



NOAA
FISHERIES

Alaska Region

Northern fur seal Conservation Plan: Status and Update

Michael Williams
Protected Resources

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Outline

- Current Conservation Plan: background & authority
- Current Plan Content and Implementation: NMFS and partners
- Updating the conservation plan: Process and timeline
- Current Fur Seal Management Priorities
- Summary and Questions

Current conservation plan: Background

- Humane Society of the US petitioned NMFS in 1984 to list northern fur seals a Threatened Species under the ESA.
- NMFS prepared a status review that determined an ESA listing was not warranted in 1985.
- NMFS proposed to list northern fur seals on the Pribilof Islands as a Depleted Stock under MMPA in 1986, based on the finding in the status review that the stock was estimated to be less than 50% of carrying capacity.

Current conservation plan: Legal Authority

Marine Mammal Protection Act of 1972

- NMFS listed northern fur seals as a Depleted Stock in 1988
- A Depleted Stock is below its Optimum Sustainable Population (lower limit of OSP is 60% of Carrying Capacity)
- NMFS is required to develop a Conservation Plan for Depleted Stocks
- NMFS completed the Conservation Plan in 1993 and it was revised in 2007

Current conservation plan: Content

- Similar to a recovery plan under the ESA, with one goal to recover the population to OSP
- The Plan contains 4 Objectives (maintained since 1992):
 - Identify and eliminate or mitigate the cause or causes of human related mortality...
 - Assess and avoid or mitigate adverse effects of human related activities on or near the Pribilof Islands and other habitat essential to the survival and recovery...
 - Continue and, as necessary, expand research or management programs to monitor trends and detect natural or human-related causes of change...
 - Coordinate and assess implementation of the plan...

Conservation plan: content & implementation

Objective 1: Identify and eliminate or mitigate the cause or causes of human related mortality of the Eastern Pacific stock of northern fur seals.

1.1 Improve understanding of the sources, fates, and effects of marine debris

1.1.1 Continue disentanglement program to reduce mortality and harm to fur seals entangled in marine debris

- Ad-hoc observations: St. Paul ECO, St. George ECO, NMFS AKR, and MML and response as practical
- Alaska Stranding Network is accounting for entanglement and including data in SARs

Conservation plan: content & implementation

1.1.2 Remove marine debris and incorporate surveys of debris in northern fur seal habitat

- St. Paul and St. George ECO departments have conducted marine debris removal projects and surveys on their respective islands with funding from NOAA and other sources

1.1.3 Examine the fate of entangling debris

- Not funded/Proposed

Conservation plan: content & implementation

1.1.4 Develop and implement additional statutes, regulations, education and enforcement of marine debris reduction programs

- Tribal ECO departments and NMFS have expanded education and outreach

1.1.5 Determine the sources of marine debris

- Preliminary assessments under action 1.1.2

Conservation plan: content & implementation

1.2 Improve assessments of incidental take of fur seals in commercial fishing operations

1.2.1 Implement and evaluate fishery and marine mammal observation programs in the North Pacific Ocean and Bering Sea

- North Pacific Groundfish Observer Program documents observations of marine mammal interactions

1.2.2 Review observer and incidental take data

- Continued through present in fisheries with observer requirements and reported in Stock Assessment Reports

Conservation plan: content & implementation

1.3 Evaluate harvests and harvest practices

1.3.1 Monitor and manage subsistence harvests

- Regulatory requirement for NMFS monitoring and reporting annually, transition to co-management self-monitoring and self-reporting began in 2010/2011 for St. Paul and St. George

1.3.2 Develop and implement harvest sampling programs

- Sampling program has continued to be supported by co-management grant and other sources

Conservation plan: content & implementation

1.3.3 Compile and evaluate existing data

- Completed EISs for St. George and St. Paul as part of subsistence use management changes in 2014 and 2017
- Completed triennial regulatory review process of subsistence use

1.3.4 Identify and evaluate illegal harvests

- Ongoing OLE, investigations in 2004, 2005, 2006, 2008 on St. Paul Island
- OLE Cases 2004, 2006, 2008 on St. Paul Island
- OLE presence on St. Paul annually 2009-2016

Conservation plan: content & implementation

Objective 2: Assess and avoid or mitigate adverse effects of human related mortality on or near the Pribilof Islands and other habitat essential to the survival and recovery of the Eastern Pacific stock of northern fur seals.

