempt to actively track the struck animal for up to three days. Over this three-day period, tracking includes monitoring local currents and wind speeds to predict where the animal could wash ashore after floating back to the surface. Hunters then monitor the shoreline in these areas during daylight hours at both high and low tide to locate the animal when it drifts ashore. A hunter that has struck an animal but did not retrieve it will notify other hunters in the community to increase the odds of detecting the wounded animal or carcass onshore. After the third day, even in the cold Bering Sea waters, the meat will begin to decompose to the point that it is not safe to consume. Animals that are not recovered within this timeframe are reported as struck and lost to the ACSPI ECO.

### **Laaqudaû Subsistence Harvest**

The subsistence harvest methods that Pribilovians have used under the regulations were modeled after the methods used in the commercial harvest, and although they are considered humane for fur seals, they are not traditional methods used by the Unangan people prior to the commercial harvest. The commercial harvest method of clubbing involves organized herding of non-breeding juvenile males at a specific haulout area by 5 to 10 experienced udugunusnikan, (or those who round up). Once animals are herded, the udugunusnikan quickly form a line between the shore and the laaquadan to prevent laaquadan access to the ocean. Juvenile male laaquadan are then slowly guided and moved from their haulout areas to a specific grassy area, long ago designated as a ‘killing field,’ where they are held in a large group by a handful of individuals known as chasavyasnikan or watchers. A smaller group of laaquadan are then separated from the large herded group and walked towards 3 to 4 anaûisnikan (or clubbers) who stun the laaquadan by hitting them on the skull with a solid wooden club. The anaûisnikan select the preferred-sized (i.e., 2-4 year old) laaquadan from each group. Some groups may not include preferred-size laaquadan and others many, but typically older and larger laaquadan are allowed to escape. After the non-harvested laaquadan escape, the stunned (i.e., knocked unconscious) laaquadan are dragged a short distance away from the ‘killing area’, and chuhnisnikan (or heart stabber) immediately cuts open the chest and pierces the heart. This method was studied extensively during the 1960s and 1970s by the government and independently reviewed by a group of veterinarians, stakeholders, and experts to confirm the harvest practices met the humane standard from MMPA and livestock industries (See NMFS 2019 for a thorough review of humane killing). The process of stunning with a wooden club and severing the aorta or piercing the heart within a few minutes was established as a humane practice. Laaquadan are then skinned, butchered, and bagged in the field. Meat, organs, and fore flippers are consumed as subsistence foods or used for traditional crafting, and occasionally blubber is rendered for seal oil.

The subsistence harvest of laaquadaadan in August and September will require a modified approach to the commercial harvest method of rounding-up and guiding laaquadaadan from the

breeding areas among breeding age laaquadan compared to that used on the hauling grounds with non-breeding laaquadan. In mid-August adult male laaquadan still exhibit territorial behavior and will defend their habitat on the rookery which poses a human safety risk. In addition, female laaquadan will attempt to avoid interactions with territorial males after breeding because adult male laaquadan can cause serious injuries or death to them. Laaquadaadan cannot be guided 'actively' in August on the rookery, rather are allowed to 'escape' in a particular direction placing people in a stationary 'fence' along the shoreline, to move them to an alternative location. In addition, the tendency of laaquadaadan is not to enter the water until they are 40-50 days old and have begun to molt into their adult pelage (Baker and Donahue 2000). The timing of this laaquadaadan behavior change indicates that by early September most laaquadaadan enter the water with increasing frequency and the water becomes an 'escape' option that does not have an energetic cost. In August, laaquadaadan disturbed by subsistence activities that escape into the water will likely incur an energetic cost while submerged (Donahue et al. 2000). Therefore, laaquadaadan harvests in August and September will differ from juvenile laaquadan harvests in that laaquadaadan will be harvested at the site of the round-up on the periphery of the rookery.

### ***Community-style harvests***

The Council identified that in 2020 community harvests of laaquadaadan, supported by ECO, will ensure female mortality and effects on non-targeted laaquadan are minimized through harvest site identification and sexing laaquadaadan prior to harvest to achieve the plan goals. By September breeding is complete and territorial adult males have departed the rookery and are replaced by similar-sized non-territorial males. Human safety risks from adult males are significantly lower in September and later than in August. Subsistence harvest of laaquadaadan will continue in September and October and harvests of yearlings and two-year olds will occur in September, October, and November. Subsistence users will harvest laaquadaadan, yearlings, and two-year olds by round-up from the hauling grounds using the commercial harvest method or a smaller family-style harvest.

### ***Family-style harvests***

The Council identified in 2019 an alternative to the community-style harvest is a family-style harvest. Family-style harvests consist of a fewer number of harvesters, such as a family group or group of families, that harvest laaquadaadan and yearlings independently of an organized community harvest. The Council supports community harvests rather than family-style harvests during the 2020 harvest season so that subsistence users can gain experience in rounding up, handling, and sexing larger groups of animals.

A family-style harvest provides the opportunity for community members to obtain subsistence resources on weekends or evenings with fewer participants, fewer laaquadaadan taken per harvest, and a higher frequency of occurrence. This method meets the regulatory standard of substantially similar effects (50 CFR 216.72(e)(2)), but the Council also identified that this method creates safety, monitoring, and reporting challenges due to staffing limitations of both NMFS and ECO for the 2020 season. It is the intent of the Council to develop a means for individuals to understand the risks and liabilities of the community-style method as the basis for making an informed decision to meet their subsistence needs via the family-style method. Before individuals participate in a family-style harvest, all active harvesters will participate in at least a portion of the 2020 community laaquadaadan/yearling harvests to gain rounding up, handling, and sexing experience prior to engaging in a family-style harvest (see Laaquadaadan Harvester Responsibilities below). ECO will survey community members for preferred family-style harvest

locations and times during 2020 and produce a list of possible family-style harvest locations for future seasons. Community members will also be surveyed to determine an acceptable level of experience needed as a pre-requisite for engaging in family-style harvests. Access to laaqudan and laaqudaadan changes seasonally (see Habitat Protection Measures section) and will be coordinated by ECO and NMFS if in-season location adjustments need to be made at such a time that family-style harvests are implemented (i.e., after 2020).

### **Subsistence Use Limits**

#### **Laaqudan**

The maximum number of laaqudan that may be killed for subsistence uses annually on St. Paul is established by regulation. Per 50 CFR 216.72(e), Pribilovians on St. Paul may take by hunt and harvest up to 2,000 juvenile (less than 7 years old, including laaqudaadan) male laaqudan per year for subsistence uses over the course of the hunting and harvest seasons, including up to 20 female laaqudan per year.

#### **Qawan**

Subsistence use limits for qawan on St. Paul are not defined in this management plan at this time.

