NORTHERN SOUTHEAST HERRING SPAWN-ON-KELP POUND FISHERY

2003 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 2003 Hoonah Sound spawn-on-kelp pound fishery and the newly established Tenakee Inlet spawn-on-kelp fishery. 5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP IN SOUTHEASTERN ALASKA establishes the regulatory framework for the Northern Southeast Alaska spawn-on-kelp fisheries.

The Alaska Board of Fisheries met in Sitka in January 2003 and modified the existing regulations for the herring spawn-on-kelp fishery in Section 13-C (Hoonah Sound), and created a new herring spawn-on-kelp fishery in Section 12-A (Tenakee Inlet). The Section 12-A fishery will be considered as part of the Northern Southeast spawn-on-kelp limited entry 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.

In Hoonah Sound during the 2002 season, a total of 98 permit holders made landings totaling 273,179 pounds of spawn on kelp. The 2002 season provided the highest harvest of spawn on kelp in the history of the Hoonah Sound spawn-on-kelp fishery with an exvessel value of $2.0 million. The high production during the 2002 season was the result of a high guideline harvest level (GHL) for this stock of 1,264 tons. This allowed single-permit closed pound operators to use 1,000 *Macrocystis* kelp blades under the kelp allocation guidelines in regulation. The highest number of kelp blades a permit holder was allowed in a closed pound previous to the 2002 season was 430 kelp blades (Table 1).

In Hoonah Sound the threshold or minimum amount of herring spawning biomass for this fishery to occur is 1,000 tons. Based on the forecast of **3,036 tons** for 2003, and a targeted harvest rate of 14%, the GHL for the 2003 fishery is **427 tons** of herring.

In Tenakee Inlet the threshold or minimum amount of herring spawning biomass for this fishery to occur is 3,000 tons. Based on the forecast of **4,731 tons** for 2003, and a targeted harvest rate of 11.2%, the GHL for the 2003 fishery is **528 tons** of herring. Newly established regulations for Tenakee Inlet herring allocate 90% of the GHL to the winter food and bait fishery and 10% to the bait pound fishery. The spawn-on-kelp fishery will be allowed to use any remaining GHL not taken in the winter food and bait fishery and bait pound fishery. The GHL for the herring pound spawn-on-kelp fishery will be announced March 17.

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 2003 fishing season.

March 14	-	2003 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 the USFS directly for applications at (907) 747-4220.
April 2	-	Kelp permits will be available at department area offices.
April 6	-	The fisheries will open by regulation to the capture of herring to be transferred into pounds.
April 13–May 9	-	Inclusive dates of documented herring spawning in Section 13-C from 1990–2002.
April 21–May 14		Inclusive dates of documented herring spawning in Section 12-A from 1990–2002.
June 7	-	Pounds must be completely removed from the fishing grounds.

REGULATIONS

The Alaska Board of Fisheries met in Sitka in January 2003 and modified the existing regulations for the herring spawn-on-kelp fishery in Section 3-B (Craig/Klawock), Section 13-C (Hoonah Sound), and created new herring spawn-on-kelp fisheries in District 7 (Ernest sound) and Section 12-A (Tenakee Inlet). The District 7 fishery will be considered part of the Southern Southeast spawn-on-kelp limited entry fishery (L21C) and Section 12-A will be considered part of the Northern Southeast spawn-on-kelp limited entry fishery (L21A).

The board modified the kelp allocation tables for the Hoonah Sound (Section 13-C) spawn-on-kelp herring pound fishery and created a kelp allocation table for the Tenakee Inlet (Section 12-A) fishery.

In Section 13-C, the kelp allocation is as follows:

Guideline Harvest Range for Herring (tons)	Single Permit Closed Pounds	Double-Permit Closed Pounds	Triple-Permit Closed Pounds	Single Permit Open Pounds	Multiple Permit Open Pounds
100 – 249	none	none	none	60 fronds or 600 blades	60 fronds or 600 blades
250 –399	200 blades	400 blades	500 blades	110 fronds or 1,100 blades	110 fronds or 1,100 blades
400 – 599	300 blades	500 blades	750 blades	160 fronds or 1,600 blades	160 fronds or 1,600 blades
600 – 799	1,000 blades	1,000 blades	1,500 blades	230 blades or 2,300 fronds	230 blades or 2,300 fronds
800 or more	1,000 blades	1,000 blades	1,500 blades	300 blades or 3,000 fronds	300 blades or 3,000 fronds

In Section 12-A, the kelp allocation is as follows:

Guideline Harvest Range for Herring (tons)	Single Permit Closed Pounds	Double-Permit Closed Pounds	Triple-Permit Closed Pounds	Single Permit Open Pounds	Multiple Permit Open Pounds
50 – 99	none	none	none	100 fronds or 1,000 blades	300 fronds or 3,000 blades
100 – 299	200 blades	400 blades	500 blades	150 fronds or 1,500 blades	450 fronds or 4,500 blades
300 – 499	300 blades	500 blades	500 blades	200 fronds or 2,000 blades	600 fronds or 6,000 blades
500 – 699	400 blades	500 blades	500 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades
700 +	1,000 blades	1,000 blades	1,000 blades	250 fronds or 2,500 blades	750 fronds or 7,500 blades

Besides modifying the kelp allocation tables the board also adopted proposals that clarified the allocation of herring between the bait fisheries, which include bait pound fisheries in addition to the winter food and bait fishery, and the spawn-on-kelp fisheries.