2.1 Work with the Tribal governments under co-management agreements

- Agreements signed in 2000 (St. Paul) and 2001 (St. George)
- Revising St. Paul Co-management Agreement 2017/18

Conservation plan: content & implementation

2.2 Advise and consult with the relevant action agencies and industries

- Ongoing ACOE harbor development & maintenance
- Ongoing NMFS fisheries management actions and research permits
- Ongoing island tourism management (jointly under co-management since 2006)
- Ongoing NPDES (EPA) and APDES (State) related to outfall operation and discharges
- Ongoing FAA and USCG related to aircraft overflights (FAA Supplement)
- State of Alaska Oil Spill Response planning

2.3 Review and make recommendations on proposed activities and actions that have the potential for adversely affecting northern fur seals (e.g. local development, industrial expansion, regulatory actions, research activities, and permitting)

- See above

Conservation plan: content & implementation

2.4 Conduct studies to quantify effects of human activities (e.g. research, hunting, tourism, vehicles, discharges, facilities) at or near breeding or resting areas

- Preliminary/pilot investigations re: fur seal research, pup harvest on St. George, outfall discharge

2.5 Undertake conservation or management measures as necessary to eliminate or minimize deleterious impacts to fur seals

- Posted no parking areas at Zapadni Beach, St. Paul
- Fur seal viewing blinds on St. Paul and St. George Islands
- Changed subsistence use regulations for St. George
- Ongoing effort to change subsistence use regulations for St. Paul
- Worked with EPA to monitor and enforce discharge permit provisions on St. Paul Island

Conservation plan: content & implementation

2.5.1 Develop oil and spill response plans and mitigation strategies specific to fur seal breeding and resting areas on the Pribilof Islands and Bogoslof Island

- Developed Pribilof/Fur Seal-Specific Oil Spill response plans included in the Aleutian/Pribilof Island Subarea Contingency Plans

2.6 Assess and monitor pollutants

2.6.1 Compile and evaluate existing data

- Ongoing, Summarized in 2007, Alaska Marine Mammal Tissue Archival Program supports sampling by St. Paul ECO and analysis of subsistence harvested fur seals at regular intervals

Conservation plan: content & implementation

2.6.2 Monitor and study environmental pollutant exposure

- Investigation of radiocesium exposure in fur seals as a result of Fukushima supported by Co-management and initiated by Tribal Members
- Investigation of mercury exposure

2.6.3 Evaluate carcass salvage programs

- Tooth Collection

Conservation plan: content & implementation

2.7 Quantify relationships between fur seals, fisheries, and fish resources

2.7.1 Study the natural and anthropogenic influences on fur seal feeding ecology

- Ongoing, started in 1976 with the Time-Depth-Recorder (TDR) advanced through 1980s
- Significant advances with satellite telemetry tags and TDR
- See references handout (~28 published papers)

2.7.2 Evaluate pelagic fur seal sampling

- Not Funded

Conservation plan: content & implementation

2.7.3 Report fishery interactions

- Ongoing reported in annual Stock Assessment Reports

2.7.4 Determine impact of fisheries

- Ongoing research characterizing temporal and spatial overlap between fur seals and fisheries in the Bering Sea
- Research characterizing temporal and spatial overlap between fur seals and fisheries in the North Pacific has not been attempted
- Indirect and direct impacts to be determined

Conservation plan: content & implementation

Objective 3: Continue and, as necessary, expand research or management programs to monitor trends and detect natural or human-related causes of change in the northern fur seal stock and habitats essential to its survival and recovery.

3.1 Monitor and study changes in fur seal populations

3.1.1 Analyze fur seal teeth

- Aged archive of teeth collected from dead adults (1970s-2010s)
- Stable Isotope studies UCSD
- Co-management analysis of seals taken in the subsistence harvest

Conservation plan: content & implementation

3.1.2 Continue regular counts of adult males and estimates of pup production on St. Paul, St. George, and Bogoslof Islands

- Ongoing Adult male counts (Pribilof Islands): annual funded 2018
- Pup production (Pribilof Islands): biennial (even years, 2018)
- Intermittent on Bogoslof Island: 4 times

3.1.3 Estimate pup survival

- Initiated preliminary project in 2007, funded annual cohort tagging and resighting through 2017. Not funded 2018.

Conservation plan: content & implementation

3.1.4 Evaluate marking programs

- Initiated in 2005

3.1.5 Estimate stock vital rates

- Preliminary estimates for adult females available in 2013
- Ongoing through 2017, not funded in 2018
- Study initiated in 2017 to estimate emigration, not funded in 2018
- Overall, 12 population assessment related reports completed between 2006 to 2017

Conservation plan: content & implementation

3.1.6 Evaluate behavioral / physiological studies

- Captive Studies -~16 papers published
- Wild Studies – ~97 papers published

3.1.7 Continue comparative studies on other islands

- Studies in Russia (Commander Islands and Tyuleniy Island)
~2 papers published

Conservation plan: content & implementation

3.1.8 Conduct appropriate studies to assess the impact of predation (e.g., killer whales, Stellar sea lions, sharks) on fur seal populations

