

# The Subsistence Harvest of Harbor Seals and Sea Lions by Alaska Natives in 2006



## An Overview of Study Findings

### Alaska Native Harbor Seal Commission & Division of Subsistence, ADF&G

June 2008

#### Background

This is a brief overview of research conducted by the Alaska Native Harbor Seal Commission (ANHSC) and the Division of Subsistence of the Alaska Department of Fish and Game (ADF&G) on subsistence takes of harbor seals *Phoca vitulina* and Steller sea lions *Eumetopias jubatus* by Alaska Natives during calendar year 2006. This was the 14<sup>th</sup> year documenting subsistence takes of these marine mammals; subsistence takes were documented in 1992 through 2006, with no research conducted in 1999. The research was conducted in cooperation with tribal governments and organizations representing marine mammal hunters, including the Aleut Marine Mammal Commission (AMMC), the Bristol Bay Native Association (BBNA), and the Southeast Alaska Intertribal Fish and Wildlife Commission (SAIFWC). Funding was provided through a contract between the ANHSC and the National Marine Fisheries Service.

The geographic area covered by the research is the Alaska coastal waters south of Cape Newenham (western-most Bristol Bay), including the Pribilof Islands, which matches the general distribution of harbor seals and sea lions in Alaska. The use of these marine mammals by Alaska Natives for food and raw materials has a long tradition in this part of Alaska, since before historic contact to the present.

#### Methods

Information on subsistence uses of harbor seals and sea lions derives from systematic, face-to-face interviews with hunters in 62 communities. Information was collected principally by local researchers in each community, working within a network of local and regional researchers organized by the ANHSC, ADF&G, AMMC, BBNA, and SAIFWC. Members of 1,277 households were interviewed, primarily in January through March 2007. Participation was voluntary, and individual and household-level data are confidential. For 2006, the same survey form was used as in previous study years. Information collected included number of animals harvested and struck and lost (these 2 estimates together equal the estimated subsistence take), seasons, geographic distribution, and age and sex of harvested animals. Take estimates for St. Paul were provided by an independent program run by that community's Ecosystem Conservation Office.

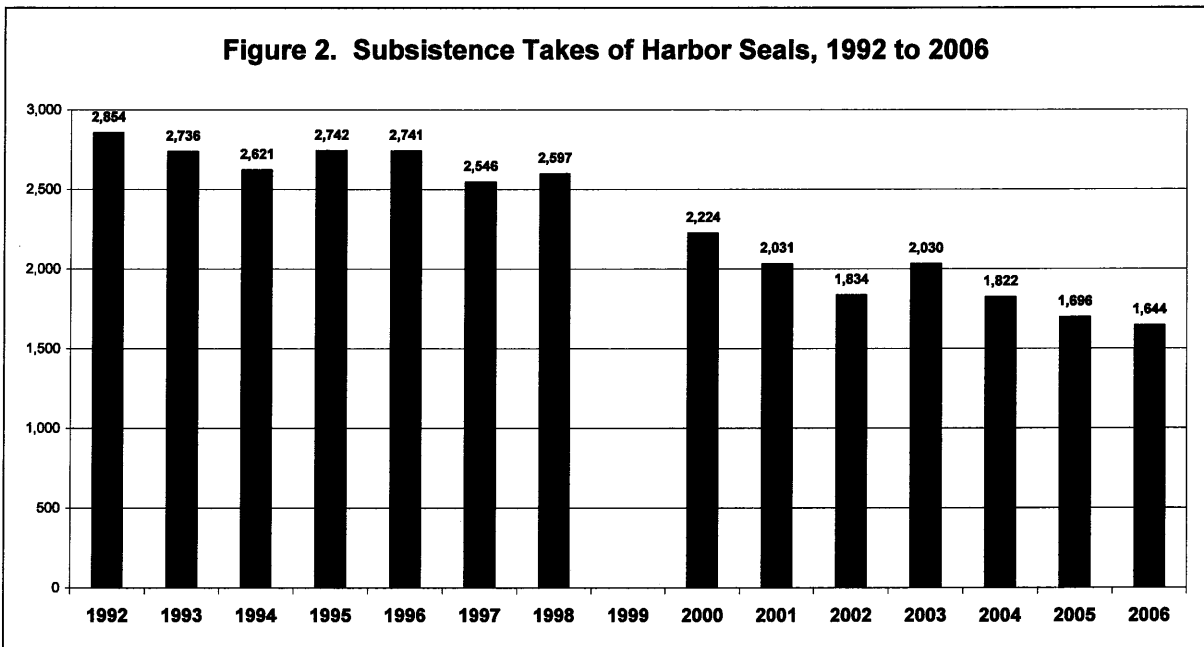
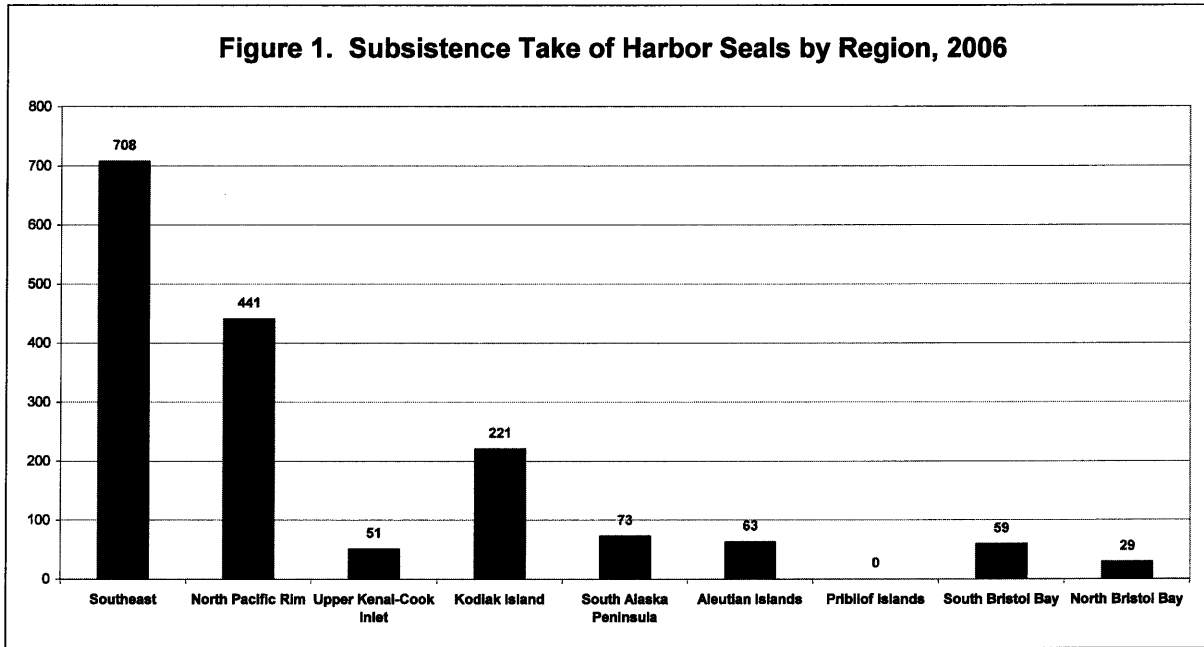
#### Findings: Harbor Seals