District 12 (Tenakee): the harvest limit for the bait pound fishery will be 10 percent of the guideline harvest level for the Tenakee Inlet stock, and the harvest limit for the winter food and bait fishery is 90 percent of that guideline harvest level. If there are no active herring bait pound permits on March 15 each year the remainder of the seasonal GHL will be allocated to the herring spawn-on-kelp fishery. Any remaining GHL after the close of the spawn-on-kelp fishery in District 12 will be available for the bait pound fishery. The department will announce via a subsequent news release the herring allocation for the spawn-on-kelp fishery on March 17, 2003.

In addition to modifying the kelp allocation tables and clarifying the herring allocation plans the board also adopted proposals that modified the overall management plan of the herring spawn-on-kelp fisheries. A summary of these actions includes:

1. After the last herring has been placed into the pounds, **two pounds** of two or more CFEC permit holders may drop a wall of their respective pounds to allow herring to swim between two connected pounds. The CFEC permit holders must notify the department representative prior to joining their pounds. Additional herring may not be allowed into the pounds once the two of them are joined.

This does not change the definition of pounds as found in **5 AAC 27.130. LAWFUL GEAR FOR SOUTHEASTERN ALASKA AREA. (e)(1)** which, in part, states that webbing of a closed pound may not be part of the webbing of another closed pound. Therefore, after fishing operations have ended, two pounds may be joined, but they must remain up to that point a single unit of gear.

If two pounds are joined the regulation that allows for retention of herring for six days will be enforced on the pound which first had herring placed into the structure. Only two pounds can be joined together.

2. All lines or structures used to suspend kelp must have legible tags above the water surface that states the actual number of blades or fronds on that line or structure along with the permit holder's first and last name. A CFEC permit holder must keep that permit holder's kelp on separate lines or structures.

   The term structure was added to allow for pound operators that suspend their kelp on something besides lines the ability to identify the number of blades or fronds being used.

3. For the purpose of this fishery a closed pound is considered to be fishing once herring have been introduced into the closed pound structure; a closed pound is considered to have stopped fishing once all of the herring have been released and all of the spawn-on-kelp product has been removed from the closed pound structure.

4. For the purpose of this fishery an open pound is considered to be fishing once kelp has been attached to the open pound structure; an open pound is considered to have stopped fishing once all of the spawn-on-kelp product has been removed from the open pound structure.

The reason for the last two changes is to define how a permit holder may participate in both of the Hoonah Sound and Tenakee Inlet fisheries in which they hold a permit. For example for a Northern Southeast spawn-on-kelp CFEC permit holder to operate a closed pound in both Section 13-C and 12-A all the herring must be released and the product harvested from one Section before a pound can be actively fished in another Section.

The board also identified the waters in Section 12-A that will be open for the spawn-on-kelp fishery. The open waters for Section 12-A include: the waters of Chatham Strait and Tenakee Inlet south of the latitude of **57°46.00'** N. latitude and north of the latitude of Peninsular Point at **57°30.30'** N. latitude and west of the longitude of **134°50.00'** W. longitude (Figure 1).

Additional regulations pertaining to the Hoonah Sound pound fishery can be found in the 2002–2003 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

Methods of Forecasting Herring Biomass

The Biomass Accounting (BA) method of forecasting is used to determine the season's guideline harvest level (GHL) in Hoonah Sound. The BA method uses the most recent year's spawn deposition estimate of eggs, the age composition of the spawning biomass, and weights-at-age to project the following year's return of mature herring. The Hoonah Sound projection also uses the average survival estimate from the age-structured analyses (ASA) from four other areas in Southeast Alaska, and maturation rates estimated by ASA for the nearby Sitka Sound herring stock. A median level of recruitment of age-3 herring specific to Hoonah Sound is also applied to forecast biomass.

This BA method is unlike the ASA method used for forecasting herring biomass for several of the larger stocks in Southeast Alaska, including Tenakee Inlet. The ASA method also uses the spawn deposition estimate of the eggs and the age composition to project the following year's return of mature herring. However, the ASA model calculates survival and maturation rates specific to the spawning stock. The ASA model utilizes a long time series of spawn deposition and age composition information to provide an estimate of the most recent biomass, from which the forecast biomass for the next year is determined. It is expected that sufficient data will be available to use the preferred ASA method of forecasting for the Hoonah Sound stock for the 2004 season.

Once a forecast of the season's biomass is calculated, a standard sliding harvest rate formula allows for a harvest rate of between 10 and 20% depending upon the size of the stock. When the spawning biomass forecast for an area equals the threshold, the exploitation rate is 10% of the estimated spawning biomass. For each incremental increase in the spawning biomass equal to the threshold, the exploitation rate increases by 2%.

Hoonah Sound (Section 13-C)

A summary showing spawning dates, mileage of spawn, and spawning stock size is presented in Table 2. Since the department first monitored the population in 1971, the Hoonah Sound herring spawning stock has averaged 6.6 nautical miles of spawn and 2,306 tons of spawning biomass. Since 1990, the year the spawn-on-kelp fishery started, the stock has maintained an average of 10.8 nautical miles of spawn and 3,998 tons of spawning biomass. The highest ever-recorded spawning biomass occurred in 2001 when 8,538 tons was observed.

In 2002, approximately 11.9 nautical miles of spawn were observed from April 25 through May 1. The spawning biomass estimate derived from dive surveys was 4,936 tons of herring. Age composition of the 2002 spawning herring was 4% age-3, 27% age-4, 24% age-5, 6% age-6, 7% age-7, and 31% age-8+ (Table 3).

