

HOONAH SOUND HERRING SPAWN-ON-KELP POUND FISHERY

2001 MANAGEMENT PLAN



By

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and

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INTRODUCTION

This plan provides an overview of the management approach, permit requirements, and regulations for the 2001 Hoonah Sound spawn-on-kelp pound fishery.

A closed pound fishery involves releasing sexually mature herring into a net impoundment in which kelp is suspended. The herring are released from the pound after they spawn on the kelp, and the kelp with eggs is then sold. **An open-pound fishery** involves suspending kelp from a floating frame structure in an area where herring are spawning. The herring are not impounded by a net but instead are allowed to naturally spawn on the suspended kelp. The kelp with eggs are removed from the water then sold. Both types of fisheries have in common the type of product produced, which is spawn-on-kelp.

During the 2000 season a total of 106 department permits were issued, 94 fishers were accounted for on the grounds and 84 pound operators made landings. The number of pound structures included 46 double closed pounds, two single closed pounds, and no open pounds. The harvest totaled 35.7 tons of spawn-on-kelp product valued at about \$587,600. The amount of total production in the 2000 fishery was roughly 50% of the previous year, with price per pound increasing by 17% to an average of \$8.23/lb. The average income for the 2000 fishery dropped from \$11,700 per fisher in 1999 to \$6,200 in 2000 (Table 1). Increased production in the fishery from 1997 through 1999 is related to a regulatory change allowing the harvest objective for the fishery to be set based on the forecast herring abundance rather than at a pre-determined level of 11-12 tons as was the case from 1990 to 1995. The decline in value and production during the 2000 season is attributed to reduced herring abundance based on the department forecast, a reduced herring GHL, and response to strong kelp allocation incentives by fishers who were willing to reduce the amount of herring impounded by switching to shared closed pounds. The 2000 season was the first season where such measures were taken in the Hoonah Sound fishery. New regulations setting forth a kelp allocation schedule by gear configuration and adopting former permit stipulations were adopted by the Alaska Board of Fisheries in February of 2000, and will be in effect for the 2001 fishing season.

The threshold or minimum amount of herring spawning biomass for this fishery to occur is 1,000 tons. Based on the forecast of **2,720 tons** for 2001, and a targeted harvest rate of 13.4%, the guideline harvest level (GHL) for the 2000 fishery is **366 tons** of herring. Based on 12.5 tons of herring per ton of product, the harvest objective for 2000 will be 29 tons of spawn-on-kelp product.

Department biologists listed at the end of this document are available to answer questions concerning this management plan. Pound fishery participants are also encouraged to carefully review the section of this plan containing requirements of other agencies.

CALENDAR OF EVENTS

The following is a calendar of events to be considered by pound operators for the 2001-fishing season.

- January 31 - 2001 Management Plans are available at all Southeast Alaska area offices.
- No Specific Deadline/Recommend March 1 - U.S. Forest Service special-use permit applications (for use of National Forest land above mean high tide) must be submitted to obtain a special-use permit. Special-use permits are required to camp or store gear on National Forest land in conjunction with this fishery. Please contact USFS directly for applications at (907) 747-4220.
- April 2 - Kelp permits will be available at department area offices.
- April 6 - The fishery will open by regulation to the capture of herring to be transferred into pounds.
- April 13-May 9 - Inclusive dates of documented herring spawning from 1990-2000.
- June 7 - Pounds must be completely removed from the fishing grounds.

REGULATIONS

The Alaska Board of Fisheries met in Sitka in February of 2000 and modified existing regulations for the two spawn-on-kelp fisheries in Southeast Alaska. These regulations will be in effect during the 2001 season. There are two errors in the printed regulation booklet, which are noted and corrected below. Otherwise the major changes in the regulations are as follows:

