

Alaska Board of Fisheries
Ketchikan
February 24 – March 4, 2012



The Sitka Sound Subsistence Herring Spawn Harvest Monitoring Program, 2002 - 2010

Davin Holen
Subsistence Program Manager, Southern Region
Alaska Department of Fish and Game

RC 3 Tab 6 – Oral Report
RC 3 Tab 21 – Technical Paper 343

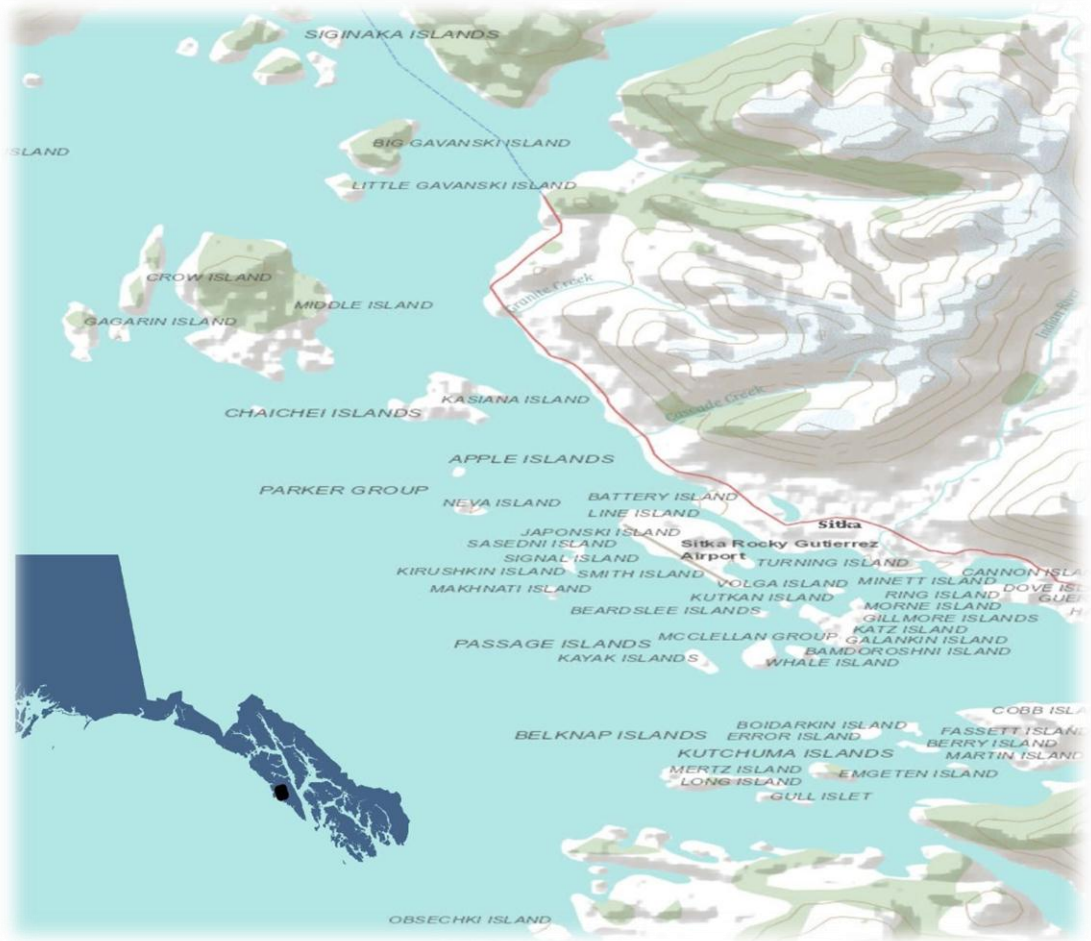


Purpose of Presentation

1. Review regulatory history.
2. Review customary and traditional use of herring spawn on branches.
3. Review the harvest assessment program.
4. Review modifications made to the program by ADF&G (department) in 2010 to strengthen the validity of the data.
5. Review results of the harvest assessment program 2002-2010.