Based on spawning age structure and biomass in 2002, the BA method forecast return for Hoonah Sound in 2003 is **3,036 tons.** The GHL for 2003 is **427 tons** based on a 14% harvest rate. The expected age structure for 2003 is 10% age-3, 9% age-4, 24% age-5, 21% age-6, 5% age-7, and 32% ages-8+.

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 2002 season spawning occurred from April 25 through May 1. 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.

Tenakee Inlet (Section 12-A)

The Tenakee Inlet stock has been utilized for the winter food and bait fishery since the 1978/1979 season. The GHL for the winter food and bait fishery in Tenakee Inlet has ranged from a low of 200 tons in 1978/1979 to a peak GHL of 1,700 tons in 1985/1986 (Table 4). In Tenakee Inlet, the threshold biomass needed before a fishery can occur is 3,000 tons.

ADF&G has been conducting aerial surveys in Tenakee Inlet since the early 1970s to define herring spawn deposition areas and to estimate the total miles of spawn to provide an indication of herring stock size or biomass. Aerial surveys were supplemented with hydroacoustical surveys, starting in the winter of 1978/1979 and continued through the 1989/1990 season, to provide a more refined estimate for biomass of Tenakee Inlet herring. Starting in the spring of 1987, spawn deposition dive surveys were routinely used, in addition to aerial surveys, to assess the spawning biomass.

In the early to mid-1990s, the Tenakee Inlet herring stock was at a depressed level due to a period of low recruitment beginning in 1988. It was not until 1996 that a strong recruitment of three-year-old herring entered into the population boosting the biomass to over 4,500 tons, up from 200 tons the previous year. The biomass peaked in 1999 at 11,000 tons and has since declined back down to around 4,400 tons in 2002.

Dive surveys, conducted in the spring of 2002, estimated the Tenakee Inlet herring spawning biomass at 4,366 tons. This value was used in conjunction with the ASA model to provide a return forecast for the 2002/2003 herring biomass of 4,731 tons. An exploitation rate of 11.2% was calculated based on a standard sliding harvest rate formula and the **GHL for the 2002/2003 season was 528 tons**. The age composition of the 2002 spawning population was 14% age-3, 28% age-4, 18% age-5, 7% age-6, 7% age-7, and 27% age-8+ (Table 5).

Spawning in Tenakee Inlet has generally occurred between the last week in April and the first week of May (Table 4). During the 1970s through the late 1980s, herring primarily spawned along the south shoreline of Tenakee Inlet between Saltery Bay and Trap Bay. The most frequented spawning grounds were along the east and west shoreline of Kadashan Bay. During the spring of 1989, aerial surveys revealed that herring had spawned in the East Point and Wachusetts Cove areas on the Chatham Strait shoreline north of Tenakee Inlet. Additional herring spawn was observed south of Tenakee Inlet between South Passage Point and Basket Bay in Chatham Strait. This was the first time herring had been recorded spawning in areas other than their more traditional spawning grounds inside Tenakee Inlet. The spring of 1996 was the only season that significant spawning was recorded on the north shore of Tenakee Inlet. This spawn occurred on the shoreline from Tenakee Springs to Cannery Point. A total of 18.1 nautical miles of spawn occurred during the spring of 1996.

From 1998 through 2002, spawning has occurred inside Tenakee Inlet along its southerly shoreline from Saltery Bay to South Passage Point and on the Chatham Strait shoreline south of South Passage Point (Figure 2). Significant spawning has occurred between South Passage Point and Basket Bay four of the

past five seasons (1998–2002) and in 2000 no spawning was recorded in Tenakee Inlet and all of the spawn occurred in Chatham Strait between South Passage Point and Peninsular Point.

A total of 15.4 nautical miles of shoreline was mapped as receiving herring spawn in spring 2002. Spawning inside Tenakee Inlet primarily occurred from Corner Bay to Trap Bay and in Chatham Strait from South Passage Point to the northern entrance of Basket Bay.

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. By regulation, the maximum number of limited entry cards for the Northern Southeast area spawn-on-kelp fishery is 109. 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 8 interim-use permit cards may be issued during the 2003 season pending the outcome of hearings and administrative reviews now in progress. At most, 108 fishers will be eligible to participate in the Hoonah Sound fishery during the 2003 season.

HARVEST AND ALLOCATION OF KELP

A permit is required to harvest kelp for use in 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) plus an allowance for breakage and loss during transport. Specific allocation limits are for individual permit holders and are dependent upon the herring GHL and the type of gear to be used. The allocations for the 2003 season are as follows:

Section 13-C (Hoonah Sound):

- Single permit closed pounds — 300 blades of *Macrocystis* kelp;
- Double permit closed pounds — 500 blades of *Macrocystis* kelp (per permit holder);
- Triple permit closed pounds — 750 blades of *Macrocystis* kelp (per permit holder);
- Single permit open pounds — 1,600 blades or 160 fronds of *Macrocystis* kelp;
- Multiple permit open pounds — 1,600 blades or 160 fronds of *Macrocystis* kelp.

Section 12-A (Tenakee Inlet): To be determined on March 17.

Total harvest limits are set on the kelp permit, and generally include a 10% breakage allowance. Kelp permits may be issued to individuals holding CFEC permit cards for the Hoonah Sound and/or Tenakee Inlet fisheries 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. A separate permit is required for each separate fishery for which kelp is harvested.

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 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 and Tenakee Inlet 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 and Tenakee Inlet 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, 2003 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.