- 1) A commissioner's permit to operate a pound is no longer necessary. In the 2000-2001 Commercial Herring Fishing Regulation book 5 AAC 27.130. **LAWFUL GEAR FOR SOUTHEASTERN ALASKA AREA.** (c) states that a commissioner's permit is required. This is an oversight in the writing of the regulation book. The intent of the department and the Board of Fisheries was to eliminate the need for a commissioner's permit for this fishery. Therefore, no permit will be required beginning with the 2001 season.
- 2) The conditions that were formerly incorporated into the commissioner's permit are now largely placed into regulations, which are included in 5 AAC 27.185. **MANAGEMENT PLAN FOR HERRING SPAWN-ON-KELP IN POUNDS IN SOUTHEASTERN ALASKA.**
- 3) A standard table for kelp allocation is now part of the Management Plan in 5 AAC 27.185. The table in 5 AAC 27.185 (d) is in error. As stated in the department News Release of December 15, 2000 the table is corrected by transposing the "Single Permit Open Pounds" and the "Multiple Permit Closed Pounds" column headings. The correct kelp allocations for the 2001 season, since the 2001 GHL of 366 tons falls in the GHR of 250-399 tons, are as follows:
 - Single permit closed pounds – 120 blades of *Macrocystis* kelp;
 - Double permit closed pounds – 300 blades of *Macrocystis* kelp (per permit holder);
 - Single permit open pounds – 1,100 blades or 110 fronds of *Macrocystis* kelp;
 - Multiple permit open pounds – 1,100 blades or 110 fronds of *Macrocystis* kelp.
- 4) When operating open pound gear, operators may use either fronds or blades for use in their pounds. A frond is defined as the kelp stipe and the naturally attached blades. There is no limitation on the number of blades on a kelp frond, as long as they are naturally attached to the stipe.

Regulations pertaining to the Hoonah Sound pound fishery can be found in the 2000-2001 Commercial Herring Fishing Regulations booklet under **CHAPTER 27, ARTICLE 4. SOUTHEAST ALASKA AREA** under the following sections: 5 AAC 27.110. **FISHING SEASONS FOR SOUTHEASTERN ALASKA AREA.** (f), 5 AAC 27.130. **LAWFUL GEAR FOR SOUTHEASTERN ALASKA AREA.** (d), and (e), and 5 AAC 27.185. **MANAGEMENT PLAN FOR HERRING SPAWN-ON-KELP IN POUNDS.** (a) through (x), and 5 AAC 27.187 **BUYER AND PROCESSORS REPORTING REQUIREMENTS FOR SPAWN ON KELP IN POUNDS FOR THE SOUTHEASTERN ALASKA AREA.** Harvesting requirements for *Macrocystis* kelp are found in 5 AAC 37.100. **PERMITS. AND** 5 AAC 37.300. **HARVESTING REQUIREMENTS FOR MACROCYSTIS.**

It is the responsibility of fishers to carefully review and follow these regulations.

HERRING STOCK STATUS AND GUIDELINE HARVEST LEVEL

A summary showing spawning dates, mileage of spawn, and spawning stock size is presented in Table 2 and fluctuations and use of the spawning stock is shown in Figure 1. Since the department first monitored the population in 1971, the Hoonah Sound herring spawning stock has averaged 6.2 nautical miles of spawn and 2,720 tons of spawning biomass. However since 1990, the year the spawn-on-kelp fishery started, the stock has maintained an average of 10.5 nautical miles of spawn and 3,615 tons of spawning biomass. The historic peak spawning biomass occurred in 1998 when a spawning biomass of 6,472 tons was observed.

In 2000, approximately 13.0 nautical miles of spawn was observed from April 27 through April 29. The spawning biomass estimate derived from dive surveys was 3,635 tons of herring. Age composition of this herring included 23% age-3, 10% age-4, 10% age-5, 24% age-6, and 31% age-7, and 2% age-8. The 2000 return was 950 tons above the 2000 forecast, in large part since recruitment of 3-year-old herring was the highest since the 1996 recruitment of the 1993 year-class. The 1993 year-class has dominated the age structure of the population for the past five years (Table 3, Figure 2).

Based on spawning age structure and biomass in 2000, the forecast return for Hoonah Sound in 2001 is **2,720 tons**. The guideline harvest level (GHL) for 2000 is **366 tons** based on a 13.4% harvest rate. The spawn-on-kelp harvest objective is 29 tons based on 12.5 tons of herring per ton of spawn-on-kelp product. The expected age structure for 2001 is 38% age-4, 9% age-5, 7% age-6, 19% age-7, and 26% ages-8 & up.

In order to remain within the 2001 GHL new regulations provide for the use of kelp incentives to encourage pound operators to fish multiple-permit closed pounds or open pounds. For the 2001 season the kelp allocation to achieve the harvest objective will be **120 blades for single-permit closed pounds, 300 blades per permit holder for double-permit closed pounds, and 1,100 blades or 110 fronds for either single- or multiple-operator open pounds.**

Herring spawning normally occurs in Hoonah Sound during the last two weeks of April. The earliest recorded spawning occurred on April 13, 1990, and the latest recorded spawning was on May 17, 1971. During the 2000 season spawning occurred from April 27 through April 29. Traditionally, spawning occurs in Hoonah Sound around Vixen and Emmons Islands and the shoreline from Fick Cove to Ushk Point. Spawning has also been observed in Peril Strait along the Chichagof Island shoreline from Finger River to Broad Island, at False Island, and along the Baranof Island shoreline from Nismeni Point to Point Benham.