#### **Isuġin**

Subsistence use limits for isuġin on St. Paul are not defined in this management plan at this time.

### **Seasons**

#### **Laaqudan**

Two seasons for subsistence use of laaqudan on St. Paul are established by regulation (50 CFR 216.72(e)): one season from January 1 – May 31 using firearms to hunt and the second season from June 23 – December 31 without using firearms for the harvest.

#### ***Hunting Season***

Juvenile male laaqudan may be killed with firearms from January 1 through May 31 annually (hereafter referred to as “hunting season”) or may be killed using alternative hunting methods developed through the Council if those methods are consistent with regulation §216.71 and result in substantially similar effects. A firearm is any weapon, such as a rifle, capable of firing a missile using an explosive charge as a propellant (50 CFR 216.72(e)(1)).

#### ***Harvest Season***

Juvenile male laaqudan may be harvested without the use of firearms from June 23 through December 31 annually (hereafter referred to as “harvest season”). Authorized harvest may be by established harvest methods of herding and stunning followed immediately by exsanguination, or by alternative harvest methods developed through the Council if those methods are consistent with regulation §216.71 and result in substantially similar effects (50 CFR 216.72(e)(2)).

Harvests for juvenile males 1 year and older will be scheduled on an as needed basis with an effort to concentrate harvest effort annually between June 23 and July 31. Joint harvests for laaqudaadan, yearlings, and two-year olds will be scheduled on an as needed basis with an effort to concentrate harvest effort annually during the community preferred timing between August 15 and November 30.

#### **Qawan**

Seasons for subsistence use of qawan on St. Paul are not defined in this management plan at this time. Qawan may be hunted at any time of the year for subsistence purposes, in accordance with federal regulations, co-management agreement and this plan, and Tribal ordinances.

### **Isuġin**

Seasons for subsistence use of isuġin on St. Paul are not defined in this management plan at this time. Isuġin may be hunted at any time of the year for subsistence purposes, in accordance with federal regulations, co-management agreement and this plan, and Tribal ordinances.

### **Area Restrictions**

Area restrictions for laaquadan, qawan, and isuġin on St. Paul are defined in this co-management plan. Area restrictions are necessary to prevent incidental disturbance during subsistence activities that would prevent use of areas important to breeding laaquadan and for rebuilding this important subsistence resource. The numbers of laaquadaadan born at Ardiguén Rookery and Small (Little) Polovina Rookery on St. Paul Island in 2018 are at extremely low levels (Towell et al. 2018). Small Polovina is effectively extinct, a single laaquadaadaġ was observed there in 2018 after a series of years with no laaquadaadan observed. Second Point South or Dushkin (within the Morjovi Rookery complex) is part of the research area at Northeast Point (see Research section) and in the 1990s the lower limit of the laaquadaadaġ production estimate was near the 500 “laaquadaadan born” threshold that is at high risk of extinction. NMFS population viability analysis models currently estimate laaquadaadaġ production at Dushkin to be approximately 1,600 laaquadaadan born with an increasing trend, while the estimate for Ardiguén Rookery is 359 and declining (Johnson 2020).

The Council will review biennial laaquadan laaquadaadaġ production and population trend information at each breeding location and evaluate the statistical probability of laaquadaadaġ production falling below a level that is necessary for long-term stability of the population in order to maintain ongoing evaluation of harvestability at each location. Research related restrictions are discussed in the Research section.

### **Laaquadan**

Harvests are prohibited at all times at Ardiguén, Small Polovina, and Dushkin. Hunting at Dushkin will be closely monitored. ECO will post harvest location information seasonally and discuss during relevant harvest and hunting meetings. Maps are available in Appendix A and will be updated as needed.

### **Qawan**

Hunting is prohibited at Ardiguén and Small Polovina from June 1 through November 30. Hunting at Dushkin will be closely monitored. Maps are available in Appendix A and will be updated as needed.

### **Isuġin**

Hunting is prohibited at Ardiguén and Small Polovina from June 1 through November 30. Hunting at Dushkin will be closely monitored. Maps are available in Appendix A and will be updated as needed.

### **Subsistence Hunter and Harvester List**

The ACSPI ECO has maintained a list of qawan hunters on St. Paul since 1998. The list includes the first and last name, contact information, status (active or inactive), and a unique hunter

identification number for each qawan hunter. This list will be updated to include both laaquadan and isugûin hunters and harvesters. Each individual will be given a unique hunter/harvester identification number to ensure the protection of personally identifiable (confidential) information. A record of unique hunter/harvester identification numbers will be maintained within ECO and updated/ reviewed on an annual basis or more frequently as needed. This list will serve as a central accounting of experienced harvesters for ECO staff and NMFS independent observers when family-style harvests are implemented.

### **Laaqudaadan Harvester Responsibilities**

During laaquadaadaâ harvests, laaquadaadan must be captured, handled, sexed, and a second person must verify the sex of all laaquadaadan prior to harvest. Laaquadaadan will also be sexed after harvest by ECO or NMFS representatives. Male laaquadaadan will be positively identified prior to harvest by trained and approved individuals. If a handler cannot determine laaquadaadaâ sex prior to stunning, the laaquadaadaâ will be released rather than risk taking a female. During the abbreviated 2019 laaquadaadan harvest season, NMFS and ECO provided significant hands-on involvement during community-style harvests for individuals to have subsistence opportunities consistent with the new regulations and co-management framework with the limited time remaining before laaquadaadan departed from the island on their winter migration. ECO will continue to support hands-on opportunities for subsistence users in 2020 to ensure harvesters are comfortable with all harvest responsibilities.

Experienced individuals will demonstrate and assist harvesters in rounding up, capturing, handling, and determining the sex of laaquadaadan prior to harvest activities and harvesters will be required to participate annually in community-style harvests prior to engaging in family-style harvests (in 2021 and beyond) to ensure that individuals remain familiar and comfortable with harvest responsibilities. With respect to traditional education, hunters and harvesters will set the best example to ensure continuity of respectful practices. Opportunities to teach hunting techniques and the laaquadan harvest process to youth are to be taken whenever feasible.

*Additional Education and Outreach:* Community education and outreach may include sealers' meetings, public service announcements, one-on-one communication, and other means as deemed effective. ECO will maintain a subsistence hunter and harvester list by tracking harvest participation through harvest order forms during each season.