In Hoonah Sound, the department will station a state vessel and personnel on the grounds when herring are available for capture. In Tenakee Inlet department personnel will be stationed in Tenakee Springs and will use a skiff to monitor fishing activity. Department personnel will closely monitor all phases of the fishery to assure compliance with regulations. 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 should be done with the pound itself or a pushable/towable net pen. Transporting with a purse seine is discouraged except for very short distances. Pound operators should **slowly push pounds or tow alongside** of the transfer pound to avoid prop wash and crushing herring against the net. Pound operators are also advised to minimize the distance of towing of herring to avoid stressing the herring and egg loss which can result in poorer quality product. 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.

The department has been receiving numerous inquiries from fishers wanting to participate in both the Hoonah Sound fishery and the newly established Tenakee Inlet fishery. The herring spawning dates in Hoonah Sound and in Tenakee Inlet have been very similar, especially in recent years (Figure 3). This will create challenges for those permit holders wanting to fish in both areas in any one year. Fishers are warned that only one unit of gear or one pound may be fished by a permit holder at any given time. The Board of Fisheries provided regulatory language defining when a pound is fishing and when it is not (see "REGULATIONS" section of this document). Fishers are also reminded that the permit holder must be physically present at the pound site at all times during operation of the pound as defined in Section (l) of 5 AAC 27.185 MANAGEMENT PLAN FOR HERRING SPAWN ON KELP POUNDS IN SOUTHEASTERN ALASKA AREA. The spawn timing graph represented in Figure 3 is provided for general reference and it cannot be predicted preseason when spawning events will actually occur.

The Hoonah Sound area is a high-use recreational area that is valued for its fish and wildlife resources as well as its wilderness character. This past season, the department received a number of public complaints regarding pound structures and other material that were either abandoned in the water or on the upland areas. All materials that are used in the fishery should either be removed from the area or stored in the upland areas under the terms of a required United States Forest Service conditional use permit (see page 13).

REQUIREMENTS FOR BUYERS

New regulations adopted in 2000 will be in effect Reporting requirements for buyers and processors of spawn-on-kelp product from the Hoonah Sound and Craig-Klawock fisheries 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 2003 entry permit (L21A) 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 2003 crewmember license. All commercial vessels used in the fishery (including skiffs) are required to have a 2003 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 and Tenakee Inlet areas, the U.S. Forest Service has jurisdiction over and manages most of the lands 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, 204 Siginaka Way, Sitka, Alaska 99835, (907-747-6671). 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 land 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.

Herring pounds used in the 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 2).

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 1).

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, 1990–2001.

	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
Exvessel 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
Kelp Blade Harvest	31,260	28,355	27,255	16,260	18,340	15,195
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**	**2001**	**2002**
Herring Quota (tons)	1421	700	778	359	366	1,264
Harvest Quota (tons)	114	56	62	29	NA	NA
Harvest (tons)	65.2	85.9	71.6	35.7	66.2	136.6
Exvessel Value	$920,000	$1,160,523	$1,005,529	$587,568	$1,006,000	$2,000,000
Average Price/lb	$7.05	$6.75	$7.02	$8.23	$7.60	$7.32
Average Income/Landing	$6,694	$10,092	$11,692	$6,251	$11,559	$20,408
Number of Applicants	139	133	106	106	NA	NA
Number of Pounds	0/113/18[b]	115	96	46/2/0[b]	42/3/1[b]	106/0/2[b]
Number Selling Product	112/12[a]	115	86	84	87	98
Kelp Allocation (blades)	430/860[a]	400/800[a]	400/800[a]	110/300[c]	120/300[c]	1,000/3,600[a]
Kelp Blade Harvest	68,755	54,275	42,025	29,820	29,966	113,713
Fishery Open - Closed	4/6-4/29	4/6-4/27	4/6-5/3	4/6-5/3	4/6-5/3	4/6-5/1
Fishing Occurred	4/22-4/29	4/18-4/26	4/29-5/2	4/27-4/29	4/25-4/28	4/24-4/27
Harvest Occurred	4/27-5/3	4/25-4/27	5/3-5/5	5/2-5/4	4/30-5/2	4/28-5/1

[a] Closed pound/Open Pound.
[b] Double closed pounds/single closed pounds/open pounds.
[c] Single-permit closed pound/double-permit closed pound.
Note: No fishery occurred in 1996 since the biomass forecast was below the 1,000-ton threshold.

Table 2. Hoonah Sound herring spawning stock and fishery performance, 1971–2002.

Year	Spawn Dates	Nautical Miles Spawn	Estimated Escapement (tons)	SOK Harvested (tons)
1971	5/10-5/17	2.5	833	
1972	5/11-5/12	1.5	666	
1973	N/A	1	333	
1974	14-May	3	999	
1975	N/A	N/A		
1976	5-May	1	333	
1977	N/A	3.5	1,166	
1978	N/A	5.3	1,765	
1979	N/A	0.5	167	
1980	N/A	N/A		
1981	4/30-5/01	2.3	750	
1982	4/29-5/01	1.5	500	
1983	1-May	1	333	
1984	4/26-5/01	3	540	
1985	5/01-5/03	3.5	1,166	
1986	4/28-5/01	3.8	1,249	
1987	4/28-5/02	3.8	740	
1988	4/30-5/01	5	1,665	
1989	4/16-4/20	17	4,000	
1990	4/13-4/28	10	2,350	11.9
1991	4/19-4/24	8.7	2,175	13.3
1992	4/22-4/24	10.8	5,714	23.1
1993	4/27-4/29	5.7	1,099	14.0
1994	4/21-4/23	9	2,450	32.7
1995	4/20-4/21	4.5	274	27.4
1996	5/02-5/9	10.1	4,023	
1997	4/25-4/28	14.5	5,884	65.2
1998	4/23-4/27	14.5	6,472	85.6
1999	4/27-5/1	13.8	4,426	71.6
2000	4/27-4/30	13.0	3,635	35.7
2001	4/27-5/1	13.7	8,538	66.2
2002	4/25-4/27	11.9	4,936	136.6
Average	1971-2002	6.6	2,306	48.6
Average	1990-2002	10.8	3,998	48.6

Shaded estimated escapements are based on average spawn density of years 1989–2002.