LIMITED ENTRY

On January 1, 1995, the Commercial Fisheries Entry Commission adopted a regulation placing the Southeastern Alaska herring spawn-on-kelp pound fisheries in the Hoonah Sound and Craig/Klawock areas under limited entry. The maximum number of limited entry cards for the Hoonah Sound spawn-on-kelp fishery has been set at 107. Based on administration of the point system adopted in February of 1995 CFEC has now issued 100 limited entry permit cards for this fishery. Up to 7 interim-use permit cards may be issued during the 2001 season pending the outcome of hearings and administrative reviews now in progress. At most, 107 fishers would be eligible to participate in the Hoonah Sound fishery during the 2001 season.

HARVEST AND ALLOCATION OF KELP

A permit is required to harvest kelp for use in the pounds (5 AAC 37.900). Kelp harvest permits may be obtained from local department offices. Kelp blades will be allocated equally among permit holders fishing the same type of gear. The amount of kelp allowed to be harvested for each permit holder is based on the kelp allocation table as indicated under REGULATION 5 AAC 27.185 (d) as corrected above under REGULATIONS, plus an allowance for breakage and loss during transport. Specific allocation limits for the 2001 season are as follows:

- Single permit closed pounds – 120 blades of *Macrocystis* kelp;
- Double permit closed pounds – 300 blades of *Macrocystis* kelp (per permit holder);
- Single permit open pounds – 1,100 blades or 110 fronds of *Macrocystis* kelp;
- Multiple permit open pounds – 1,100 blades or 110 fronds of *Macrocystis* kelp.

Total harvest limits are set on the kelp permit, and generally include a 15% breakage allowance. Kelp permits may be issued to individuals holding CFEC permit cards for the Hoonah Sound fishery who are harvesting for a group of CFEC permit holders provided that the name and amount harvested for each permit holder is listed on the permit. Kelp permits may be obtained from local Fish and Game offices beginning April 2 and must be completed and returned to the department within 30 days after harvesting of kelp.

The kelp allocation incentive table is intended to encourage fishers to share closed herring pounds during times when forecast herring stock abundance and the associated herring GHL is above threshold but relatively low, and to allow fishers to fish more single closed pounds when forecast herring abundance is relatively high. As the herring forecast and GHL increases, the kelp allocation becomes increasingly more liberal. The kelp allocations as set forth in the allocation table are upper limits, not required amounts, and fishers may decide within that limit how much kelp they will actually suspend from their pounds. Use of open pounds is also encouraged through kelp allocations as an option to help minimize herring handling and impoundment. Fishers choosing to fish open pounds are allowed to fish with larger amounts of kelp blades or with kelp fronds with the blades naturally attached to the kelp stalk. When harvesting fronds of kelp for use in open pounds, fishers are reminded that provisions of 5 AAC 37.300. HARVESTING REQUIREMENTS FOR MACROCYSTIS KELP (a)-(d) prevent harvest using diving gear, dislodging plants from the bottom, or cutting of kelp stalks at depths greater than one foot below the water surface.

HARVEST AND PRODUCTION

Each permit holder's spawn-on-kelp blades must remain separate from other permit holder's spawn-on-kelp blades until after processing and grading is completed. Permit holders will be allowed to harvest all of the spawn-on-kelp product produced in their pounds. A permit holder's fish ticket must report only the spawn-on-kelp harvested from his/her own pound. Each permit holder fishing a jointly operated pound shall be issued a fish ticket and the **sum** of the weights of those tickets shall equal the total weight of product produced in the jointly operated pound. All fishers and any vessel carrying unlanded and unprocessed spawn-on-kelp product from the fishing grounds must first contact the department and hail the estimated amount of spawn-on-kelp product harvested and indicate the intended time and location where a landing will occur. For any product that has been landed on the grounds to a licensed processor, the processor (not the fishers) will be required to hail the department with delivery weight for each landing on board.

FISHERY CONDUCT AND MANAGEMENT

Suitable sites for pounds in Hoonah Sound are limited. To avoid herring mortality and damage to the pounds, operators should locate their pounds in an area with minimal exposure to wind and wave action, and with a relatively deep bottom. The distance between the location where herring are captured and the pound will be anchored should be minimized since long towing distances can cause stress induced spawning, egg loss, de-scaling of herring, and mortality of herring. The area between Emmons Island and Vixen Island has been the main focus for anchoring pounds since herring normally spawn near this area.

