**2019 Ice Seal Committee and National Marine Fisheries Service**
**ICE SEAL CO-MANAGEMENT ACTION PLAN**

Information and activities needed to promote the conservation of Alaska's ice seal populations
and
the co-management of subsistence uses of ice seals in Alaska

**Ice Seal Committee**
**and**
**National Marine Fisheries Service**

May 2019 through May 2020[1]

## INTRODUCTION

In October 2006, a Co-management Agreement (Agreement) was signed between the Ice Seal Committee (ISC) and the National Marine Fisheries Service (NMFS). The ISC is a tribally authorized Alaska Native organization that represents ice seal subsistence hunters within the following Regional government and non-profit corporations:

- North Slope Borough www.north-slope.org
- Maniilaq Association www.maniilaq.org
- Kawerak, Inc. https://kawerak.org
- Association of Village Council Presidents www.avcp.org
- Bristol Bay Native Association, Inc. www.bbna.com

The Agreement covers co-management of bearded seals (*Erignathus barbatus*), ribbon seals (*Histriophoca fasciata*), ringed seals (*Pusa hispida*), and spotted seals (*Phoca largha*)—commonly referred to as "ice seals"—throughout their range in Alaska.

The purposes of the Co-management Agreement are:

1. To promote the sustained health of Alaskan ice seals in order to protect the culture and way of life of Alaska Natives who rely on the harvest of ice seals for subsistence uses;

2. To advance co-management, research, and the use of traditional knowledge of Alaska Natives; and

3. To provide information to subsistence hunters and the public at large.

[1] Or 12 months from the date of finalization of the Action Plan, whichever is later.

The Co-management Agreement's Operational Structure includes an Ice Seal Co-management Committee, which is composed of five Representatives from the ISC and three representatives from NMFS. Decisions by the Ice Seal Co-management Committee are through consensus, based on mutual respect.

The Agreement calls for the Co-management Committee to prepare and update a Management Plan (or plans) describing relevant information, specifying mutually agreed upon actions to be implemented by the ISC and NMFS, and setting forth recommendations for additional activities that would promote Alaskan ice seal conservation. The ISC's most recent Management Plan was adopted on January 20, 2012.

During the June 7, 2017 Ice Seal Co-management Committee meeting, it was agreed that an Annual Co-management Action Plan would be developed (i.e., a list of shorter-term objectives that the ISC and NMFS intend to accomplish during the year). The Annual Co-management Action Plan will support the longer-term goals discussed in the Management Plan, and will be reviewed and updated at the annual Co-management Committee meetings.

## PURPOSE OF THE ACTION PLAN

This Action Plan will describe the tasks each party intends to accomplish during the upcoming year in support of our co-management partnership. A key to a successful partnership is to incorporate the spirit and intent of co-management by building trust and by establishing close cooperation, shared responsibility, and communication between the ISC and NMFS. Decisions are shared and made through consensus, based on mutual respect and understanding of each other's cultural perspective. All representatives are responsible for proposing updates to the new annual Action Plan for discussion and review by the Co-management Committee.

This Action Plan will specify joint and separate management and research actions to be taken by the ISC and NMFS related to the conservation and management of subsistence uses of ice seals. The Action Plan will be evaluated and updated on an annual basis and could include actions in the following categories: 1) population monitoring, 2) harvest management, 3) education and outreach, 4) research recommendations, and 5) other.

For each subject area the Action Plan presents 1) issue(s) of concern; 2) input received from the participants; 3) actions that will be taken or are proposed to satisfy the issue; and 4) the lead partner responsible for the action. Actions are to be updated and revised annually, leading to summaries for the prior years. This will give both parties a mechanism to evaluate the performance and merit of all agreed upon actions. The period for this Action Plan is the twelve months succeeding the ISC annual meeting (May 2019 to May 2020) **or the finalization of the Action Plan, whichever is later.**

To achieve its conservation goals, it is fundamentally important that the Co-management Committee have access to accurate information on ice seal populations throughout their habitats. There are several sources for such information, including scientific information and local and traditional knowledge. ← sources? Can we put them below with the other sources?

Current information about bearded seal (*Erignathus barbatus)* is found at:
https://repository.library.noaa.gov/view/noaa/18114
https://www.afsc.noaa.gov/nmml/species/species_bearded.php
https://www.fisheries.noaa.gov/species/bearded-seal

Current information about ribbon seal (*Histriophoca fasciata*) is found at:
https://repository.library.noaa.gov/view/noaa/18114
http://www.nmfs.noaa.gov/pr/species/mammals/seals/ribbon-seal.htm
https://www.fisheries.noaa.gov/species/ribbon-seal

Current information about ringed seal (*Pusa hispida*), is found at:
https://repository.library.noaa.gov/view/noaa/18114
http://www.nmfs.noaa.gov/pr/species/mammals/seals/ringed-seal.html
https://www.fisheries.noaa.gov/species/ringed-seal