Proposals

- Proposals 238 and 239
- Proposal 273

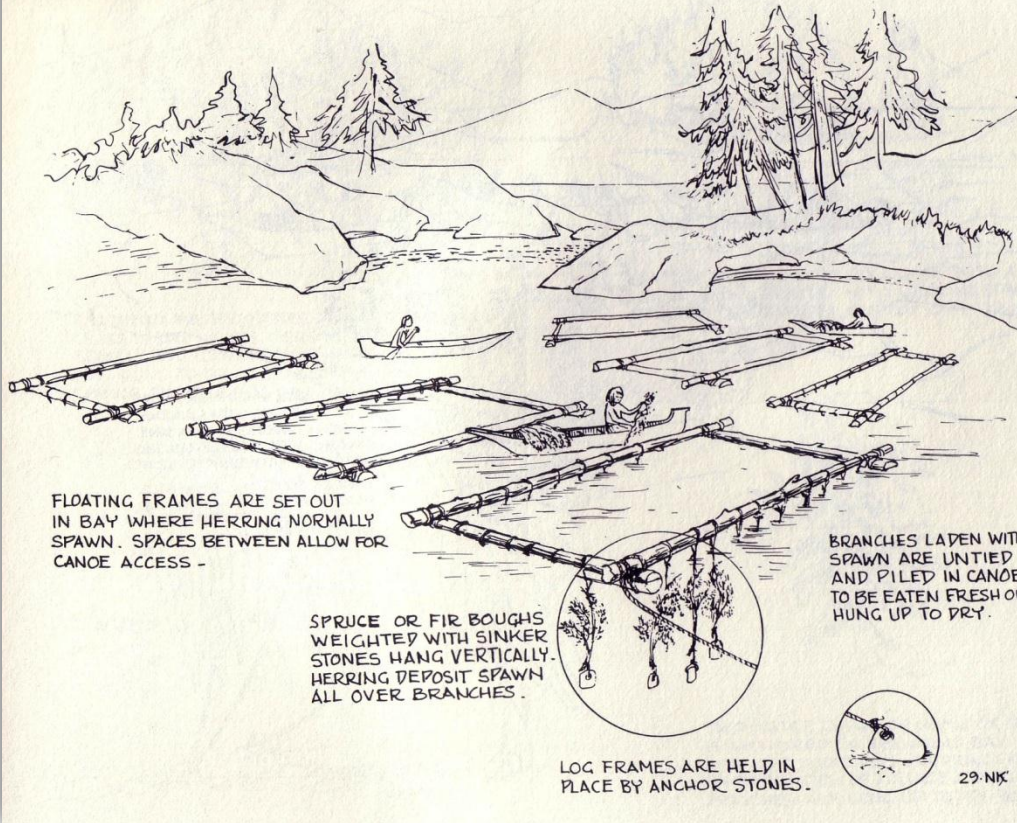


Sitka Sound

Regulatory History

- 1989
 - The Alaska Board of Fisheries (board) made a customary and traditional use determination for the harvest of herring spawn in Sitka Sound.
- 2002
 - The Sitka Tribe of Alaska (STA) submitted a proposal to the board requesting recognition of the geographically and historically important areas used for subsistence herring spawn harvest.
 - The board made a determination that the amount reasonably necessary for subsistence (ANS) was between 105,000 and 158,000 lb of herring spawn.
 - The board requested that ADF&G work with the STA to develop a harvest monitoring program based on in-person harvest surveys.
- 2009
 - The board increased the ANS to 136,000-227,000 pounds of herring roe based on subsistence harvest data collected from 2002-2008.

HERRING SPAWN CULTURE.



- The primary method of harvest is to submerge branches of the western hemlock (*Tsuga heterophylla*) in salt waters just outside the intertidal zone.
- The herring deposit their eggs on the branches of the hemlock, which were then removed from the water.

Harvest Monitoring Program, 2002-2011

- To conduct in-person interviews with households who harvest herring spawn.
- To produce estimates of the total pounds of herring spawn harvested on hemlock branches, *Macrocystis* kelp, hair seaweed and “other” substrates; and,
- To identify locations where herring spawn are harvested.

Survey Sample Achievement

	Sample size	Number of households surveyed	Interview success rate
2002	108	86	80%
2003	163	118	72%
2004	197	144	73%
2005	182	159	87%
2006	160	127	79%
2007	168	126	75%
2008	131	128	98%
2009	190	150	79%
2010	132	132	100%

Sources Community Subsistence Information System, 2011.



Conversion Factor Revisions, 2010

- The department identified a need for a more rigid weight conversion factor methodology.
 - STA and the department work together to develop a set of conversion factors.
 - The conversion factors include conversion weights for the most common types of containers.
 - To develop an average weight for a container, 2 containers were weighed, the mean computed, then 3 containers and the mean computed, and so on until there are no significant differences in the mean.