### **Subsistence Monitoring and Reporting**

The ECO and NMFS will collect subsistence monitoring data to ensure the taking of any marine mammal is accomplished responsibly, in a non-wasteful manner, in accordance with established laws and regulations, and to assess whether the goals of this management plan are being achieved. The ECO and NMFS will share responsibility for collecting and sharing data with the Council for analysis on a regular basis. Subsistence monitoring and reporting information will be used for making in-season co-management decisions (see In-Season Co-Management section). Data used to estimate subsistence mortality and struck and lost rates will be gathered through hunter registration and subsistence monitoring. Subsistence mortality and struck and lost rates will be closely monitored by ECO and NMFS representatives via a real-time subsistence monitoring program. The real-time subsistence monitoring method established by ECO in 1998 under its Tanam Amgignaa (Island Sentinel) Program promotes the collection of local subsistence data within a 48-hour period for a retrieved animal and 72 hours for a struck and lost animal. If the animal is not retrieved in 72 hours and is considered struck and lost by the hunter,

Island Sentinels will search the shorelines as feasible until the animal is recovered or so much time has passed that sampling is not considered possible. Once an animal is retrieved, ECO Island Sentinels collect subsistence data directly from users (within 48 hours) or their own observations (after 48 hours) in a standardized format (see Marine Mammal Hunting Monitoring Form, Appendix B) and enter quality-controlled data in the BeringWatch database. Sentinels will continue to track a subsistence event closely during the three-day period that the marine mammal would be considered edible by the users if retrieved. After the three-day edible period, the Sentinels will take on the primary survey/monitoring role to detect the carcass over a wider area. Subsistence data are collected through a multitude of communication methods ranging from: (1) voluntary hunter reporting, (2) ECO reporting requirements, and (3) active field monitoring and outreach by ECO Island Sentinels. The following hunt and harvest data will be collected and recorded by ECO (see Appendix B):

1. Hunt/harvest reported by (hunter identification number for confidentiality);
2. Date and time hunt/harvest reported;
3. Hunt/harvest date and time;
4. Hunt/harvest region and location, laaquadan, qawan, and isuġin location (in water or on land);
5. Sex and age class of laaquadan, qawan and isuġin hunted/harvested;
6. Retrieval or struck and lost date, time, and location;
7. Sampling details and tag or brand information; and,
8. Hunter/harvester comments.

In addition to sharing subsistence monitoring data with the Council, ECO will prepare and disseminate annually a subsistence use report for laaquadan, qawan, and isuġin to the local community and NMFS.

### **Laaquadan**

Subsistence monitoring for laaquadan will include monitoring during the hunting and harvest seasons by ECO and NMFS to ensure that the female take limit or age limit in the regulations are not exceeded, and to estimate injury and incidental disturbance of laaquadan during subsistence activities. Injured laaquadan will be assessed by ECO through weekly marine mammal stranding surveys. NMFS representatives may also participate in and support ECO with these surveys. The marine mammal stranding process will be used to determine injury caused by human interaction (i.e., shot). Incidental disturbance will be assessed by hunter/harvester comments (i.e., how many laaquadan on land and in the water during subsistence activities and how many disturbed). Occasional independent monitoring by NMFS representatives may occur during the hunting and harvesting of laaquadan. NMFS will develop annually a monitoring schedule and share with the Council and ECO to ensure efficient coordination of data collection.

### **Hunting Season**

During the hunting season ECO will take photos of the heads and collect snouts including canine teeth and vibrissae from all retrieved laaquadan. The Council may request that hunters take a photo of the head or bring the head to ECO for sampling. The teeth will be examined to verify sex and estimate age class of the animal (e.g., pup, juvenile, adult). If the hunters reported age estimate is older than 7 years old, or if most vibrissae are predominately white, ECO will send photo(s) of the head to the Council and immediately process and age the teeth to ensure that the animal is not an adult laaquadan (Scheffer 1962). Vibrissae data will be used to validate the assumption that adult laaquadan possess predominately white vibrissae in both males and females.



All samples from the hunting season will be retained by ECO and/or NMFS until review by the Council is completed and a method to verify results by a minimum of two independent sources is identified and implemented.

### **Harvest Season**

The Council will develop harvest methods consistent with § 216.71 and resulting in substantially similar effects as current harvest methods. During the harvest season ECO will externally examine all harvested animals to verify sex, regardless of the age-class being harvested.

### **Qawan**

No additional monitoring is required for this species at this time.

### **Isuġin**

No additional monitoring is required for this species at this time.

## **Temporary Suspension and Termination Provisions**

### **Laaqudan**

To ensure all necessary measures are taken to minimize female laaqudan mortality, the following annual (i.e., January 1- December 31) threshold levels of female laaqudan mortality will trigger temporary interruption or termination of the hunt or harvest season:

1. If one (1) or more females have been accidentally killed within the hunting season from January 1 to May 31, subsistence use will be suspended for a period of two (2) days so that the Council may discuss with subsistence hunters the reasons why a female or females were taken, review the identification methods for females, and take additional action to correct problems contributing to the accidental take of females;
2. If five (5) females have been accidentally killed within the hunting season from January 1 to May 31, subsistence use will be terminated for the remainder of the hunting season;
3. If five (5) females have been accidentally killed within the harvest season from June 23 to December 31, subsistence use will be suspended for a period of two (2) days so that the Council may discuss with subsistence users the reasons why females were taken, review the identification methods for females, and take additional action to correct problems contributing to the accidental take of females;
4. If ten (10) females have been accidentally killed within the harvest season from June 23 to December 31, subsistence use will be suspended and the Council will evaluate and determine an appropriate set of actions that must occur before subsistence activities are resumed for the season; and,
5. If fifteen (15) females have been accidentally killed during the harvest season from June 23 to December 31, subsistence use will be terminated for the year.

### **Qawan**

No temporary suspension and termination provisions are required for this species at this time.

### **Isuġin**

No temporary suspension and termination provisions are required for this species at this time.

## **In-Season Co-Management**

The Council is authorized to make in-season adjustments to ensure that subsistence use continues to be conducted sustainably on the basis of all relevant information. Using all available

information, the Council may limit the season (i.e., frequency) or areas of subsistence hunting or harvesting activities, suspend or terminate subsistence activities, or restrict hunting or harvest methods in order to achieve the goals of this management plan.

The in-season management process will include: (1) data collection, (2) data synthesis and review, (3) *consensus* decision-making, and (4) implementation. At each meeting, the Council members will share their views regarding any needed adjustments to hunting and/or harvesting practices based on recent and anticipated subsistence use and will seek to reach consensus on any in-season adjustments within the parameters of the applicable regulations. Any in-season frequency/area adjustments made by the Council will be carried out within the authority of this management plan. Such action is not considered to warrant a plan amendment. When amendments warrant updating the Co-Management Plan to a newer approved working version, changes will be tracked and recorded in Appendix F, including how decisions were made, communication plan for stakeholders, and memorandums as produced and released.

### **In-Season Adjustments**

The Council will convene at least twice annually no later than May 23 and December 1 to review laaquadan harvest data and laaquadan, qawan, and isuġin hunting data, respectively. The Council sub-committee will meet monthly to review data and distribute to the Council as needed. The ECO will share hunting and harvest effort and success for laaquadan, qawan, and isuġin with the Council on a regular basis, as described below. The Council may hold additional meetings to review in-season monitoring data and determine if in-season adjustments to hunting and harvesting practices are necessary.