- Preliminary evaluations with MML cetacean assessment program and co-management observations and photo ID shared

3.1.9 Promote joint research and collaborative programs

- Support co-management, support Russian & Japanese colleagues, NPUMMRC, Lenfest, UAF, CSU
- Pinniped Research Program initiated in 2014, included fur seals in multi-year awards

Conservation plan: content & implementation

3.2 Improve assessment of the effects of disease

3.2.1 Compile and evaluate existing data

- Preliminary assessment and funded CSU through Pinniped Research Program, (reduced funding in 2nd and 3rd yr)

3.2.2 Determine and mitigate disease effects

- Identification of exposure to *Coxiella brunetti* (see handout)
- Identification of exposure risk to Phocine Distemper Virus (see handout)
- ~18 papers published

Conservation plan: content & implementation

3.2.3 Continue management program to prohibit disease transmission to fur seals from introduced species

- Continue prohibitions 50 CFR 216.82 and 216.83, education and outreach regarding cats and dogs
- Partner with USFWS to prevent rat introductions from ships or cargo

3.3 Describe and monitor essential fur seal habits

3.3.1 Compile and evaluate available habit-use-data

- Ongoing, GIS database of satellite telemetry data
- ~16 papers published

Conservation plan: content & implementation

3.3.2 Conduct oceanographic and fishery surveys based on pelagic fur seal habitat use

- Sairdrone and fur seal foraging integrated research

3.4 Identify and evaluate natural ecosystem changes

3.4.1 Reevaluate carrying capacity

- Not funded

Conservation plan: content & implementation

3.4.2 Continue and evaluate Pribilof Islands Sentinel Program

- Funded through co-management grant program and tribal effort

3.4.3 Compile and evaluate existing physical environmental data

- Ongoing, AFSC PMEL

3.4.4 Select appropriate environmental indices

- Ongoing, AFSC

Conservation plan: content & implementation

3.4.5 Quantify environmental effect on behavior and productivity

- Preliminary; Bering Sea Ecosystem Model, Lenfest

3.4.6 Ecosystem modeling

- Preliminary; Bering Sea Ecosystem Model, Lenfest

Conservation plan: content & implementation

Objective 4: Coordinate and assess the implementation of the conservation plan, based on implementation of conservation actions and completion of high priority studies.

4.1 Establish conservation plan coordinator position

- Pribilof Program Manager
- Pribilof Program Assistant (2008-2011 and 2017-present)

4.2 Develop and implement education and outreach programs

- Ongoing, Co-management, Northern Fur Seal Curriculum, Bering Sea Days

Conservation plan: content & implementation

4.3 Develop and promote international conservation efforts

- NOAA International Programs, Collaborations in Russia & Japan

4.4 Enforce existing regulations

- NOAA OLE patrols 2009-2016
- NOAA OLE patrols as needed 2017-present

Updating the conservation plan: Process & Timing

1. Identify policy guidance for Conservation Plan revisions: September 2018
2. Transition to “living web-based” documents: March 2019
3. Develop implementation plan: July 2019

Current Fur Seal Management Priorities

- Revise subsistence use regulations
 - Petitions from tribal governments
 - Supplemental EISs, proposed rules, and final rules
- Co-manage subsistence use with St. Paul and St. George
- Continue to assess adverse effects of human activities (disturbance, bycatch, research, illegal shooting, and entanglement)
- Enhance relationships with the Council and stakeholders to improve hypothesis development and testing of the relationships between fur seals, fisheries, and the ecosystem
- Update the 2007 Conservation Plan

Summary: Conservation Actions Since 2007

- NMFS has supported specific projects or has ongoing efforts related to all eleven specific action items intended to address sources of mortality identified for Objective 1.
- NMFS has supported specific projects or has ongoing efforts related to the seven specific action items and four of the eight sub-actions intended to address sources of sub-lethal adverse effects identified for Objective 2.

Summary: Conservation Actions cont'd

- NMFS has supported specific projects or has ongoing efforts related to the four specific action items identified for Objective 3, and has investigated 16 of the 20 sub-actions related to monitoring and research.
- NMFS has supported specific projects or has ongoing efforts related to three of the four specific action items for Objective 4.

Summary: Conservation Actions cont'd

- Implementation of Objectives 1-4 are extensively referenced:
 - NOAA Technical Memorandum Series: Fur Seal Investigations is produced annually or biennially
 - Numerous gray literature (Tribe, NPRB, Universities, etc)
 - At least 113 published peer-reviewed papers since 2006
- Revision of subsistence use regulations
- Co-management of subsistence use
- Estimate survival and population size
- Northern fur seal stock still below OSP

• Questions?