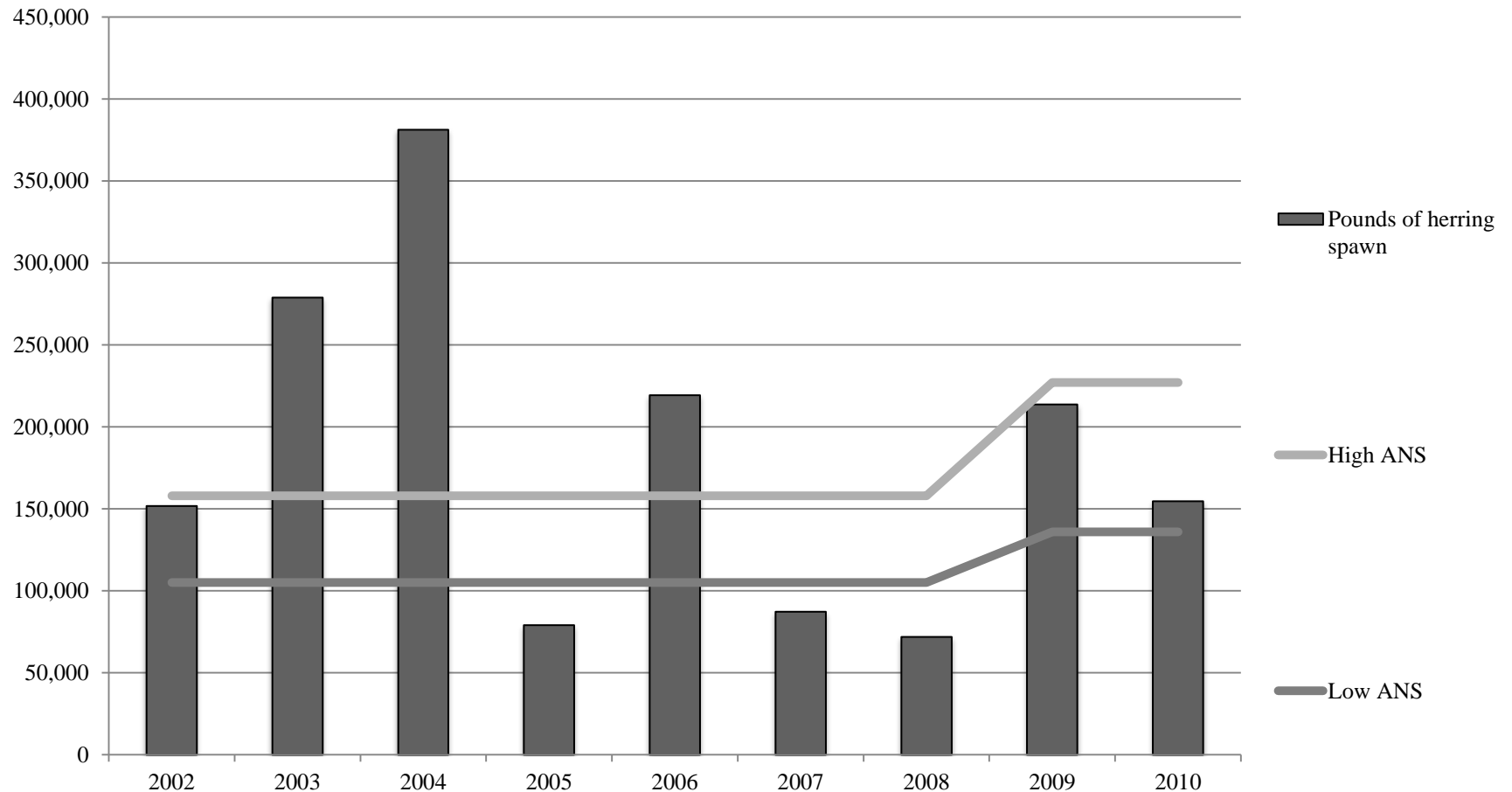
Total estimated harvest of herring spawn, pounds by substrate, 2002–2010.