#### ***Laaqudan***

Prior to the new laaquadan subsistence use seasons the Council will review the number of marine mammal hunters active and inactive on the tracking list, expected hunting and harvesting locations, prevalence of animals observed, number and identity of individuals trained to handle and sex animals, and any relevant Tribal ordinances.

*Hunting:* ECO and NMFS will share effort and success rates with the Council monthly during the hunting season from January 1 through March 31 and then weekly from April 1 through May 31, when hunting effort is expected to increase, annually. Reporting frequency will be reviewed by the Council and adjusted annually if needed.

*Harvesting:* ECO and NMFS will share effort and success data with the Council weekly during the harvest season from June 23 through December 31 annually. The number of community harvests will be identified at the start of each season and adjusted as needed during the season. Interest in family-style harvests will be gauged by ECO in 2020. Any family-style harvests that do occur, although not encouraged for the 2020 season, will be monitored during the season through ECO staff and NMFS independent observers and self-reporting to ECO.

#### ***Qawan***

Hunting effort and success for qawan will be shared with the Council annually.

#### ***Isuġin***

Hunting effort and success for isuġin will be shared with the Council annually.

### **Tribal Ordinances**

The ACSPI will develop, implement, and enforce Tribal ordinances governing the subsistence use of laaquadan, qawan, and isuġin. Traditional uses of laaquadan are currently governed under

the ordinance *Customary Traditional Use of Northern Fur Seal* (Title VII, Chapter 7.2, Environmental and Resource Code) that was adopted by the St. Paul Tribal Council on May 29, 2009. To date no Tribal ordinance has been adopted regarding traditional uses of qawan. ECO implemented a departmental order in 2000 requiring all qawan hunters to report all retrieved and struck and lost qawan to ECO within 24 hours. The current reporting method continues to be based on the honor system and ECO's departmental order and has led to 100% hunter participation in the real-time subsistence monitoring program since 2001.

### **Laaqudan Subsistence Use Regulations**

Below are the Federal regulations applicable to St. Paul and can be found in the Code of Federal Regulations (CFR) 50 CFR §216.71-.74.

#### **50 CFR Part 216 – Subpart F – Pribilof Islands, Taking for Subsistence Purposes**

##### ***50 CFR §216.71 – Allowable take of laaqudan***

Pribilovians may take laaqudan on the Pribilof Islands if such taking is

- (a) For subsistence uses, and
- (b) Not accomplished in a wasteful manner.

##### ***§216.72 Restrictions on subsistence use of laaqudan***

(e) St. Paul Island. For the taking of laaqudan for subsistence uses, Pribilovians on St. Paul Island are authorized to take by hunt and harvest up to 2,000 juvenile (less than 7 years old, including pups) male laaqudan per year.

(1) Juvenile male laaqudan may be killed with firearms from January 1 through May 31 annually, or may be killed using alternative hunting methods developed through the St. Paul Island Co-management Council if those methods are consistent with § 216.71 and result in substantially similar effects. A firearm is any weapon, such as a pistol or rifle, capable of firing a missile using an explosive charge as a propellant.

(2) Juvenile male laaqudan may be harvested without the use of firearms from June 23 through December 31 annually. Authorized harvest may be by established harvest methods of herding and stunning followed immediately by exsanguination, or by alternative harvest methods developed through the St. Paul Island Co-management Council if those methods are consistent with § 216.71 and result in substantially similar effects.

(3) Pribilovians are authorized each year up to 20 mortalities of female laaqudan associated with the subsistence seasons. Any female laaqudan mortalities will be included in the total number of laaqudan authorized per year for subsistence uses (2,000).

(f) Subsistence use suspension provisions.

(1) The Assistant Administrator is required to suspend the take provided for in § 216.71 on St. George and/or St. Paul Islands, as appropriate, when:

(i) He or she determines that subsistence use is being conducted in a wasteful manner

(2) A suspension based on a determination under paragraph (f)(1)(i) of this section may be lifted by the Assistant Administrator if he or she finds that the conditions that led to the determination that subsistence use was being conducted in a wasteful manner have been remedied.

(g) Subsistence use termination provisions. The Assistant Administrator shall terminate the annual take provided for in § 216.71 on the Pribilof Islands, as follows:

(1) For St. Paul Island:

(i) For the hunting of juvenile male laaqudan with firearms, at the end of the day on May 31 or when 2,000 laaqudan have been killed, whichever comes first;

- (ii) For the harvest of juvenile male laaquadan without firearms, at the end of the day on December 31 or when 2,000 laaquadan have been killed, whichever comes first; or
- (iii) When 20 female laaquadan have been killed during the subsistence seasons.

#### **§ 216.73 Disposition of laaquadan parts**

Except for transfers to other Alaskan Natives for barter or sharing for personal or family consumption, no part of a laaquadan taken for subsistence uses may be sold or otherwise transferred to any person unless it is a nonedible byproduct which:

- (a) Has been transformed into an article of handicraft, or
- (b) Is being sent by an Alaskan Native directly, or through a registered agent, to a tannery registered under 50 CFR 216.23(c) for the purpose of processing, and will be returned directly to the Alaskan Native for conversion into an article of handicraft, or
- (c) Is being sold or transferred to an Alaskan Native, or to an agent registered under 50 CFR 216.23(c) for resale or transfer to an Alaskan Native, who will convert the seal part into a handicraft.

#### **§ 216.74 Cooperation between laaquadan subsistence users, tribal and Federal officials**

Federal scientists and Pribilovians cooperatively manage the subsistence use of laaquadan under section 119 of the Marine Mammal Protection Act (16 U.S.C. 1388). The federally recognized tribes on the Pribilof Islands have signed agreements describing a shared interest in the conservation and management of laaquadan and the designation of co-management councils that meet and address the purposes of the co-management agreements for representatives from NMFS, St. George and St. Paul tribal governments. NMFS representatives are responsible for compiling information related to sources of human-caused mortality and serious injury of marine mammals. The Pribilovians are responsible for reporting their subsistence needs and actual level of subsistence take. This information is used to update stock assessment reports and make determinations under § 216.72. Pribilovians who take laaquadan for subsistence uses collaborate with NMFS representatives and the respective Tribal representatives to consider best subsistence use practices under co-management and to facilitate scientific research.

#### **Habitat Protection Measures**

NMFS owns and administers land on St. Paul for the conservation of marine mammals. This land is often referred to as the rookery; however, the land actually includes both breeding (locally known as the rookery) and resting (hauling grounds or haulout) habitat occupied during the spring, summer, and autumn as well as an adjacent buffer area not typically occupied by breeding or resting marine mammals.

