

## **2021 Ice Seal Committee and National Marine Fisheries Service ICE SEAL CO-MANAGEMENT ACTION PLAN**

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

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

January 2021 to January 2022

### **INTRODUCTION**

In October 2006, a Co-management Agreement (Agreement) was signed between the Ice Seal Committee (ISC) and the National Marine Fisheries Service (NMFS). ISC is a tribally authorized Alaska Native organization that represents ice seal subsistence hunters within the following Regional government and non-profit corporations: 1) North Slope Borough, 2) Maniilaq Association, 3) Kawerak, Inc., 4) Association of Village Council Presidents, and 5) Bristol Bay Native Association, Inc. The Agreement covers co-management of the four ice seal species; referred to as the bearded seal (*Erignathus barbatus*), ribbon seal (*Histriophoca fasciata*), ringed seal (*Pusa hispida*), and spotted seal (*Phoca largha*) throughout their range in Alaska. The purposes of that 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.

The Agreement's Operational Structure includes an Ice Seal Co-management Committee that 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 2012 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 2021 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, and 4) research recommendations.

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 (February 2021 to February 2022).

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.

Current information about bearded seal s found at:

<https://repository.library.noaa.gov/view/noaa/18114>  
[https://www.afsc.noaa.gov/nmml/species/species\\_bearded.php](https://www.afsc.noaa.gov/nmml/species/species_bearded.php)  
<https://www.fisheries.noaa.gov/species/bearded-seal>

Current information about ribbon seal 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 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 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>

Current information about all four ice seals is found at:

<https://www.iceseals.org/read-more-about>

## **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 haul-out areas, foraging areas, and prey composition; and 3) sources of mortality, including the extent, location, nature, and timing, of such mortality.

### **A. Estimate abundance and trends**

#### **NEED**

Determine the abundance (size) and trends of the four ice seal populations.

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 better understand ice seal population status.

#### **NMFS input**

NMFS is mandated by law to provide abundance estimates in stock assessment reports. Results from the NMFS Marine Mammal Lab (MML) surveys will be shared with the ISC and posted on the new ISC and MML websites:

<https://www.iceseals.org/read-more-about>

<https://www.afsc.noaa.gov/NMML/>

#### **ACTION – 1            (Lead: MML)**

In 2021 MML will conduct surveys, in collaboration with US Fish and Wildlife Service, on ice seals and polar bears. They will survey the sea ice covered portions of the Beaufort Sea during mid-April to mid-June.

## B. Use Alaska Native local ecological knowledge in population monitoring.

### NEED

Alaska Native hunters have frequent contact with bearded, ribbon, ringed, and spotted seals in their natural environment. These observations and traditional knowledge 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 seals. 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 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 has a questionnaire on their new website (<https://www.iceseals.org/read-more-about>) that allows the ISC, ice seal hunters, community members, researchers, and others to record observations that will be added to a database.

During the ISC Co-management Committee meetings, the ISC representatives will include information on ice conditions and weather, and how that affected seal behavior and therefore, hunting methods and success. Any new information would be added to the ISC website.

Hunters have to adjust to change. Ice seals can use different habitats, likely following prey and necessary haul-out areas. Shifting migrations, die-offs of other species (ex., birds, fish), age class die offs (ex., ice seal pups), harmful algal blooms, and warming Arctic waters, indicate changes to the Arctic and subarctic habitats preferred by ice seals.

### NMFS input

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

### ACTION – 1            *(Lead: ISC, with NMFS input as needed)*

In 2021, NMFS will work with the ISC Executive Manager and the North Slope Borough, who currently have a successful observational database, to develop a draft format for the questionnaire 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 this draft at the 2022 Co-management Committee meeting.

**Reminders:**

- 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 Association, North Slope Borough) to see what pertinent information is available to incorporate into a usable format for the ISC.
- Document changes in animal health (bad odors, hairless, mortalities, sick, and tumors).
- It might take several years for the collected ice seal harvest information to be of value to the ISC and NMFS.

Once the questionnaires are completed on the ISC website, the ISC and MML will work together to summarize the information from hunters on ice seal trends and availability in their regions.

**ACTION – 2                    (*Lead: ISC*)**

ISC representatives will complete the questionnaires posted on the ISC website. Ice seal hunters, community members, researchers, and other interested parties will also complete the questionnaire with ice seal and ice seal habitat observations. This information will be annually summarized and reported to the ISC and incorporated into the minutes. The focus on this shared information should be on ISC representatives reporting observations that highlight unusual occurrences or that indicate change(s) in the marine environment.