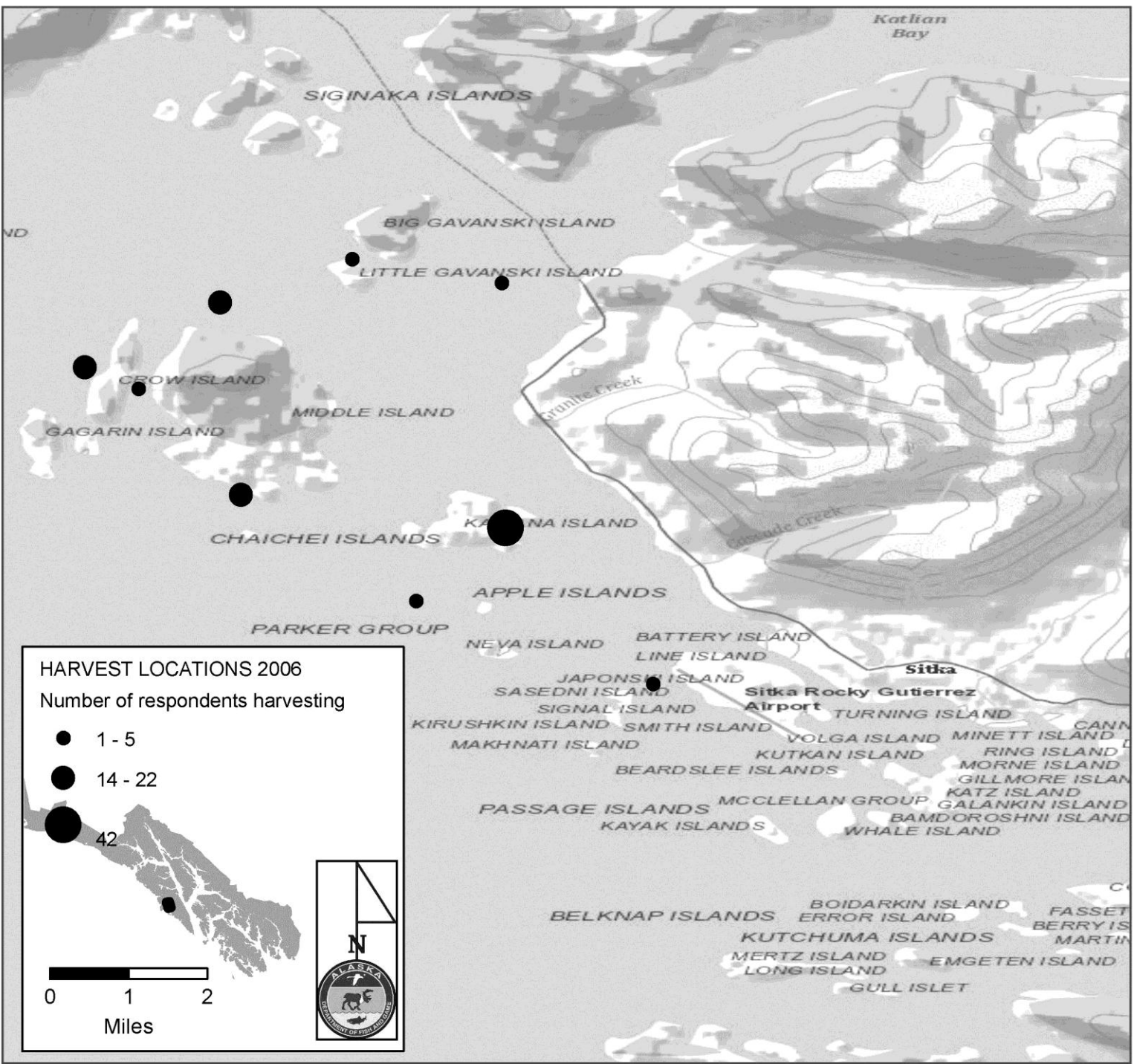
Resource	2002	2003	2004	2005	2006	2007 ^a	2008	2009	2010
Herring spawn on kelp	4,309	4,556	11,494	3,176	4,372	3,117	1,409	2,571	4,105
Herring spawn on seaweed	7,642	4,339	10,961	3,848	2,031	ND	2,118	5,751	2,020
Herring spawn on hemlock branches	139,756	269,904	356,693	76,961	212,952	84,093	68,409	205,390	148,495
Total	151,707	278,799	379,148	83,985	219,355	87,210	71,936	213,712	154,620