Regulatory closures (50 CFR 216.81) prohibit unauthorized trespass by the general public on laaquadan breeding and resting areas from June 1 until October 15 annually on St. Paul. The ACSPI will post and remove rookery signs and/or barricades on June 1 and October 15 annually, respectively. ACSPI will develop and distribute public service announcements annually in the community to notify subsistence hunters of the opening of Sea Lion Neck on September 1 for qawan subsistence hunters only. Walrus and Otter Islands were set aside as a bird reservation under Executive Order 1044. NMFS added a regulatory closure at 50 CFR 216.85 prohibiting unauthorized landing on Walrus and Otter Islands. This regulatory closures do not prohibit subsistence use activities of laaquadan, qawan, and isugûn as those activities are authorized under the FSA regulations at 50 CFR 216.71-74, MMPA regulations at 50 CFR 216.23, and section 10(e) of the ESA.

## **Local Regulations and Enforcement**

The ACSPI recognizes the Secretary of Commerce's authority to enforce the provisions of the MMPA, ESA, and FSA applicable to the subsistence use of laaquadan, qawan, and isuġin. The ACSPI will continue to provide related information to NMFS as requested and via regular co-management reporting avenues, and will conduct the following in cooperation with NMFS:

1. Issue and record registration permits or refer individuals to NOAA's Office of Law Enforcement for documentation of collected marine mammal hard parts, in accordance with current Federal regulations;
2. Issue and record permits for laaquadan viewing blinds, in accordance with current Federal regulations;
3. Local posting of laaquadan rookery signs upon opening and closing of the rookeries, in accordance with current Federal regulations;
4. Develop and implement effective local processes for informing the public regarding applicable Federal laws and regulations; and,
5. Review, recommend, and advise on revisions to Federal regulations governing subsistence use of laaquadan, qawan, and isuġin.

NMFS recognizes the existing Tribal authority to govern and regulate their members and members' conduct regarding the traditional uses of laaquadan, qawan, and isuġin and acknowledges Tribal authority to conduct the following:

1. Develop and implement Tribal ordinances governing the subsistence use of laaquadan, qawan, and isuġin;
2. Issue and record permits for observing the subsistence use of juvenile male laaquadan, in accordance with current Tribal ordinances;
3. Conduct laaquadan rookery disturbance monitoring;
4. Develop and implement a Tribal Enforcement Plan to cover violations of Tribal law by Tribal members; and,
5. Develop and implement effective local processes for informing the public regarding applicable Tribal ordinances.

## **Research**

The ACSPI will work with NMFS via the Council to coordinate research activities related to subsistence use prior to each upcoming hunt/harvest and research season. The Council may designate areas of research to monitor, reduce, or avoid conflicts between subsistence users, the general public, and researchers. Current high intensity research areas include Polovina Cliffs, Zapadni Reef, and Northeast Point. Research locations will be identified and communicated to the public via public service announcements on the radio, bulletin boards in public places, Facebook posts, and other relevant means. NMFS and ECO are collaborating on a research project to examine the response of breeding age female laaquadan to human activities at Northeast Point. All subsistence use activities will be closely monitored (i.e., date, time, location details) in these areas.

Whenever possible, all scientists affiliated with ACSPI or NMFS who plan to conduct marine mammal research on behalf of either Party on or around St. Paul (as defined in Section I of this agreement) that may impact subsistence activities will advise the Council in a timely manner and before research is initiated. The Council will review relevant information and if the research is determined to have an unmitigable adverse impacts on the availability of marine mammals for

subsistence users the Council may provide comments and recommendations accordingly to mitigate those impacts.

The subsistence use research program will be reviewed annually to prioritize projects and will be updated as necessary. The subsistence use research program will identify information and conservation needs, outline activities by each Party and any external researchers, identify future goals, and include topics and items deemed appropriate and necessary by the Council, such as:

1. Long-term data collection programs;
2. Sampling programs;
3. Population abundance and status;
4. Habitat use and seasonal movements;
5. Sources of natural and human-caused mortality; and,
6. Disentanglement programs.

### **Disentanglement**

The ACSPI may conduct entanglement research or disentanglement response when observed while the laaqudan are present on island or during subsistence activities. The ACSPI is authorized under Section 403 of the MMPA (16 U.S.C. § 1421b) to respond to entangled laaqudan under Marine Mammal Stranding Agreement No. SA-AKR-2019-04 (expiration date: December 31, 2021) with NMFS and under authorization of NMFS Permit No. 19436-02 (expiration date: September 30, 2021). The Council will ensure that entanglement research and response will be implemented and coordinated with other research and subsistence activities to avoid unmitigable adverse impacts or conflicts.

### **Biosampling**

ECO, NMFS, or other researchers may request biosamples from subsistence hunted and harvested laaqudan, qawan, and isuġin on an as needed basis. ECO has authority to collect biosamples under NMFS Permit No. 19436-02 through September 30, 2021. ECO staff will work directly with hunters and harvesters to coordinate any biosample collections. The Marine Mammal Laboratory has authority under NMFS Permit No. 14327 to collect and/ or receive biosamples. ECO will collect snouts including canine teeth and vibrissae from at least 50% of all non-pups harvested at each harvest. The teeth will be examined at the end of the harvest season to verify sex and estimate age class of harvested animals. All samples from the harvest will be retained and archived by ECO. ECO will sample retrieved laaqudan (and opportunistically struck and lost animals) for snouts including canine teeth and vibrissae. The teeth will be examined as soon as feasible, unless the hunters reported age estimate is older than 7 years old, or if most vibrissae are predominantly white, in which case the teeth will be examined immediately.

### **Other Topics**

#### **Permits and Photography**

The Council will work to coordinate access for the public to observe subsistence activities and proper etiquette.

#### **Trading and Tanning**

Persons taking laaqudan, qawan, and isuġin for subsistence purposes will be encouraged to trade legal marine mammal parts for food, arts, and crafts with other tribal members and Alaska Natives in other villages consistent with 50 CFR 216.23 and § 216.73. Tribal members taking laaqudan, qawan, and isuġin for subsistence purposes will also be encouraged to tan their own

pelts on island. Any tannery or person can apply to become a registered agent by submitting an application consistent with 50 CFR 216.23(c). The ACSPI may make information available for people on tanning, tannery contacts, and other Alaskan Natives willing to legally trade laaquadan, qawan, and isugûin parts for food, arts, and crafts.

**Council Review of the Co-Management Plan**

This co-management plan will be reviewed annually by the Council and updated as needed.