The estimated subsistence take of harbor seals by Alaska Natives in 2006 is 1,644 seals, with a 95% confidence range of 1,250 to 2,348 (+/-43%). Of the total estimated take, 1,423 seals (87%) were harvested, and 221 seals (13%) were struck and lost. Hunters reported taking males over females by a ratio of 3.3 to 1. In 2006, 77% of the harvest was males, very consistent with previous study years. Of the total subsistence harbor seal harvest in 2006, 78% were adults, 19% juveniles, and 3% pups, again similar to other years. In the study area overall, subsistence harbor seal takes occurred in every month in 2006, with a seasonal peak during early spring (March) and during fall and early winter (September-December). Subsistence takes came from the following stocks: Southeast Alaska, 708 seals; Gulf of Alaska, 848 seals; and Bering Sea, 88 seals.

The geographic distribution of subsistence harbor seal takes in 2006 was similar to that of other years (Figure 1). The largest take (708 seals; 43%), occurred in Southeast Alaska, followed by North Pacific Rim (Prince William Sound, lower Cook Inlet; 441 seals; 27%); Kodiak Island (221 seals; 13%); South Alaska Peninsula (73 seals; 4%); Aleutian Islands (63 seals; 4%); South Bristol Bay (59 seals; 4%);

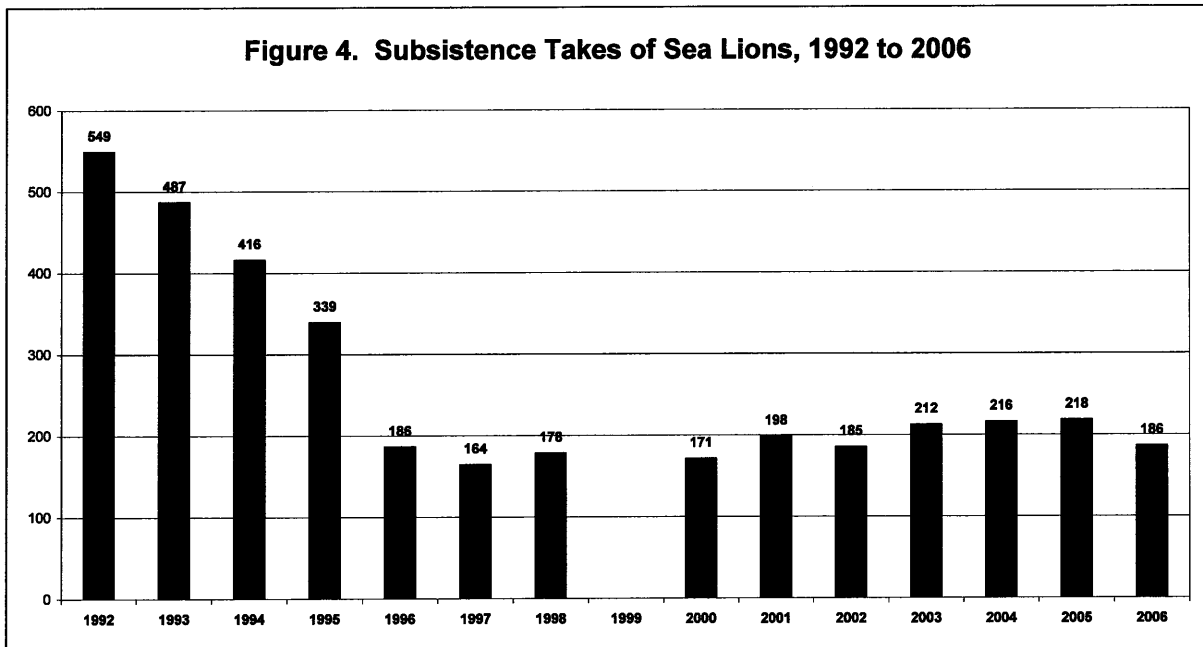
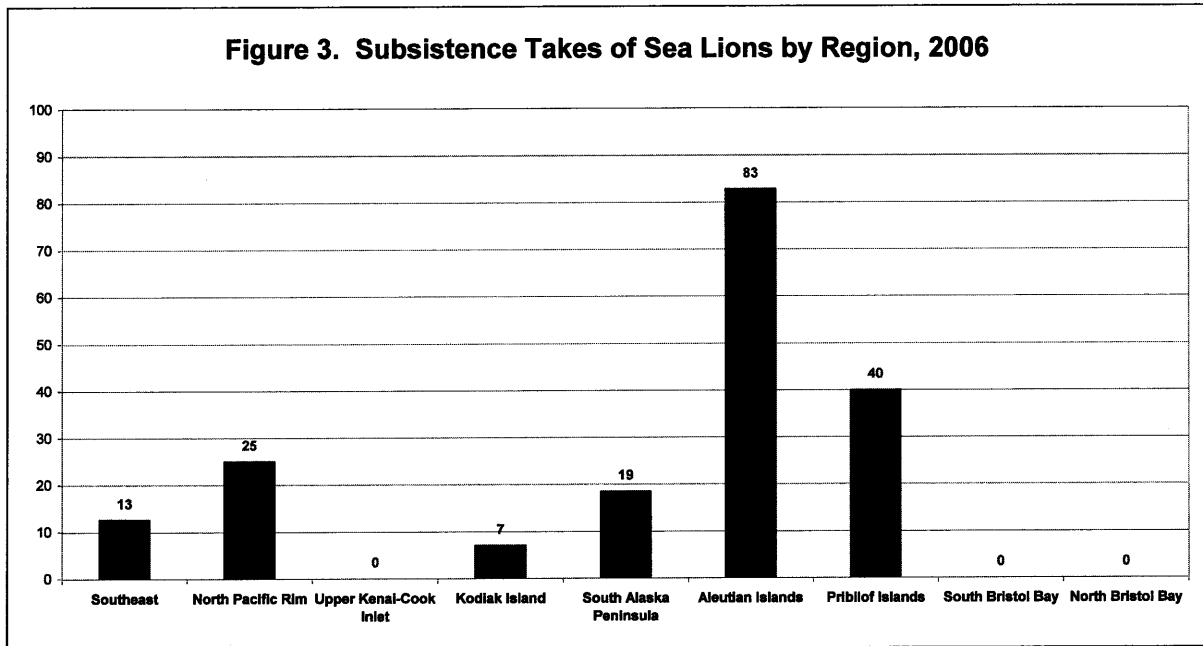
Upper Cook Inlet (51 seals; 3%); and North Bristol Bay (29 seals; 2%). At the state level, subsistence takes of harbor seals have declined since 1992-98 (Figure 2).

The 2006 harvest and total take were the lowest since surveys began in 1992. The reason for the decline is uncertain, but may be due to fewer hunters. Greater annual variations have occurred at the community level, likely related to factors such as seasonal hunting conditions, local food needs, local prey availability for seals, and personal circumstances of hunters. Longer time series data are available for the North Pacific Rim and Kodiak Island. In both regions, harbor seal harvests from 1992 to 2006 have been lower than those for a decade earlier, perhaps due to such factors as the *Exxon Valdez* oil spill and lower seal populations. This provides a cautionary note about interpreting trends in subsistence patterns since 1992; the longer time series may better represent the potential ranges of subsistence takes in particular regions.