The department will be closely monitoring herring activity in Hoonah Sound by vessel and aerial surveys. Results of aerial surveys will be announced by recorded message at 907-747-5022 or by department news release if findings have a significant bearing on when fishing activity should begin. Permit holders may begin catching and transferring herring at any time after 12:01 a.m. April 6, 2000 until closed by emergency order. If it appears spawning will occur earlier than this date, the fishery may be opened earlier to avoid loss of the fishery.

The department will station a state vessel and personnel in Hoonah Sound when herring are available for capture. After that time department personnel will closely monitor all phases of the fishery to assure compliance with permit conditions. All fishery announcements, including updates of herring activities and fishery openings/closures, will be broadcast by VHF radio, channel 10. Fishers are expected to have a VHF radio.

The capture and transfer of herring into pounds will be monitored to document any mortality or rough handling of herring. To avoid mortality, the transport of herring to the pound site must be done with the pound itself or a pushable/towable net pen. Transporting with a purse seine will not be allowed. Pound operators are also advised to **slowly push pounds or to tow alongside** of the transfer pound to avoid prop wash and crushing herring against the net. Fishers are asked to avoid making and holding large sets intended to fill multiple pounds in order to avoid mortality and stress of herring. The department may temporarily close the fishery or limit fishing to daylight hours only, in order to minimize stress and mortality, to reduce potential set size, and to better monitor the fishery.

Although the department has determined a limitation on the number of kelp blades that can be harvested and placed in each permit holder's pound, fishers are encouraged to fish the number of blades which will maximize the overall quality and value of their product rather than simply to fish the total amount allowed by the department.

REQUIREMENTS FOR BUYERS

New regulations will be in effect for buyers and processors of spawn-on-kelp product from the Hoonah Sound and Craig-Klawock fisheries in 2001. These requirements can be found in **5 AAC 27.187. BUYER AND PROCESSORS REPORTING REQUIREMENTS FOR SPAWN ON KELP IN POUNDS FOR THE SOUTHEASTERN ALASKA AREA.**

Buyers, processors, and permit holders should read and become familiar with these reporting requirements.

Operators of floating processing vessels, tender vessels, and catcher-processors will be required to report in person, by VHF radio, or by telephone, to the Department of Fish and Game office in Sitka or directly to

department area management biologists on the grounds before the start of processing operations in Hoonah Sound. These reporting requirements are specified by regulation **5 AAC 39.130 (g)**.

LICENSE REQUIREMENTS

Operators must obtain a 2001 entry permit (L21C) from the CFEC. Individuals who do not have a CFEC permit but are assisting in the operation of the fishery in any manner, must have a 2001 crewmember license. All commercial vessels used in the fishery (including skiffs) are required to have a 2001 vessel license with the CFEC. Fishers are required to display the permanent vessel license plate (ADF&G number) on both sides of the hull, cabin, or mast in permanent symbols at least 12-inches high and with lines at least one-inch wide that contrast with the background.

Applications for vessel and CFEC permits are available from all offices of the Alaska Department of Fish and Game or they can be obtained by writing the Commercial Fisheries Entry Commission, 8800-109 Glacier Highway, Juneau, Alaska 99801-8079. Fishers are reminded to apply for all licenses well in advance of the fishery. Crewmember licenses may be obtained from local vendors in most communities.

OTHER AGENCY REQUIREMENTS

Prospective pound operators are advised to consider other agency requirements for constructing and operating pounds in Hoonah Sound. Pound operators are urged to contact the Alaska Department of Natural Resources, U.S. Forest Service, the National Marine Fisheries Service, and the United States Coast Guard to determine other regulations and requirements. For your convenience phone numbers for those agencies are listed below.

Department of Natural Resources

The Alaska Department of Natural Resources (907-465-3400) manages the use of tide and submerged lands seaward of mean high water (9.1 ft.).

U.S. Forest Service

In the Hoonah Sound area, the U.S. Forest Service has jurisdiction over and manages public land above mean high tide. People who plan to use National Forest land in connection with the fishery must apply for a special use permit from the Forest Service prior to any occupancy. Special use permit applications are available at the Sitka Ranger District Office, 201 Katlian, Suite 109, Sitka, Alaska 99835, (907-747-4220). Completed applications should be submitted to the Sitka Ranger District well in advance of operations to ensure that a permit is received in time for the fishery. Examples of use needing a permit include (but not limited to): camping on National Forest in conjunction with the commercial fishery, and storage of gear on the National Forest.