Table 3. Percent-at-age composition of spawning Hoonah Sound herring, 1991–2001 and forecast age structure for 2002.

	Age Class					
Year	**3**	**4**	**5**	**6**	**7**	**8+**
1991	44	8	4	15	22	5
1992	7	55	6	4	14	11
1993	7	17	56	8	1	10
1994	3	10	35	42	5	6
1995	25	6	16	30	19	4
1996	83	13	1	1	2	1
1997	8	80	7	2	2	1
1998	2	13	77	7	1	1
1999	3	5	13	72	6	1
2000	23	10	10	24	31	2
2001	17	31	5	6	14	27
2002	4	27	24	6	7	31
2003 Forecast	10	9	24	21	5	32

Table 4. Tenakee Inlet herring spawn deposition timing, location, biomass estimates and food & bait harvests.

Winter & Spring of the Year	Major Spawning Dates	Nautical Miles of Spawn (nm)	Spawning Biomass Estimate[a] (tons)	Food/Bait Quota (tons)	Food/Bait Harvest (tons)	Tenakee Inlet Herring Historical Spawning Locations
1979	5/9-5/11	3.3	2,500	200	0	Corner Bay to Crab Bay, Kadashan Flats
1980	4/28-5/2	3.9	4,485	400	504	Crab Bay to Saltery Bay
1981	4/27-5/5	9.3	7,500	750	847	Saltery Bay to Trap Bay, Kadashan Flats
1982	4/25-5/7	11.1	6,650	650	654	Saltery Bay to Corner Bay, Kadashan Flats
1983	4/25-5/6	13.1	8,870	875	799	Saltery Bay to Corner Bay, Kadashan Flats
1984	4/20-4/26	8.3	12,100	850	619	Crab Bay to Trap Bay, Kadashan Flats
1985	4/24-5/1	9.9	11,000	1,400	1,406	Saltery Bay to W. of Trap Bay
1986	4/27-5/1	8.3	12,500	1,700	2,040	Saltery Bay to W. of Trap Bay
1987	4/22-4/30	7.9	6,600	800	1,275	Crab to Corner Bay & Tenakee Sp. to Cannery Pt.
1988	4/22-4/27	9.1	6,000	1,450	1,577	Saltery Bay to Trap Bay
1989	4/26-4/29	10.3	5,360	720	655	Chatham St. from Wachusetts Cove to Basket Bay
1990	4/25-5/6	2.9	2000	650	595	East Point to Wachusetts Cove, Kadashan Bay to Crab Bay
1991	4/25-5/4	2.1	400	No fishery.		Kasdashan Flats to Trap Pt., East Pt.
1992	5/5	trace	200	No fishery.		Long Bay Flats
1993	4/21-4/23	6.4	904	No fishery.		Seal Bay to Trap Bay
1994	4/24-4/26	0.25	400	No fishery.		Crab Bay to Saltery Bay
1995	4/26	0.05	200	No fishery.		South Passage Pt. to Don's Creek
1996	5/4-5/14	18.1	4,569	No fishery.		Trap Bay to Kadashan Bay & S. Passage Pt. to Little Basket Bay & Tenakee Sp. to Cannery Pt.
1997	4/26-5/7	14.4	10,000	300	97.5	Crab Bay to Corner Bay Pt. & S. Passage Pt. to Basket Bay
1998	4/24-4/29	12.4	10,419	825	692	Trap Bay to Basket Bay, Kadashan Flats
1999	4/25-4/28	11.0	11,049	1,023	835	South Passage Pt. to Trap Bay
2000	4/26-5/3	13.8	9,149	542	494	Basket Bay to South Passage Pt. & W. of Trap Bay
2001	4/21-5/1	12.2	7,575	906	775	Corner Bay to W. of Saltery Bay
2002	4/23-4/27	15.4	4,366	840	327	Trap Bay to Basket Bay

[a] Spawning biomass estimates were calculated from hydro-acoustical surveys from 1979 through 1986. Spawning biomass estimates were calculated from egg deposition surveys from 1987 through present.

Table 5. Percent-at-age composition of spawning Tenakee Inlet herring, 1982–2002.