### Findings: Sea Lions

The estimated subsistence take of sea lions by Alaska Natives in 2006 is 186 animals, with a 95% confidence interval range from 125 to 289 sea lions (+/-55%). Of the total take, 137 sea lions (74%) were harvested, and 49 sea lions (26%) were struck and lost. Males outnumbered females in the harvest by a ratio of about 5 to 1; this is a higher proportion of males than the last 3 study years. In 2006, 84% of the sea lion harvest was males; 64% was adults, 36% juveniles, and 0% pups. Takes occurred in every month in 2006, with the largest in February, March, and November. Figure 3 shows the geographic distribution of the sea lion take in 2006. Most of the take occurred in the Aleutian Islands (45%), Pribilof Islands (22%), and North Pacific Rim (13%). Of the 63 communities, 15 reported sea lion takes for 2006. Eight had takes of five or more sea lions.



The statewide subsistence take of sea lions declined sharply between 1992 and 1997, and has since leveled off (Figure 4). In 2006, takes were lower than in 1992 in three of the four primary sea lion hunting regions - the Pribilof Islands, the Aleutian Islands, and Kodiak Island.

Declines in sea lion takes during the 1990s appear to be associated with drops in hunter numbers. For example, 4 households in Unalaska hunted sea lions in 2006, compared to an average of 23 in 1992 through 1994. Similarly, an average of 30 Old Harbor households hunted sea lions over the three-year period from 1992 through 1994; one did so in 2006. As with seal hunting, there are likely a variety of local factors related to annual changes in hunter numbers. A key factor is the decreased sea lion populations. This has increased the cost and difficulty of subsistence hunts. Additionally, during this study many sea lion hunters reported concerns about the health of local sea lion populations. Some portion of the decline in hunting effort probably reflects hunters choosing not to hunt in order to conserve the sea lion population.

### Continuing Research

In partnership, the Alaska Native Harbor Seal Commission (ANHSC), the Division of Subsistence of ADF&G, the Bristol Bay Native Association (BBNA), the Aleut Marine Mammal Commission (AMMC), and the Southeast Alaska Intertribal Fish and Wildlife Commission (SAIFWC) will organize another round of household interviews to document subsistence takes of harbor seals and sea lions for 2007. Again, the National Marine Fisheries Service is providing the funding. Similar methods will be used as in the previous 13 rounds of data collection. It is expected that local research assistants will conduct most of the interviews, primarily in January to March 2008. Following established guidelines, approval of the ongoing research will be sought from tribal governments, and all interviews will be voluntary and confidential. Preliminary results will be sent to study communities for review and comment before the final report is published in about December of 2008.

A key objective of this project has been to transfer certain project responsibilities from ADF&G to the ANHSC and other partners. For example, in 2006 the ANHSC was the project manager, receiving the federal project funds directly. ADF&G's involvement, primarily data review and analysis and local researcher training, was through a contract with the ANHSC. The ANHSC hired local researchers in the North Pacific Rim, Upper Cook Inlet, and Kodiak areas; BBNA hired researchers in its communities; the AMMC hired local researchers in southern Alaska Peninsula and Aleutian Islands communities; and the SAIFWC hired local researchers in southeast Alaska. These same responsibilities will carry forward in the 2007 study year.

---

**For More Information:** Complete results for the project appear in: Wolfe, Robert J., James A. Fall, and Monica Riedel. 2008. *The Subsistence Harvest of Harbor Seals and Sea Lions by Alaska Natives in 2006*. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 339. Juneau. Detailed findings for previous study years appear in the Division of Subsistence technical paper series as numbers 229, 233, 236, 238, 241, 246, 250, 266, 273, 277, 291, 303, and 319. In addition to harvest data, these reports contain sections on selected topics, such as traditional uses of harbor seals and sea lions, hunting methods, and traditional knowledge. The reports are available by contacting the Division of Subsistence at P.O. Box 115526, Juneau, AK 99811-5526 (907-465-4147). Study findings have also been provided to each participating community. The Alaska Native Harbor Seal Commission may be contacted at 800 East Dimond Blvd, Suite 3-625, Anchorage, Alaska, 99515 (907-345-0555).

---

The Alaska Department of Fish and Game administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972. If you believe you have been discriminated against in any program, activity, or facility please write: ADF&G ADA Coordinator, PO Box 115526, Juneau, AK 99811-5526 (The department's ADA Coordinator can be reached via phone at the following numbers: (VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078); U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington, VA 22203; Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240. For information on alternative formats and questions on this publication, please go to <http://www.subsistence.adfg.state.ak.us/> for contact information.