National Marine Fisheries Service

The National Marine Fisheries Service (907-747-6940) regulates activities, which might harm marine mammals.

United States Coast Guard

Structures such as floating fish pens are subject to the requirements of the Code of Federal Regulations, Title 33, Part 64. This regulation requires an owner to apply for a Coast Guard permit and to install and maintain a light or other private aid to navigation if the Coast Guard determines it to be necessary to protect maritime navigation.

The proposed pens of the Hoonah Sound spawn-on-kelp pound fishery do not require permits for private aids to navigation at this time, provided the owners:

1. Place two signs on opposite corners of the structure. These signs will be worded “Danger, Fish Pens” (Figure 4).
2. Place a single, all-points white light on one corner of structures less than 400 square feet in size.
3. Place a single, all-points white light on every corner of structures larger than 400 square feet in size.
4. Anchor fish pens within the boundary area specified in ADF&G regulation 5 AAC 27.185 (f)(2) (Figure 3).

If all these conditions are not met, the permit holder must apply to the Coast Guard for an individual “Private Aids to Navigation Permit.” If you have questions, call the Coast Guard Aids to Navigation office, at (907) 463-2254.

Table 1. Hoonah Sound herring spawn-on-kelp fishery summary, 1990-2000.

	1990	1991	1992	1993	1994	1995
Herring Quota (tons)	150	150	150	150	150	150
Harvest Quota (tons)	11	12	12	12	12	12
Harvest (tons)	11.9	13.25	23.12	14.0	32.7	27.4
Ex-vessel Value	\$201,348	\$193,715	\$453,152	\$542,080	\$1,683,396	\$1,175,460
Average Price/lb	\$8.46	\$7.31	\$9.80	\$19.36	\$25.74	\$21.45
Average Income	\$2,034	\$2,334	\$4,196	\$8,470	\$15,444	\$9,715
Number of Applicants	400	185	199	230	195	153
Number of Pounds	128	104	120	115	123	132
Number Selling Product	99	83	108	64	109	121
Kelp Allocation (blades)	240	280	240	160	140	100
Number of Kelp Permits	26	25	27	25	25	27
Kelp Blade Harvest	31,260	28,355	27,255	16,260	18,340	15,195
Harvest Limit (lb)	170	none	none	none	none	none
Fishery Open - Closed	4/13-4/22	4/6-4/25	4/6-4/26	4/6-5/3	4/6-4/25	4/6-4/22
Fishing Occurred	4/13-4/22	4/15-4/25	4/17-4/26	4/26-5/2	4/21-4/24	4/17-4/22
Harvest Occurred	4/18-4/27	4/22-4/29	4/22-4/30	4/25-5/2	4/25-4/27	4/22-4/26
	1997	1998	1999	2000		
Herring Quota (tons)	1421	700	778	359		
Harvest Quota (tons)	114	56	62	29		
Harvest (tons)	65.2	85.9	71.6	35.7		
Ex-vessel Value	\$920,000	\$1,160,523	\$1,005,529	\$587,568		
Average Price/lb	\$7.05	\$6.75	\$7.02	\$8.23		
Average Income	\$6,694	\$10,092	\$11,692	\$6,251		
Number of Applicants	139	133	106	106		
Number of Pounds	113/18 ^a	115	96	48 ^b		
Number Selling Product	112/12 ^a	115	86	84		
Kelp Allocation (blades)	430/860 ^a	400/800 ^a	400/800 ^a	110/300 ^c		
Number of Kelp Permits	34	31	22	17		
Kelp Blade Harvest	68,755	54,275	42,025	29,820		
Harvest Limit (lb)	none	none	none	none		
Fishery Open - Closed	4/6-4/29	4/6-4/27	4/6-5/3	4/6-5/3		
Fishing Occurred	4/22-4/29	4/18-4/26	4/29-5/2	4/27-4/29		
Harvest Occurred	4/27-5/3	4/25-4/27	5/3-5/5	5/2-5/4		

^a Closed pound/Open Pound

^b Forty-six double closed pounds + 2 single closed pounds.

^c One hundred and ten blades for single closed/300 blades for double closed pounds. Note: No fishery occurred in 1996 since the biomass forecast was below the 1,000-ton threshold.

Table 2. Hoonah Sound herring spawning stock summary, 1971-2000.