	Spawning Age Composition (%)						
Year	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Sample Type
1982	24	7	48	21	0	0	Trawl/Nov.81’
1983	49	7	3	12	27	2	Trawl/Nov. 82’
1984	17	38	6	13	22	4	Trawl/Nov. 83’
1985	2	31	45	7	9	6	Trawl/Nov. 84’
1986	3	8.0	42	34	4	10	Seine/Jan. 86’
1987	30	14	16	28	10	3	Hand Seine/April 87’
1988	1	41	18	12	16	12	Cast Net/April 88’
1989	9	12	53	15	8	2	Cast Net/April 89’
1990	10	10	20	38	13	10	Cast Net/ April 90’
1991	No Sampling was performed during 1991 & 1992.						
1992							
1993	20	11	61	2	2	4	Cast Net/April 93’
1994	No Sampling was performed during 1994–1996.						
1995							
1996							
1997	5	88	5	1	1	0	Cast Net/May 97’
1998	3	9	81	7	1	0	Cast Net/April 98’
1999	3	4	11	78	2	1	Cast Net/April 99’
2000	16	8	8	23	42	3	Cast Net/April 00’
2001	15	19	5	7	20	33	Cast Net/April 01’
2002	14	28	18	7	7	27	Cast Net/April 02’
2003*	12	18	35	25	4	7	na

*Forecasted

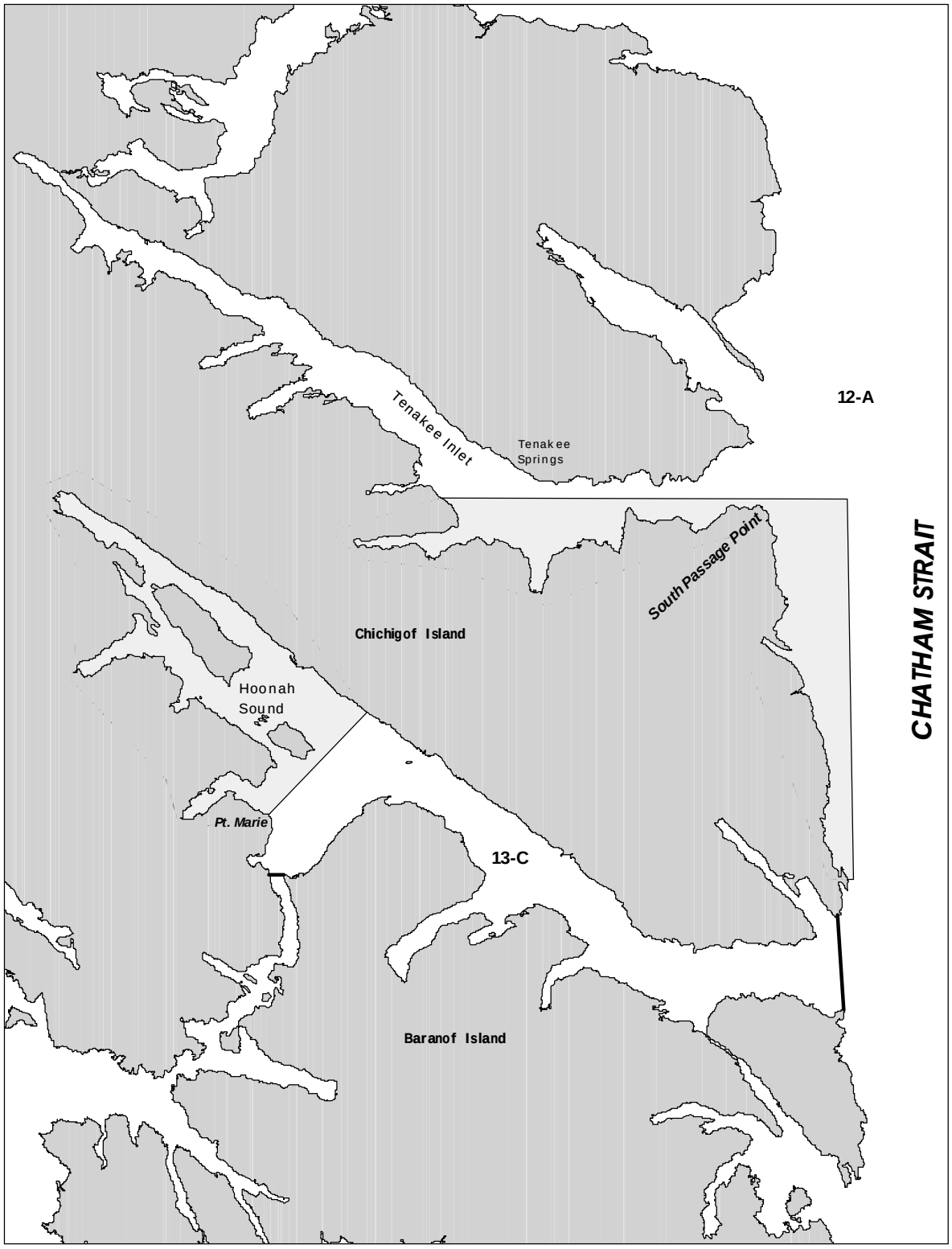

Figure 1. Areas open (dark shade) to spawn-on-kelp fishery in Hoonah Sound and Tenakee Inlet.