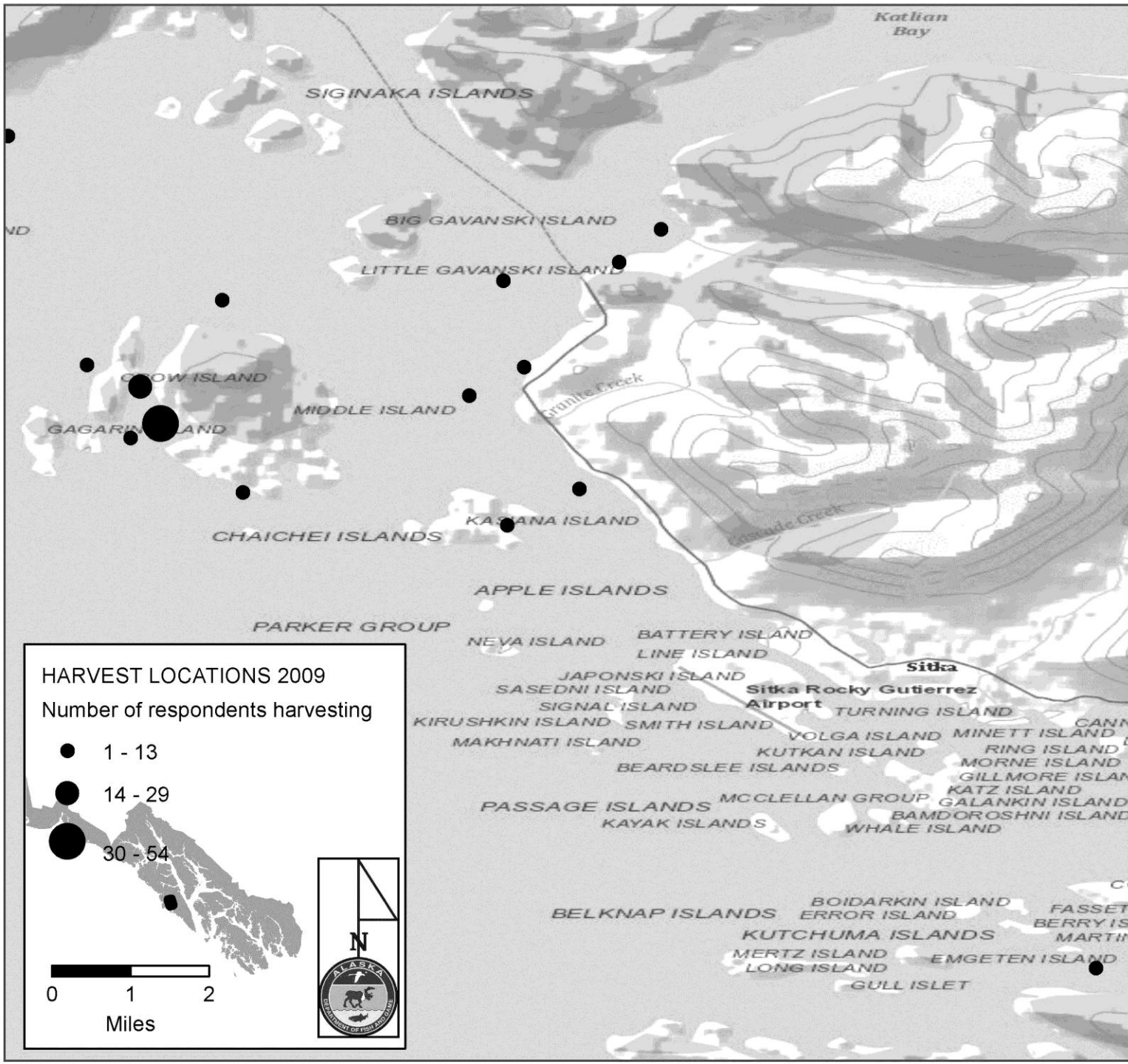
Sources Sitka Tribe of Alaska; ADF&G, 2010.

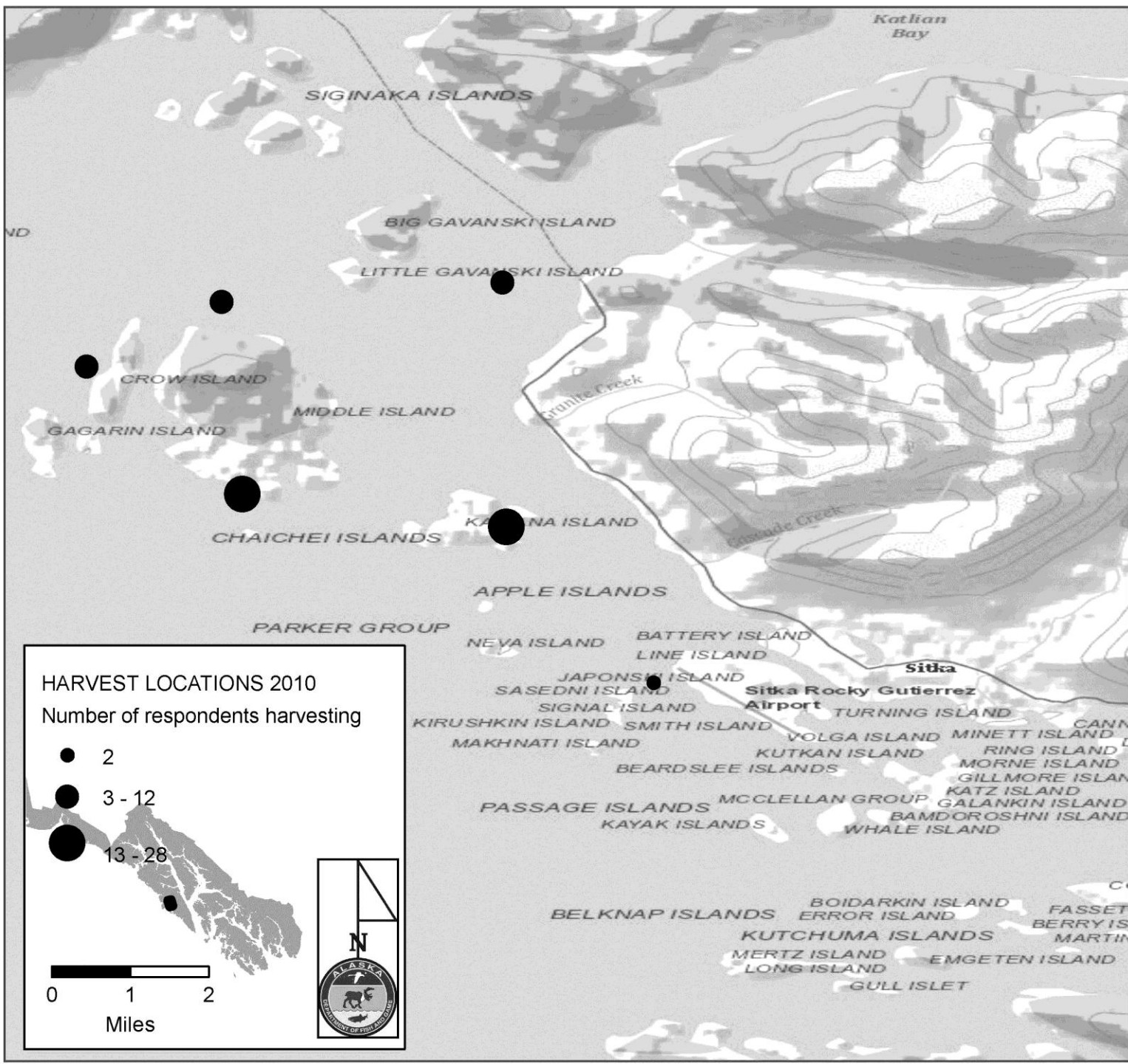
a. Data for 2007 were collected using “herring spawn on kelp/other” and “herring spawn on hemlock branches” categories. The “spawn on kelp/other” included seaweed substrate harvest amounts, in contrast to the other survey years.