YEAR	DATES	SPAWNING NAUTICAL MILES OF SPAWN	SPAWNING STOCK BIOMASS (TONS)
1971	5/10-5/17	2.5	N/A
1972	5/11-5/12	1.5	N/A
1973	N/A	1.0	N/A
1974	5/14	3.0	N/A
1975	N/A	0	N/A
1976	5/5	1.0	N/A
1977	N/A	3.5	N/A
1978	N/A	5.3	N/A
1979	N/A	N/A	N/A
1980	N/A	N/A	N/A
1981	4/30-5/01	2.3	753
1982	4/29-5/01	1.5	N/A
1983	5/01	1.0	N/A
1984	4/26-5/01	3.0	540
1985	5/01-5/03	3.5	N/A
1986	4/28-5/01	3.8	N/A
1987	4/28-5/02	3.8	740
1988	4/30-5/01	5.0	N/A
1989	4/16-4/20	17.0	4,000
1990	4/13-4/28	10.0	2,350
1991	4/19-4/24	8.7	2,175
1992	4/22-4/24	10.8	5,714
1993	4/27-4/29	5.7	1,099
1994	4/21-4/23	9.0	2,450
1995	4/20-4/21	4.5	274
1996	5/02-5/9	10.1	4,023
1997	4/25-4/28	14.5	5,884
1998	4/23-4/27	14.5	6,472
1999	4/27-5/1	13.8	4,426
2000	4/27-4/29	13.0	3,635
AVERAGE	1971-2000	6.2	2,969
10 YR AVG	1990-2000	10.5	3,615

Table 3. Percent-at-age composition of spawning Hoonah Sound herring, 1991-2000.

Age Class	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
3	44	7	7	3	25	83	8	2	3	23
4	8	55	17	10	6	13	80	13	5	10
5	4	6	56	35	16	1	7	77	13	10
6	15	4	8	42	30	1	2	7	72	24
7	22	14	1	5	19	2	2	1	6	31
8+	5	11	10	6	4	1	1	1	1	2
Spawning Biomass (tons)	2,175	5,714	1,099	2,450	274	4,023	5,884	6,472	4,426	3,635