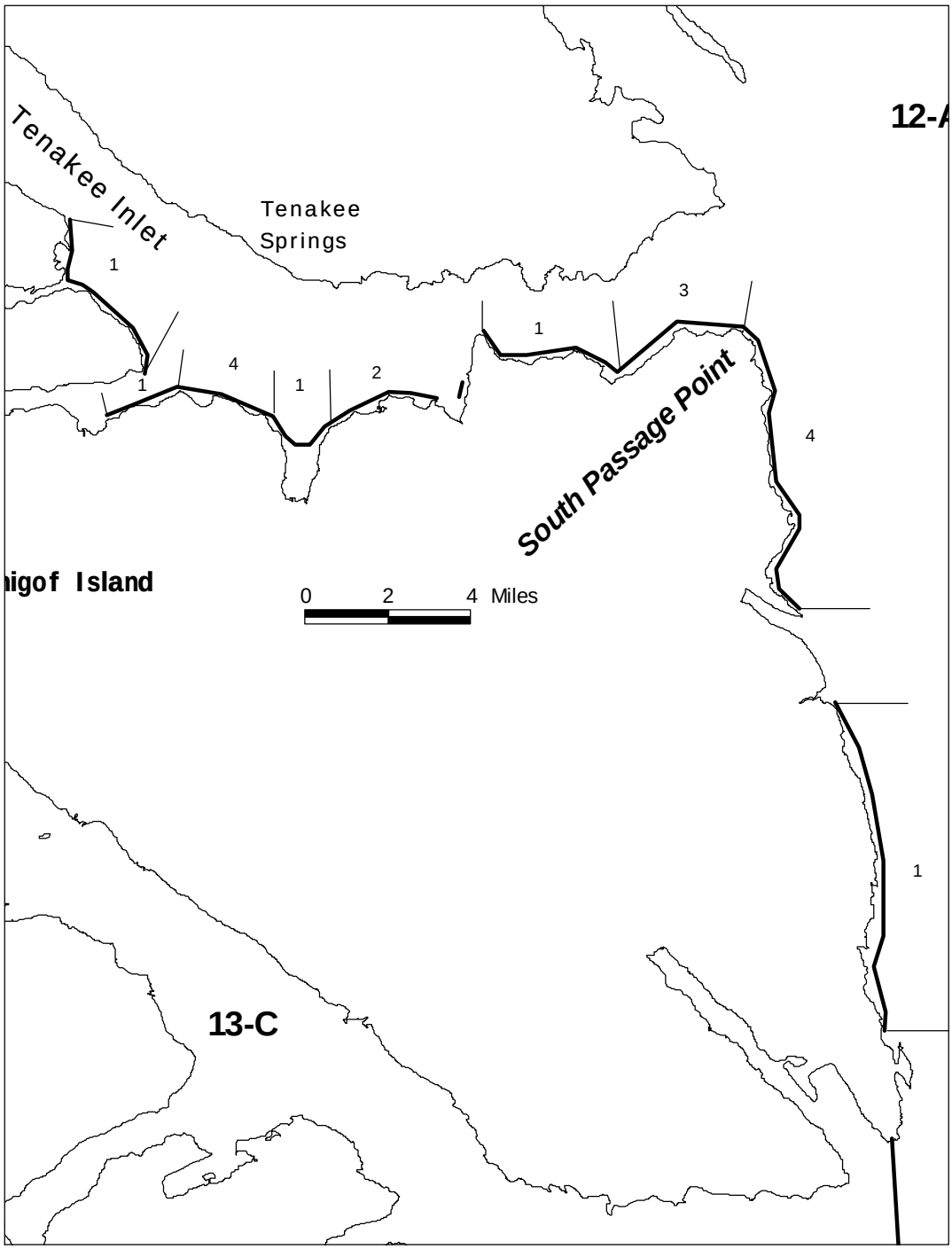

Figure 2. Herring spawn distribution in Tenakee Inlet 1998–2002. Numbers within delineated sections of shoreline indicate number of seasons herring spawn was recorded along that section of shoreline from 1998–2002.