## DESCRIPTION OF MARINE MAMMAL SPECIES

### Laaqudan

Laaqudan, or northern fur seals (*Callorhinus ursinus*), return to St. Paul seasonally to rest, breed, give birth, and molt. They predictably land at traditional onshore locations known to Unangan hunters, who also have observed them swimming offshore in all months. Laaqudan have strong affinity or tenacity for their traditional landing sites. Unangan hunters have learned that laaqudan will land at a site in the presence of humans if they remain still and the wind direction obscures the scent of the hunter. About 400,000 laaqudan visit, rest and breed on St. Paul each year. Females live up to 27 years and are on shore for approximately 30-40 days (Gentry 1998). Females are approximately 3-5 times smaller than breeding males, which live up to 18 years. Adult males fast during the breeding season, although the length of fasting is highly variable (i.e., 1-87 days; Gentry 1998).

Laaqudan seasonally breed on six islands in the eastern North Pacific Ocean and Bering Sea in the United States: St. Paul including Sea Lion Rock, St. George and Bogoslof, Alaska; San Miguel and South Farallon, California. They also breed on the Commander Islands, Kuril Islands, and Robben Island in Russia. Females become reproductive at 5-6 years old, with highest reproductive success between the ages of 8-13 (York 1983). Laaqudaadan are born on the Pribilof Islands in late June-July annually and nurse intermittently for 110-120 days, or about 4 months prior to weaning (Petersen 1968; Gentry 1998). Laaqudaadan learn to swim and dive before weaning, (Baker and Donahue 2000) and leave the islands to spend two years at sea before returning to their breeding grounds.

Overall laaqudaadaâ production for the Pribilof Islands decreased approximately 3.7% from 2016 to 2018 (Towell et al. 2018). Since 1998 laaqudaadaâ production on St. Paul Island declined 57.7%, or at an annual rate of 4.04% (SE = 0.34), while laaqudaadaâ production on the Pribilof Islands (St. Paul and St. George Islands combined) declined 51.6%, or at an annual rate of 3.4% (SE = 0.36) (Towell et al. 2018). Laaqudaadaâ production on St. George shows no significant trend in production since 1998 but the last three estimates have all shown an increase in laaqudaadaâ production (Towell et al. 2018). The reasons for continued decreased number of births and survival remain poorly understood; factors under current investigation and debate include climate change (Francis et al. 1998; Hare and Mantua 2000); competition with commercial fisheries (Robson et al. 2004; Gudmunson et al. 2006); predation (Springer et al. 2003; DeMaster et al. 2006; Wade et al. 2007). The exploration of the factors that may influence laaqudaâ population dynamics are a high priority for resource managers at both the local and regional levels.

### Qawan

Qawan, or Steller sea lions (*Eumetopias jubatus*), are the largest eared seals hunted by Unangan. Qawan regularly haulout on the Pribilof Islands in all months of the year, and do not migrate into the North Pacific Ocean seasonally like laaqudan. Compared to laaqudan, qawan can be displaced from their breeding or hauling grounds easily. Qawan once bred on St. Paul Island at Northeast Point but were removed by government representatives to make room for laaqudan breeding nearby (Kenyon 1962). They have since been observed breeding in small numbers on Walrus Island. Unangan hunters regularly observe qawan swimming singly or in small groups around St. Paul Island and hunt from traditional locations where qawan come close to shore and the currents are likely to wash the carcass on land.



Qawan are resident to the Pribilof Islands year-round, but during the winter can occur in the hundreds on St. George Island, Walrus Island, Sea Lion Rock (Lestenkof et al. 2018). Branded qawan from breeding islands in the Okhotsk Sea, Bering Sea, and Gulf of Alaska are occasionally documented on the Pribilof Islands. The population is divided into the Western and the Eastern ‘distinct population segments’ (DPS) at 144° West longitude (Cape Suckling, Alaska). Qawan occurring on St. Paul Island are part of the Endangered Species Act (ESA) listed endangered DPS (NMFS 2008).

The qawan population in the Pribilof Islands has declined to extremely low levels and the sole remaining breeding rookery at Walrus Island is currently in danger of extinction. Within recorded history qawan were abundant in the Bering Sea and bred in large numbers on the Pribilof Islands. Elliott (1880) reported that approximately 10,000 to 12,000 animals were distributed at breeding rookeries on both St. Paul and St. George Islands in the 1870s. The breeding rookeries on St. Paul and St. George Islands were largely extirpated by 1916 due to a combination of hunting and culling (Loughlin et al. 1984). Over the last 50 years, pup production on Walrus Island has declined by over 90%, from 2,866 in 1960 to only 28 pups born in 2013. Similar to the decline of the Western DPS Alaskan population as a whole, the cause of the qawan decline in the Pribilof Islands remains unexplained. The highest ranked threats to the recovery of the western DPS are: environmental variability, competition with fisheries, killer whale predation, and toxic substances (NMFS 2008).

### **Isuġin**

Isuġin, or harbor seals (*Phoca vitulina*), are members of the Phocidae, or true seal family. They are also referred to as hair seals in the Pribilof Islands. Isuġin are one of the most common marine mammals along the U.S. west and east coasts.

Isuġin generally are non-migratory, with local movements associated with such factors as tides, weather, season, food availability, and reproduction (Scheffer and Slipp 1944; Fisher 1952; Bigg 1969, 1981; Hastings et al. 2004). The Pribilof Islands stock is one of 12 stocks in Alaska. Counts of isuġin in the Pribilof Islands ranged from 250 to 1,224 in the 1970s and between 119 and 232 in the 1980s and 1990s. Prior to July 2010, the most recent count was in 1995 when a total of 202 seals were counted. In July 2010, approximately 185 adults and 27 pups were observed on Otter Island plus approximately 20 on all the other islands combined for a total of 232 isuġin. In 2018, the ECO and NMFS estimated the Pribilof Islands stock to be 229.

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**APPENDIX A: Maps of Subsistence Hunting and Harvest Locations on St. Paul Island, Alaska**



**APPENDIX B: Marine Mammal Hunting Monitoring Form from Tanali̇ Amgînȧ ~ Sentinel Program**

	<b>Tanali̇ Amgînȧ – Marine Mammal Hunting Monitoring Form</b>					
<b>REPORTING DETAILS</b>						
<b>Observer(s) Initials</b>		<b>Reported By</b>		<b>Date/ Time Reported</b>		
<b>HARVEST DETAILS</b>						
<b>Harvest ID</b>	<b>Hunter ID</b>	<b>Hunting Date/ Time</b>	<b>Hunting Region</b>	<b>Hunting Location/ Vantage Point</b>		
<b>Retrieved</b>	<b>Retrieval Date/ Time</b>	<b>Retrieval Location</b>	<b>Struck/ Lost</b>	<b>Struck/ Lost Date/ Time</b>	<b>Injured/ Wounded</b>	
<input type="checkbox"/>			<input type="checkbox"/>		<input type="checkbox"/>	
<b>Animal Location</b>	<b>Sex</b>	<b>Age Class</b>	<b>How many animals on land, in water and how many disturbed?</b>	<b>Hunter Comments</b>		
<input type="checkbox"/> Water <input type="checkbox"/> Land						
<b>SAMPLING DETAILS</b>						
<b>Samples Collected</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Sample Date/ Time</b>		<b>Sample No.</b>		
<b>TAG INFORMATION</b>						
<b>Tagged or Branded</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No	<b>Tag or Brand No.</b>				
<b>BERING WATCH DATA ENTRY DETAILS</b>						
<b>Entered By</b>		<b>Date/ Time Entered</b>		<b>BeringWatch ID</b>		
<b>NOTES</b>						