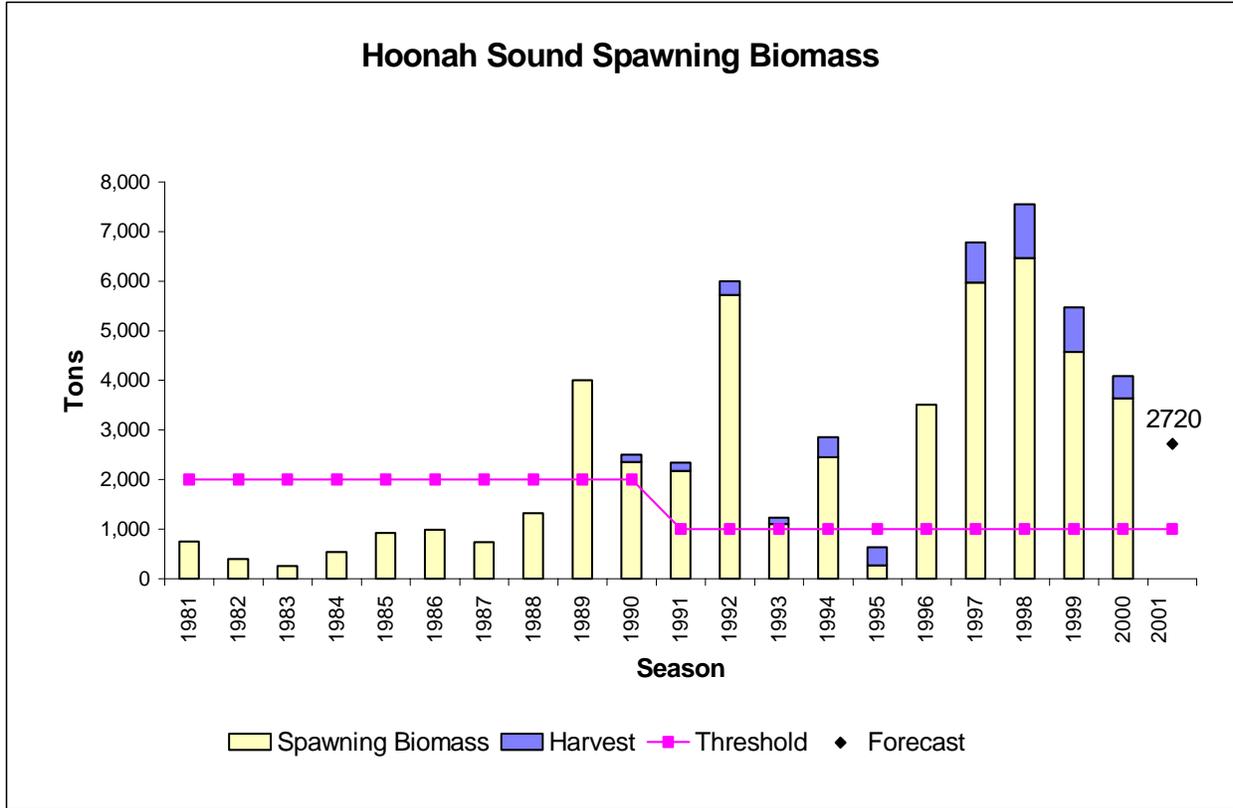


Figure 1. Hoonah Sound herring stock performance showing estimated spawning biomass and harvest (based on 1 ton of spawn-on-kelp to 12.5 tons of herring), 1981-2000, and the 2001 forecast biomass.