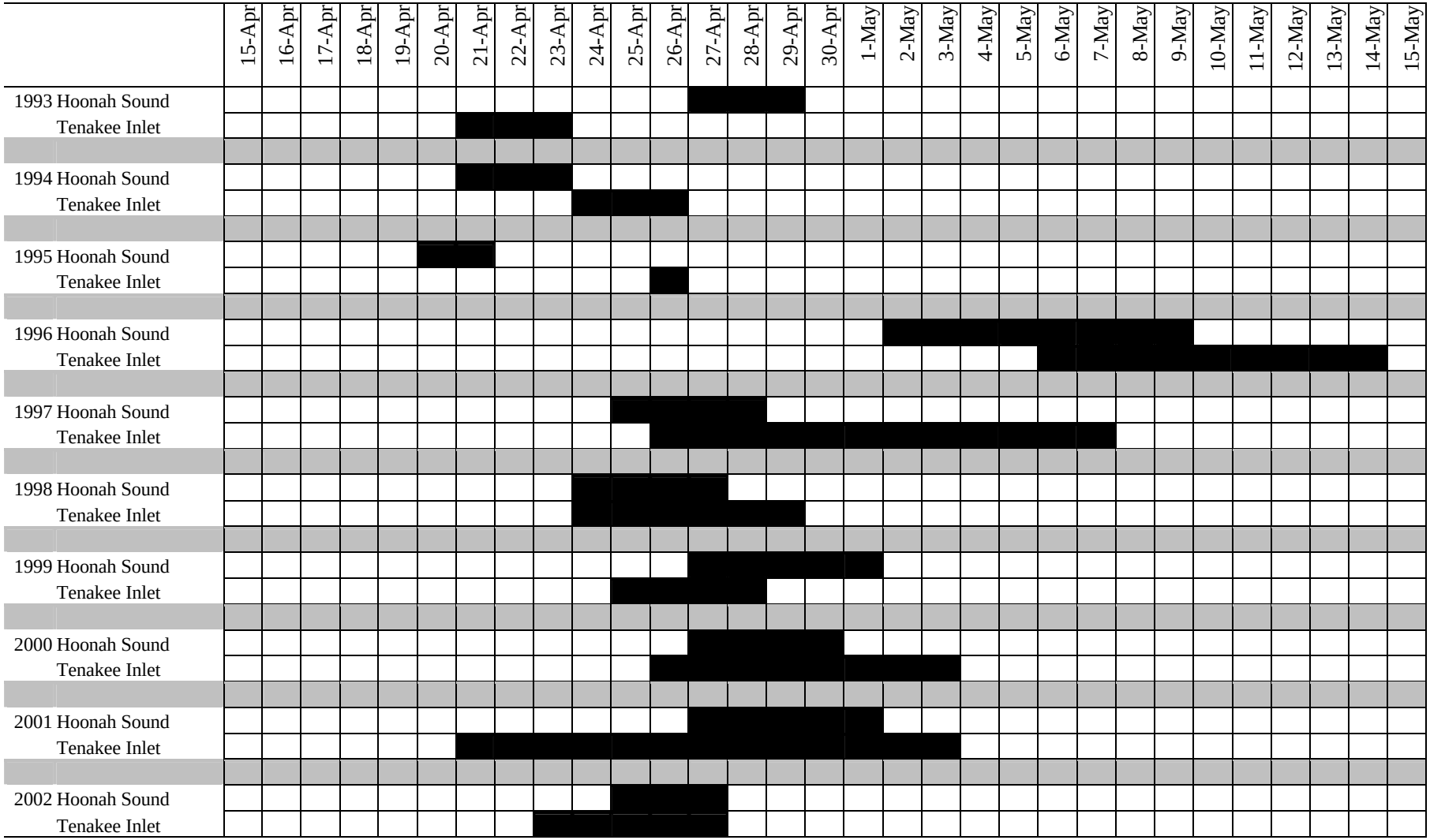

Figure 3. A Comparison of Hoonah Sound and Tenakee Inlet herring spawning dates for years 1993–2002. Black bar indicates dates of active spawning.

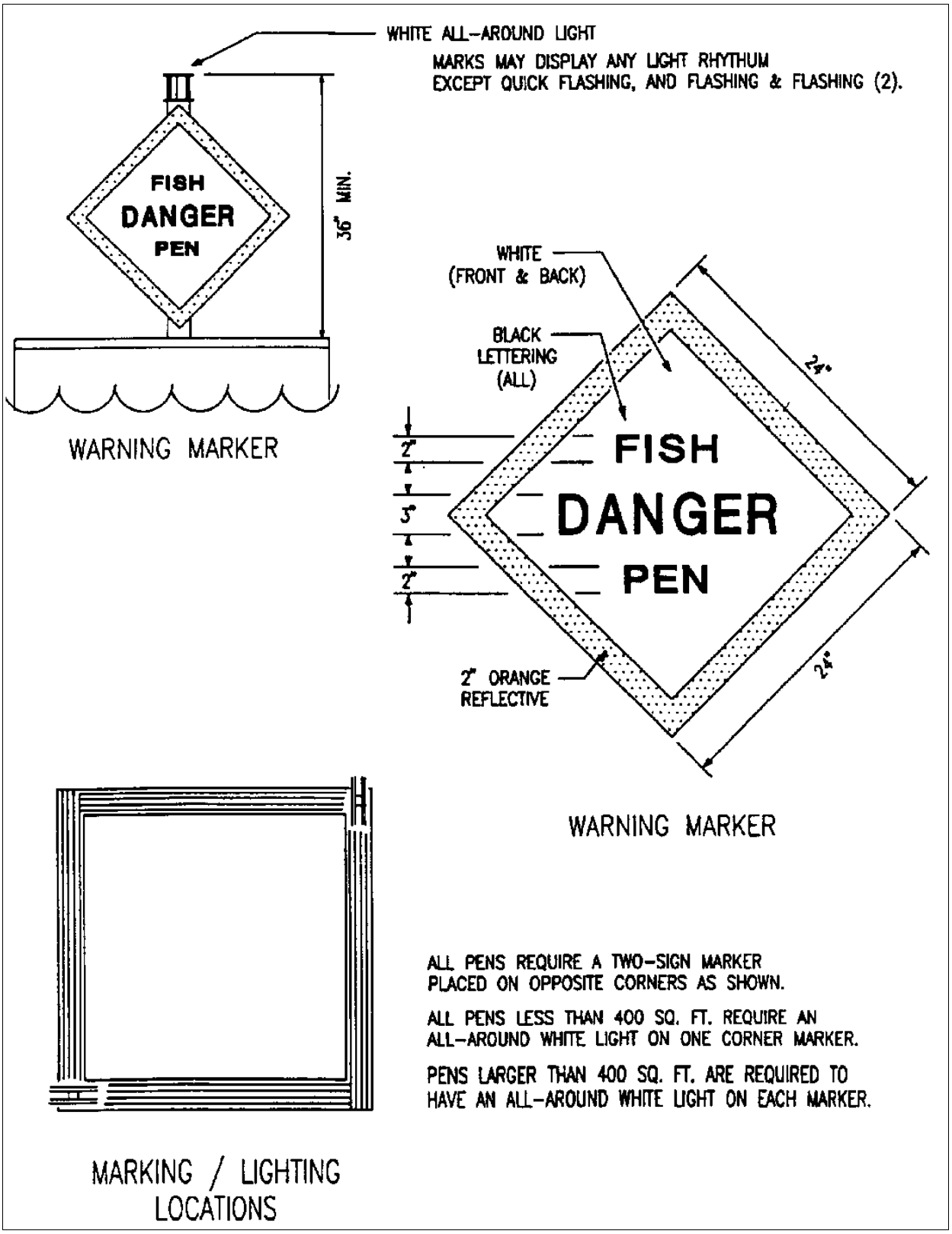

Figure 4. Coast Guard requirements for marking pounds.

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