

TRIBAL GOVERNMENT-INITIATED RESEARCH PROJECTS
for the
ALEUT COMMUNITY OF ST. PAUL ISLAND, ALASKA

Title: Integrating Science and Tradition: Ecosystem Monitoring Through the Subsistence Harvests of the Pribilof Islands, Alaska

Funding Source: Pollock Conservation Cooperative Research Center

Objective: To present an integration of traditional subsistence harvest skills and scientific method. To enhance current research efforts investigating the decline of multiple apex species in the Bering Sea ecosystem, including seals, sea lions, and seabirds. Subsistence harvests will provide critical tissue samples, such as are needed for the investigation of the current role of contaminants in species declines. The Pribilof Islands are remote, and therefore it is extremely difficult for researchers to collect important samples from native species. It is equally difficult for members of the local community to access scientific information regarding their environment. This project will allow for an enhanced scientific and community level understanding of the ongoing changes in the complex Bering Sea ecosystem.

The mission of this proposal is to maximize the amount of information gathered from an important biological, traditional and economic region undergoing change. Through the co-operation of native subsistence hunters and scientists, both groups will be able to increase our knowledge and understanding of the current shift in the ecosystem. In particular, we will be able to further the examination of the role of contaminants in the observed decline in marine mammal and seabird species. However, once initiated, this project has the potential to provide samples from multiple species to additional scientific investigations with complementary goals for many years to come.

Partners: Alaska Sealife Center and LGL Alaska Research Associates, Inc.

Title: Assessment of Northern Fur Seal (*Callorhinus Ursinus*) Entanglement In Marine Debris On the Pribilof Islands

Funding Source: Prescott Grant Program

Objective: To estimate and compare sub-adult male fur seal entanglement rates on St. George and St. Paul Islands, and compare the debris composition between islands and years by removing entangling debris from fur seals rounded up in the subsistence harvest on St. Paul Island and St. George Island and from solo captures on St. Paul Island.

Partners: Traditional Council of St. George and LGL Alaska Research Associates, Inc.

Title: Subsistence Harvest Monitoring of Steller Sea Lions on St. Paul Island, Alaska

Funding Source: Steller Sea Lion Research Initiative (SSLRI)

Objective: To characterize and monitor the present subsistence harvest of Steller sea lions on St. Paul Island, Alaska. In addition, tissue and stomach samples will be collected from marine mammals taken for subsistence purposes. These samples will be distributed from the Tribal Government of St. Paul under an arrangement (Memorandum of Understanding or similar agreement) to laboratories or scientists. The receiving party will be required to report to the TGSNP on the status of sample analyses. Through a cooperative agreement between the Tribal Government of St. George and the Tribal Government of St. Paul, small groups of potential marine mammal tissue samplers from rural Alaska will be trained during the six-week subsistence harvest of fur seals on St. George Island.

Partners: Traditional Council of St. George and LGL Alaska Research Associates, Inc.

Title: Evaluation of the Health and Restoration of the St. Paul Island Salt Lagoon

Funding Source: USFWS Tribal Wildlife Grant

Objective: Determine the current biological condition and restore the shoreline habitat of Salt Lagoon, and develop a conservation plan by:

1. Establishing sampling locations in a study area that includes Village Cove, the entrance channel to Salt Lagoon, and Salt Lagoon.
2. Collecting water samples in the study area and analyzing the samples for water temperature, salinity, and dissolved oxygen for comparison with baseline data collected in the early and mid- 1990s by Flint et al. (1999).
3. Determining the composition, biomass, and spatial and trophic structure of benthic communities in the study area for comparison with baseline data from the early to mid- 1990s, and to provide information on potential food sources for birds.
4. Collecting data on bird use of the study area to establish a baseline for future estimation of the natural or man-induced changes in the ecosystem.
5. Developing a group of local personnel to collect and process water and invertebrate samples, and to conduct bird surveys.
6. Documenting and removing marine debris that has collected on the shoreline of the Salt Lagoon.
7. Reviewing past impacts to the Salt Lagoon ecosystem.
8. Assessing current and future impacts to the Salt Lagoon ecosystem.
9. Gathering and documenting local traditional knowledge and wisdom of historical and current activities conducted in the lagoon, observed annual and other changes to the lagoon, and perceived community concerns.
10. Recommending conservation actions to protect the lagoon from future degradation and negative impacts.

Partners: LGL Alaska Research Associates, Inc.