Current information about spotted seal (*Phoca largha*) is found at:
https://repository.library.noaa.gov/view/noaa/18114
http://www.nmfs.noaa.gov/pr/species/mammals/seals/spotted-seal.html
https://www.fisheries.noaa.gov/species/spotted-seal

## 1. POPULATION MONITORING

Population monitoring is necessary for ice seal management. Population monitoring is important to track demographics, habitat use, movement patterns, and other population effects. Effective population monitoring involves evaluating the best available information on the following topics: 1) population abundance, by sub-areas if possible, including aspects such as abundance trends, age structure, vital rates, and indices of physical condition; 2) habitat use and seasonal movements, including information on preferred haulout areas, foraging areas, and prey composition; and 3) sources of mortality, including the nature, extent, timing, and location of such mortality.

### A. Estimate abundance and trends

**NEED:** Determine the abundance (size) and trends of the four ice seal populations in Alaska. Abundance information is fundamentally important to conserve and co-manage subsistence use of ice seals in Alaska.

ISC input: The ISC needs this information to keep its membership informed.

NMFS input: NMFS is mandated by law to provide abundance estimates in stock assessment reports. Early results from the NMFS Marine Mammal Lab (MML) surveys will be shared with the ISC and posted on the MML website:
www.afsc.noaa.gov/NMML/ ←is this the right link?

**Action 1:** In 2012 and 2013, MML conducted aerial surveys of ice seals in the Bering Sea. Results from these surveys are found at https://access.afsc.noaa.gov/pubs/posters/pdfs/pRichmond01_ebs-ice-seal-surveys.pdf. In 2016, MML conducted aerial surveys of ice seals in the Chukchi Sea. Results from these surveys, which will also incorporate the abundance estimates from Russia, are anticipated in 2020. We should insert language about the upcoming 2020 aerial survey in the Beaufort Sea. **Lead: MML.**

**B. Use Alaska Native local and Indigenous Knowledge in population monitoring.**

**NEED:** Alaska Native hunters have frequent contact with bearded, ribbon, ringed, and spotted seals in their natural environment. Hunters have to adjust. Ice seals use different places, likely following prey and necessary haulout areas. Shifting migrations, die-offs of other species (e.g., birds, fish), age class die offs (e.g., ice seal pups), and warming Arctic waters indicate changes to the Arctic and subarctic habitats preferred by ice seals.

These observations and Indigenous Knowledge (IK) insights can help with population monitoring. Scientific population monitoring, by definition, involves a time series of counts, and the comparability of these counts requires a standardized effort. Monitoring by local community members and hunters may be based on current observations, frequency of encounters, recollection, and use of the animals. Quantifying the observations of ice seals by Native hunters, as well as Sentinels, would substantially contribute to population monitoring. This information could help develop analyses to compare and/or combine this observational information to other data.

*ISC input:* Many factors influence ice seal populations and subsistence use, therefore, more information (recent and year round) is valuable to understanding patterns and trends in ice seal abundance and movement. The ISC will work with the NMFS to develop protocols for recording this Local and Indigenous Knowledge.

During the ISC Co-management Committee meetings, the ISC will include information on weather and ice conditions, how they affect seal behavior, and therefore, their affect(s) on hunting methods and success.

*NMFS input:* NMFS conducts abundance surveys for ice seals. NMFS will incorporate subsistence hunters' impressions about ice seal trends in abundance and changes in distribution. This information is very useful as a proxy or supplement to quantitative, scientific surveys.

**Action 1:** ISC representatives annually report ice seal and other marine mammal observations at the ISC Committee meetings to be incorporated into the minutes. The focus on this shared information should be on ISC representatives reporting observations that highlight unusual occurrences or that indicate the status (including changes) of the marine environment. Expanding efforts by the ISC to collect marine mammal observations (IK) from additional hunter households would facilitate a better understanding of the status of ice seals and their environment. **Lead: ISC.**

**Action 2:** In 2019, NMFS will work with the ISC Executive Manager to develop a draft format that could be used by ISC members to capture ice seal opportunistic observations (questionnaire). The ISC Co-management Committee will review the draft questionnaire with the goal of finalizing it at the 2020 Co-management Committee meeting. ISC may revise this protocol, as needed, for use in subsequent years.

Considerations:

- Regions are distinctively different, so questionnaires may be different for each region or for nearby villages. Each village has its own unique experience.
- Coordinate with other entities (Alaska Department of Fish and Game, Maniilaq, North Slope Borough) to see what pertinent information is already available for incorporating into a usable format for the ISC.
- Document changes in animal health (e.g., hair loss, bad odors, sickness, and/or tumors).
- It may take several years for the collected ice seal harvest information to be of value to the ISC and to NMFS.