The collection of marine mammal observations from ISC members will expand to other hunter households. The ISC could increase their outreach through the ISC representatives collecting additional information from other hunters and their government and non-profit corporations.

## **2. HARVEST MANAGEMENT**

To ensure sustainable subsistence uses, the ISC and NMFS need information regarding the number of ice seals harvested, number of ice seals struck and lost, age and sex composition, and condition of the seals 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 needs of the ISC communities, accurate harvest counts, including struck and lost estimates, are relevant human caused mortality sources to 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 ISC is valuable. This information would help NMFS ensure that subsistence harvests do not have population-level consequences.

#### **ACTION - 1            *(Lead: ISC)***

ISC will continue to work with local hunters and villages to develop a local real-time or other harvest-monitoring program. The ISC will create a budget for a harvest-monitoring proposal to submit to NMFS for 2021 funding.

#### **ACTION - 2            *(Lead: ISC, with NMFS input if needed)***

NMFS will provide input, as requested, to assist the ISC with developing ice seal harvest-monitoring plans.

### **3. ICE SEAL STRANDINGS and UNUSUAL MORTALITIES**

#### **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 response may include data collection, handling, photographing, and/or tissue sampling. Marine mammal(s) entangled in debris is a ‘stranding event’. Documenting and reporting of stranded ice seals is valuable to their management and the conservation.

##### **ISC input**

ISC hunters and representatives will report live and dead stranded animals to NMFS or to the local Stranding Agreement holders: Dr. Raphaela Stimmelmayr (NSB) and Ms. Gay Sheffield (NOAA Sea Grant, Marine Advisory Agent).

##### **NMFS input**

Will continue to provide information and support to the ISC communities on marine mammal strandings. Will respond to all stranding reports. Will work with local stranding network members and volunteers to respond to ice seal strandings and collect samples.

##### **ACTION – 1            (Lead: NMFS)**

NMFS will investigate (data collection, necropsy, analyses) the health of these stranded ice seals. NMFS will provide equipment and funds (to the extent available) for ISC representatives and hunters to send seal carcasses to veterinarians for examination and analysis (necropsies, sampling, labs. etc.). NMFS will continue to provide information from the stranding program to the ISC, Alaska Native Tribal Health Consortium, and pertinent state agencies.

##### **ACTION – 2            (Lead: ISC, working with NMFS)**

The ISC will disseminate the stranding hotline number to ice seals hunters and community members. The ICE will take steps to encourage and support ISC representatives and community members to document and report marine mammal strandings to the NMFS hotline (877-925-7773).

##### **ACTION – 3            (Lead: ISC, working with NMFS)**

ISC hunters will prioritize reporting seals that appear to be sick to the Alaska Marine Mammal Stranding Network. The ISC hunters will coordinate with NMFS to have those seals examined and/or necropsied by veterinarians

**ACTION – 4                   *(Lead: ISC, working with NMFS)***

ISC and NMFS will work with the experts to inform hunters about food safety, as pertains to ice seals. Food safety concerns can be related to seals with alopecia (hair loss), discolorations, and harmful algal blooms.

**4. EDUCATION and OUTREACH**

**A. Provide education and outreach materials to the communities and hunters**

**NEED**

The ISC and NMFS agreed to develop information sheets to educate and promote understanding about ice seal concerns and issues among hunters and users, resource managers, and other interested parties, particularly as related to the Endangered Species Act.

**ISC input**

The ISC will share information on ice seals, Endangered Species Act, subsistence foods and handicrafts, ISC and Co-management Committee, and other pertinent information with their communities, hunters, and users. Most of this information will be posted on the ISC website.

**NMFS input**

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

**ACTION – 1                   *(Lead: NMFS, with input from ISC)***

NMFS and the ISC (Executive Manager and selected representatives) will continue to develop fliers on ice seals as needed.

**ACTION – 2                   *(Lead: ISC and NMFS – ISC representatives will take the lead on scheduling)***

ISC regional representatives and NMFS experts will continue to participate on local radio shows to talk about ice seals (abundance, harvests, listing, petitions, research, etc.). These public broadcasts will occur seasonally (likely early spring) to reach the ice seals hunters.