## **APPENDIX C: Respectful Laaqudan Harvest Practices**

Laaqudan are harvested for the subsistence needs of members of the Aleut Community of St. Paul Island. The process is carried out by tribal members and supported by the Tribal Government of St. Paul Island. The laaqudaâ harvest crew, as members of the community, must respect the process as providing for their community and conduct themselves accordingly:

1. No “special favors”, nor taking of laaqudan just for parts and not the whole animal.
2. Community members can barter and trade amongst themselves. Harvest crew must conduct their barter and trading of their "requested" laaqudan parts outside the harvest activity and off the harvest field in order to avoid conflict.
3. For safety and in support of cultural respect and responsibility-no alcohol or drugs, nor anyone under the influence allowed in the harvest activities.
4. For the continued health of our people and in support of sanitary practice, no smoking or snuffing, ashes, butts, or spit on the harvest field where food is in the beginning stages of being prepared.

In turn, community members must respect the fact that the harvest crew is performing harvest duties on behalf of the whole community and that all animals harvested were requested by someone in the community. Community members must conduct themselves accordingly:

1. Sealers are not to take requests outside of a whole animal. (e.g., someone asking for specific parts such as lastax, livers, or hearts, etc.). Community members are encouraged to barter, trade and/or exchange parts amongst each other outside of the immediate activity on the harvest field. Harvest crew, as community members can barter and trade with the seal they requested, but only away from the harvest activity so as to avoid conflict.
2. Sealers are only required to round up (udugunu-lix), cut pods, stun (anaâgi-lix), and stick or stab the heart (chuhni-lix), and provide further services (e.g., cutting and delivery) for Elders. Community members are encouraged to perform these additional activities, including but not limited to cutting and delivering, on their own behalf so as to participate in cultural and subsistence continuity through the knowledge of meat handling and preparation.
3. All precautions must be taken to avoid wasting and/or throwing away edible laaqudan. Any person found wasting and/or throwing away edible whole laaqudaâ or laaqudaâ parts may lose their privilege of requesting and taking laaqudaâ from the subsistence laaqudaâ harvest.

## **APPENDIX D: Laaquadan Harvest Responsibilities**

### **Harvest Foreman**

The harvest foreman will be designated at an annual sealers meeting, occurring prior to the start of the harvest season. The harvest foreman will be responsible for supervising all aspects of the subsistence harvest and working with ECO to ensure that management measures, respectful laaquadan harvest practices (Appendix C), and laaquadan harvest responsibilities in this plan are followed.

### **Elder Observer**

The Elder observer will be designated at an annual sealers meeting, occurring prior to the start of the harvest season. The Elder observer will assist the harvest foreman whenever possible. The Elder observer will be responsible for ensuring that all participants in the harvest abide by the *Respectful Laaquadan Harvest Practices* section of this plan.

### **Seal Harvesters**

Responsibilities of seal harvesters will be designated at an annual sealers meeting, occurring prior to the start of the harvest season. Seal harvesters are individuals that round up (udugunu-lix), watch (chasavya-lix), pod cut, stun (anaġi-lix), and stick or stab the heart (chuhni-lix) of the laaquadan.

### **Humane Observer**

ECO monitors the laaquadan and harvests for, but not limited to, the following: environmental conditions, methods of gathering, herding and harvesting.

### **Requesting Laaquadaġ**

Any tribal member or Alaska Native in the community that wishes to take laaquadaġ on a particular harvest day shall be strongly encouraged to cut their own laaquadaġ. Requests must be placed with the Tribal Government of St. Paul by calling 546-3200 by 5:00 p.m. the day prior to the next harvest. Requests for laaquadaġ will be limited to a maximum of 5 laaquadan per individual per harvest.

### **Harvest Time**

The harvest will begin at 8:00 a.m. and should aim to begin no later than 9:00 a.m. for juvenile (2+ years old) laaquadan and begin at 1:00 p.m. and no later than 2:00 p.m. for laaquadaadan and yearling laaquadan. All harvest workers are required to be punctual with respect to one another, Tribal and community members, and to the laaquadan. The harvest crew and all people interested going to and/or participating in the harvest will meet at the Tribal Government Office at the times mentioned above.

### **Harvest Methods**

#### **Round Up and Drive**

With respect to the consumers and the laaquadan, and in order to prevent heat strokes, any person participating in the round up and drive shall abide by the following:

1. The round up will take place at least 30 minutes before the harvest begins.
2. Drive the laaquadan slowly to the killing field.

3. Do not unnecessarily harass the laaquadan during the drive.
4. During the roundup and drive all persons must stay away from the rookery to avoid disturbing female laaquadan with laaquadaan and the other laaquadan as well.
5. Weed out larger males. Take time to isolate selected animals to harvest.
6. Give the laaquadan frequent rests during the drive.

### **Pod Holding**

With respect to the consumers and the laaquadan, and in order to prevent heat strokes, any person participating in the holding of the pod of seals shall abide by the following:

1. Keep the held pod loose.
2. Do not unnecessarily harass the laaquadan during the holding.

### **Pod Cutting and Stunning**

With respect to the consumers and the laaquadan, and in order to prevent heat strokes, any person participating in the holding of the pod of laaquadan shall abide by the following:

1. Drive small pods to the stunners according to number of stunners for safety and efficiency purposes; one laaquada $\hat{x}$  per stunner.
2. Stunners shall hit the laaquada $\hat{x}$  on the head with one blow when possible and shall avoid at all cost hitting a laaquada $\hat{x}$  on any other part of the body in order to avoid bruising and therefore inedible meat.
3. If environmental temperatures are  $\geq 45^{\circ}\text{F}$ , give the laaquadan frequent rests during pod cuttings.