Total pounds usable weight and amount necessary for subsistence (ANS) of herring spawn harvested on all substrates in Sitka, 2002–2010

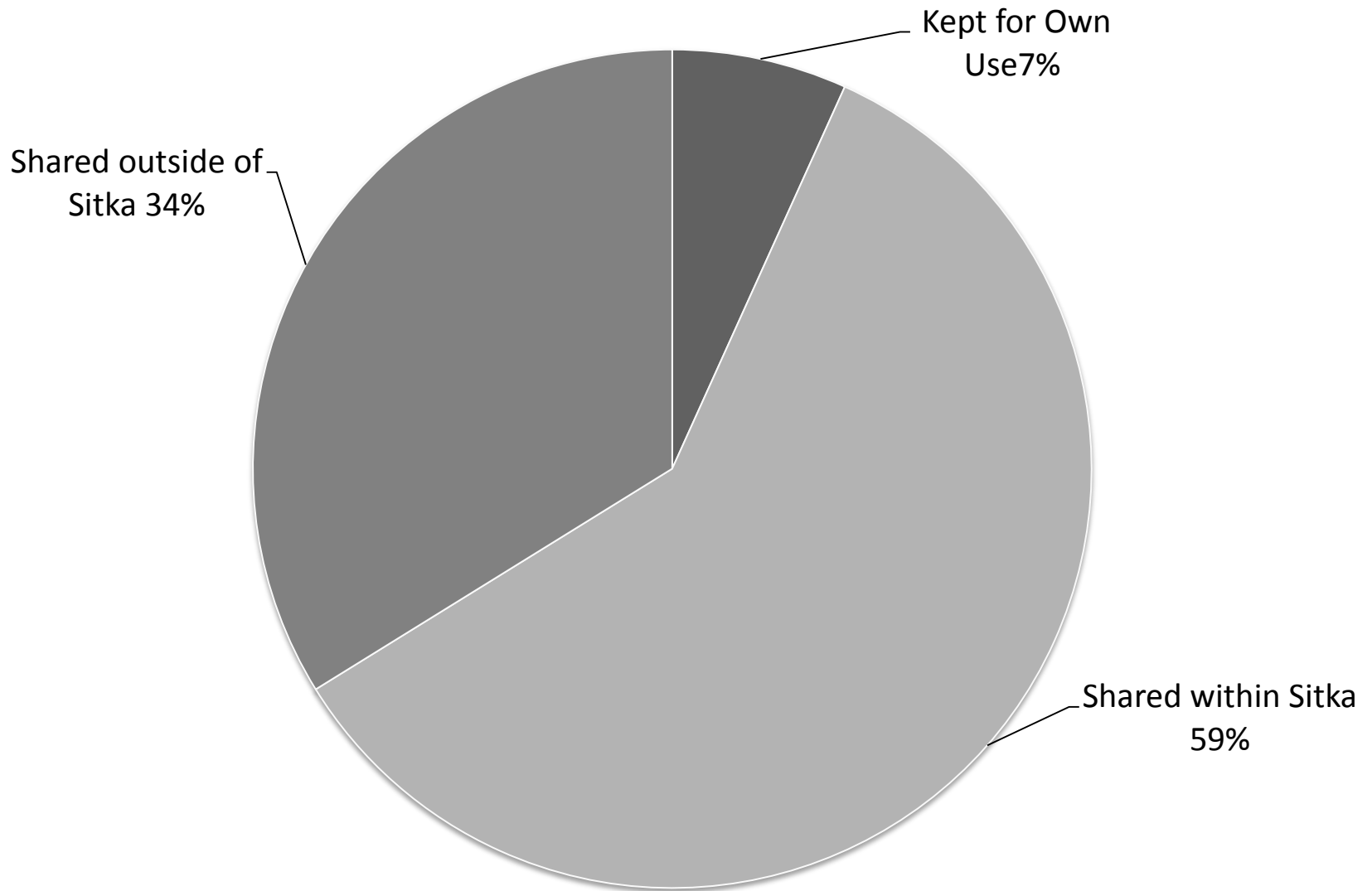




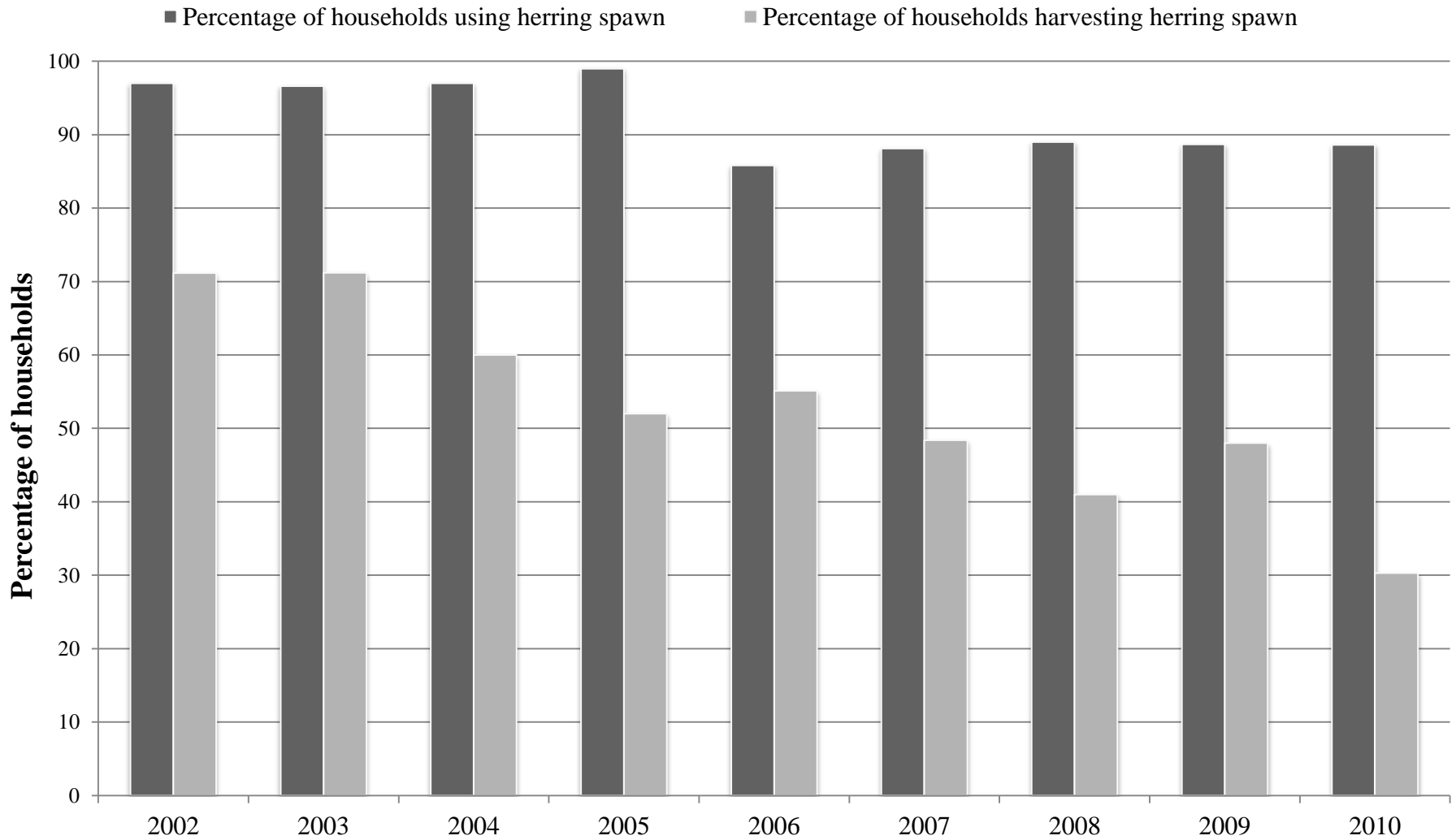




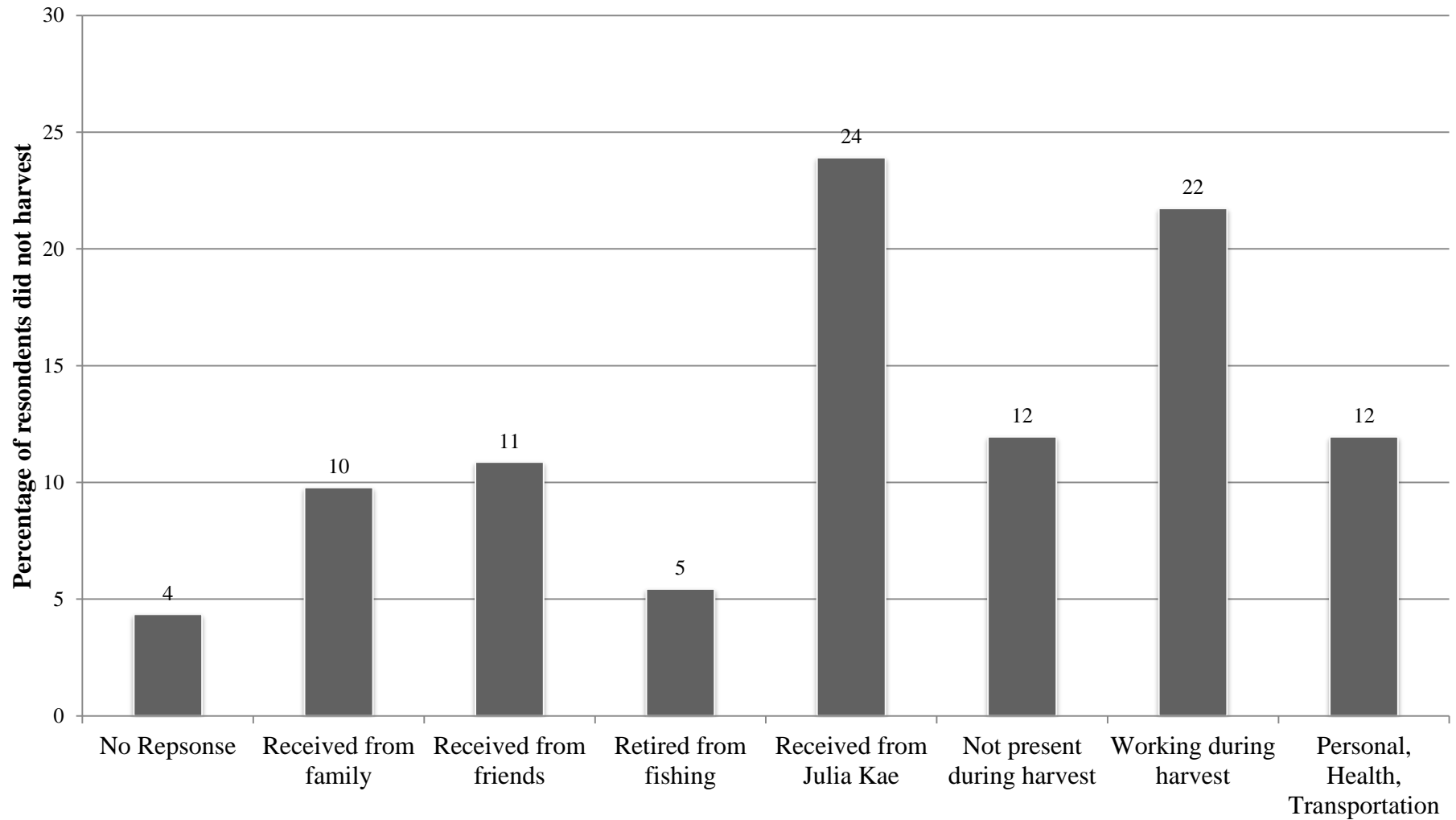
Herring Distribution 2010



Percentage of households harvesting and using herring spawn, 2002–2010



Reported reasons households did not harvest herring spawn, 2010



2010 Respondent Comments and Concerns

- Fewer harvesters participating in the fishery.
- F/V Julia Kae distributing harvest.
- Reduction of the spawning event over time.
- Weather interfering with setting trees in the southern part of the sound.

Togiak District Herring Spawn-on-Kelp Subsistence Fishery



2011 Herring Spawn-on-kelp weights (Togiak District)
 Date: 10/22/2011 Location: Sika/1011 Bog Junction's staff camp (mi)
 Name of harvestor: _____
 Species: Herring or other species? _____

Count	Sample 1 (lb)	Sample 2 (lb)	Spawn-on-kelp weight (lb)	Average (lb)
1	4.99	4.50	4.50	4.35
2	4.20	4.20	4.20	
3	4.46	4.46	4.46	4.39
4	4.18	4.18	4.18	4.34





Togiak Spawn at Low Tide