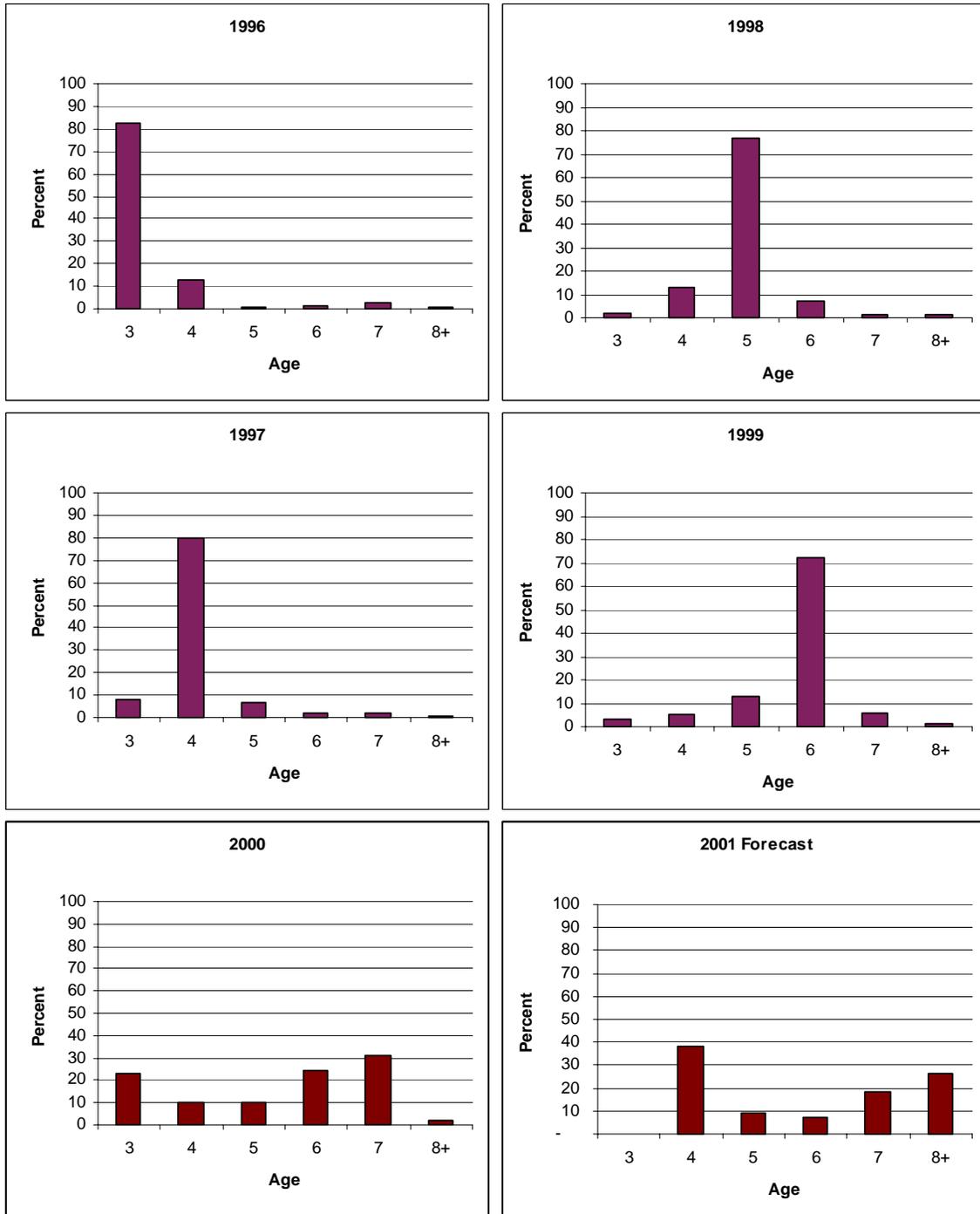
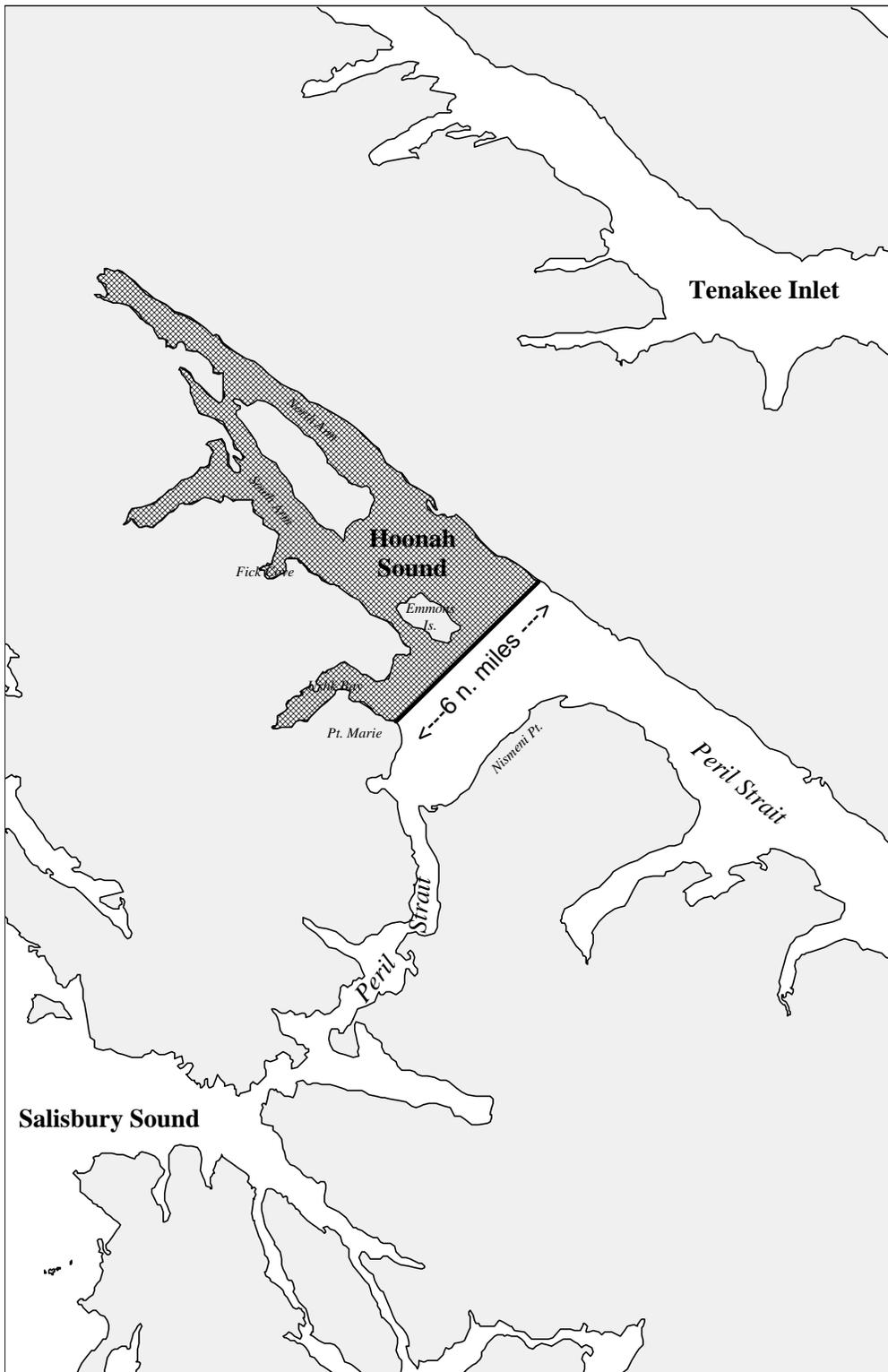


Figure 2. Percent-at-age composition of spawning Hoonah Sound herring, 1996-2000, and 2001 forecast age composition.



Hoonah Sound Herring Spawn-On-Kelp in Pounds Fishery Location

Figure 3. Spawn-on-Kelp boundary area for herring pound structures.

LIST OF MANAGEMENT CONTACTS

Following are Commercial Fisheries Division contacts regarding this management plan:

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