### **Butchering and Elder Delivery**

Any person requesting laaquada $\hat{x}$  shall be strongly encouraged to butcher the laaquada $\hat{x}$  they ordered. If the person that has requested laaquada $\hat{x}$  is not present at the harvest their request will not be filled unless another person volunteers to butcher and deliver their laaquada $\hat{x}$ . Only requests from Elders will be filled and delivered by the harvest workers. Upon completion of the butchering of a laaquada $\hat{x}$ , the laaquada $\hat{x}$  shall be allowed to cool off. Once the butchered laaquada $\hat{x}$  is cool enough the harvest workers shall bag all butchered parts for those present at the harvest or for Elder delivery.

### **Disposal**

The harvest foreman will get approval from the appropriate representative of Tanadgusi $\hat{x}$  Corporation for the designated site to dispose of inedible parts. This site and approval will be disclosed to the Tribal Government of St. Paul. A container will be available for inedible parts for proper disposal for those who wish to butcher their laaquada $\hat{x}$  at the harvest grounds. No other items shall be placed in the container. Designated laaquada $\hat{x}$  harvesters will dispose of the inedible laaquada $\hat{x}$  parts at the designated carcass dump or at the shoreline at laaquadaada $\hat{x}$ /yearling harvest locations. Seal harvesters disposing of inedible parts shall ensure that no garbage that would otherwise be disposed of in the landfill is improperly disposed of at the carcass dump or in the water for laaquadaada $\hat{x}$ /yearling harvests. The laaquada $\hat{x}$  harvesters shall cover, with available scoria, any inedible parts on a regular basis to prevent attracting foxes, flies, and other animals at the designated carcass dump. For those who wish to butcher their laaquada $\hat{x}$  at home, inedible parts shall be disposed of properly (no garbage) at a designated location in or near town (i.e., at the shoreline in the water).



**Equipment**

All harvest equipment (i.e. clubs, knives, etc.) is the property of the Tribal Government of St. Paul. All equipment shall be signed out for and cleaned and returned to ECO by a selected representative upon completion of the daily harvest task. All harvest workers or community members using Tribal Government equipment will abide by current equipment use policies. Participating community members' use of own equipment is allowable.

## **APPENDIX E: Responsible Qawan Hunting Techniques**

The following techniques were compiled by qawan hunters on St. Paul Island and the ECO. These techniques represent the best practices employed by St. Paul Island subsistence qawan hunters and are shared with youth and young adults that are new to qawan hunting.

### **Before a Hunt**

Always dress appropriately—a good rule of thumb is to overdress for the weather. Hunting locations are on the shoreline where it is windy, you may get wet, you are exposed to all kinds of weather for an extended amount of time. The last thing you want to do is not be under dressed or dressed inappropriately. Gloves, goggles, balaclava, weather proof boots, warm socks, goose down layers, thermals, long underwear are all excellent choices for warm clothing layers. Check the weather: the condition of the surf and winds are critical. Northerly or south winds are desirable; west winds are not desirable. Surf over 10 feet high is bad, as qawan are going to go around the surf and remain too far offshore (> 100 yards) for a safe and ethical shot. Know which way winds are going to predict where the animal will come to shore or drift in the surf after you have taken it. Knowing where the animal will come on shore or drift is important to minimizing the risk of a struck and lost animal. Always chose a firearm that is an appropriate caliber, has been cleaned and properly maintained, is outfitted with a scope and sighted in, and that you are comfortable operating.

### **During a Hunt**

Head out as early in the morning as possible, within an hour of daybreak. Qawan are more active during this time. There are specific haulout locations that are known—scope these and look for qawan on shore. Check these locations first to see if you can get a qawaâ on shore and remember that you may have to move through rookeries with seals present. Exercise extreme caution and discretion when moving through rookeries with seals present to minimize or eliminate disturbance.

If a shot of a qawaâ is not possible on land, and you have decided to take a qawaâ from in the water, pick location at one of the hunting locations to wait for qawaâ to swim by. Watch qawan “riding” (swimming on waves in a manner that looks like surfing waves) in the surf. While scouting qawan in the water, looking for dark-bodied individuals with smaller heads (these are more likely to be animals age 2-3 years, after which the coat color lightens up significantly), mainly looking at size—not trying to sex the animal in the water. About 90% of qawan riding by are too large to take. Once the right sized individual comes by (small head, small body, dark coloration), begin making calls and mimicking movements to pretend to be another qawaâ to encourage the animal in the water to come closer. The animal’s curiosity will bring it closer to shore. You want the animal to come within 50-80 yards of the shoreline to be in the “kill zone”. If you are a skilled hunter, you may shoot up to 100 yards into the water to get a fairly accurate shot.

To shoot an animal: time the movements of the rifle to movements of the qawaâ in the water. Take aim at the head and wait for a clean, clear shot. Once shot, if it’s dead, it will stop moving and bleed into the water. If the animal is wounded, it will thrash around and bleed and look like it is in distress. A large percentage of qawan sink under the water after being shot and you can’t see it under the water. It may float anywhere from a minute to 10-15 minutes, and then sink to the bottom or drift under the water in the currents. The animal may sink and remain unobtainable under the water for 24-72 hours. The water temperature will keep the animal fresh and edible for

a few days. It is critical that you closely and frequently monitor the winds, currents, and shorelines until you can retrieve a qawaâ that you have shot.

DO NOT shoot another animal once you have shot a qawaâ and have retrieved it. It is considered wasteful to do this.

DO NOT shoot into a pod of qawan in the water; If you can't isolate one animal out of the pod, do not shoot.

DO NOT shoot unless you have a clear head shot.

Patience and consistency are key.

### **After a Hunt**

Many hunters have a qayuâ (pronounced 'kî-yôô) that can assist in getting the qawaâ to shore after it is close enough to be retrieved. A qayuâ is a tool that is homemade- a piece of wood that has hooks and about 80-100 feet of rope on one end. The hunter holds on to the rope and throws the wooden hooked end towards the dead qawaâ. Once the animal is hooked, it usually takes more than one person to haul it to shore. The rope can be tied to a 4-wheeler and pulled up the beach. More typically, two people pull the animal up the beach out of the water. After the animal is retrieved, the hunter contacts Island Sentinels to provide the relevant information about the hunt (Appendix B).

### **Subsistence Qawaâ Hunting Guide**

Building from the information in this management plan, and other hunting resources across the state (e.g., A student guide to seal hunting and safety, Yupik Region"; Alaska Department of Fish and Game Hunter Instruction and Training handbook), ACSPI will develop a hunting and safety guide that specifically addresses subsistence hunting of qawan in the Pribilof Islands.

## **APPENDIX F: Plan Amendments**

**Version 1:** Dated May 20, 2020 - <https://www.fisheries.noaa.gov/resource/document/co-management-plan-subsistence-use-marine-mammals-st-paul-island-alaska>

**Version 2:** Dated August 14, 2020 - <https://www.fisheries.noaa.gov/resource/document/co-management-plan-subsistence-use-marine-mammals-st-paul-island-alaska>