Once the questionnaires are completed, this information may be collected by the ISC, NMFS, and/or other partner organizations (e.g., ADF&G). The ISC and NMFS will work together to identify the most effective methods to gather information from hunters on ice seal trends and availability in their regions. **Lead: ISC, with NMFS input (if needed).**

## 2. HARVEST MANAGEMENT

To ensure sustainable subsistence uses, the ISC and NMFS need information regarding the number of ice seals harvested, approximate number struck and lost, demographic composition (i.e., age and sex), and physical condition of the animals taken in the harvest.

Effective harvest management may also include encouraging the development of local and/or regional harvest management plans that reflect local harvest practices to ensure that ice seals are used for subsistence in a sustainable and non-wasteful manner.

### A. Subsistence harvest monitoring

**NEED:** In addition to supporting sustainable subsistence uses to meet the nutritional and cultural needs of the ISC communities, accurate harvest counts, including struck and lost estimates, are relevant human caused mortality sources that will be included in the annual NMFS stock assessment reports.

*ISC input:* Harvest monitoring is most successful when implemented at the local level.

*NMFS input:* Harvest monitoring through periodic retrospective surveys in villages represented by the ISC is valuable. This information would help NMFS ensure that subsistence harvests do not have population-level consequences.

**Action 1:** The ISC will continue to work with local villages and hunters to develop a local real-time or other harvest-monitoring program. The ISC will continue to compile available information on the villages' (or regions') ice seal harvest numbers by species, including the number of seals struck and lost. The ISC will share this information with NMFS annually. **Lead: ISC.**

**Action 2:** NMFS will provide input to assist the ISC with developing regional ice seal harvest management plans in the coming years, as needed. **Lead: ISC.**

Considerations:

- Ice seal hunting has seasons, which might be different for each region. Any harvest monitoring effort should be timed with the hunting season.
- The ISC has five regions. An affordable and reasonable option would be to conduct a harvest monitoring effort on a rotational basis for each region so that each region will be surveyed every six years.
- ISC harvest monitoring could operate in a similar manner to the ADF&G salmon harvest monitoring program. An envelope sent to the hunters will request information on harvested seals. The hunter completes the questionnaire on the postcard and returns it to the ISC.

## 3. STRANDINGS

### A. Estimate stranding events for ice seals

**NEED:** NMFS coordinates the Alaska Marine Mammal Stranding Network and has limited participation in the ISC regions. Volunteers participate in the marine mammal stranding network by reporting live and dead marine mammal stranding observations and, when practical, assisting with responses. Stranding responses may include data collection, handling, photography, and/or tissue sampling. Any marine mammals entangled in debris are considered to be stranded, and the documentation of such events is valuable to the management and conservation of ice seals.

*ISC input:* As needed.

*NMFS input:* Will continue to provide support to ISC communities and others to report and respond to ice seal strandings and to possibly collect samples.

**Action 1:** NMFS will continue to provide information from the stranding program to the ISC. NMFS will investigate (i.e., necropsy, analyses) ice seal health. NMFS will also provide equipment and funds (to the extent available) for ISC members to send seals of concern to veterinarians for examination and analysis (i.e., necropsies, labs. etc.). NMFS

will provide marine mammal stranding information to the ISC, Alaska Native Health Consortium, and pertinent state agencies. **Lead: NMFS.**

**Action 2:** The ISC will disseminate the stranding hotline number to members and will take steps to encourage ISC members and other local residents to report the stranding of marine mammals to the NMFS hotline (877-925-7773). **Lead: ISC.**

**Action 3:** Hunters from ISC communities will prioritize reporting seals that appear to be sick to the Alaska Marine Mammal Stranding Network, and will coordinate with NMFS to ensure that those seals are examined and/or necropsied by veterinarians. **Lead: ISC working with NMFS.**

**Action 4:** The ISC will work with the experts to inform their hunters about food safety, as pertains to ice seals. Food safety concerns can be related to seals with hair loss, discolorations, and during harmful algal blooms. **Lead: ISC, working with NMFS.**

## 4. EDUCATION and OUTREACH

**NEED:** The ISC and NMFS agreed to develop ways to educate and promote understanding about ice seal concerns and issues among users, resource managers, and other groups, particularly as related to the Endangered Species Act (ESA).

*ISC input:* The ISC will share information on ice seals, ESA, subsistence foods, Native handicrafts, the ISC and Co-management Committee, and other pertinent information with their communities, hunters, and users.

*NMFS input:* NMFS will provide support to the ISC Executive Committee, regional representatives, and Executive Manager for communication, education, and outreach on ice seals.

**Action 1:** NMFS and the ISC (Executive Manager and selected Representatives) will develop a brochure, pamphlet, or flier on the Endangered Species Act and the subsistence use of ice seals. **Lead: NMFS, with input from ISC.**

**Action 2:** The ISC Regional Representatives and NMFS experts will continue to participate on local radio shows to talk about ice seals; covering topics such as: abundance, harvests, listing, petitions to delist, research, etc. These public broadcasts will occur seasonally (likely early spring) to reach ice seal hunters. **Lead: ISC and NMFS (ISC representatives will take the lead on scheduling).**