

**HOONAH SOUND HERRING SPAWN-ON-KELP POUND FISHERY**

**1990 MANAGEMENT PLAN**



Regional Information Report No. 1J89-20

Alaska Department of Fish and Game  
Commercial Fisheries Division  
Juneau, Alaska

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## INTRODUCTION

This plan provides an overview of the management approach and regulatory measures that will be used to conduct the 1990 Hoonah Sound spawn-on-kelp pound fishery. Staff biologists listed at the end of this document are available to provide further assistance regarding questions pertaining to this plan.

The Alaska Board of Fisheries adopted new regulations that specified a spawn-on-kelp pound fishery in Hoonah Sound to begin in the spring of 1990. This will be the first roe-on-kelp pound fishery in Southeast Alaska. Pound fisheries have occurred in British Columbia and Prince William Sound for many years. Much of the management approach outlined in this plan is based on management procedures used in the Prince William Sound pound fishery.

A 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 are sold. Examples of two herring pound types are shown in Figure 1.

The following is a calendar of events to be considered by pound operators:

- January 1 - Department of Fish and Game pound permit applications will be available.
- January 10 - Applications for special use permits must be submitted to the Forest Service.
- February 28 - Deadline for submitting an application to the Department of Fish and Game for a pound permit.
- March 5 - The Department will issue a permit to each applicant that has met the March 1 deadline.
- April 5 - A completed pound must be present on the fishing grounds by this date.
- April 6 - A Department representative will be on the grounds to inspect each pound.
- April 7 - Allocations will be made for each pound operator that has a completed pound in the fishing area.
- June 1 - Pounds must be completely removed from the water by this date.

## REGULATIONS

The Alaska Board of Fisheries approved the following regulations creating the new pound fishery (see 5AAC 27.110. FISHING SEASONS (f) and 5AAC 27.185. MANAGEMENT PLAN FOR HERRING SPAWN-ON-KELP IN POUNDS, (a), (b), and (c)(1) through (6)):

1. Herring spawn-on-kelp in pounds may be taken only during periods established by emergency order.
2. Herring pounds for the taking of spawn-on-kelp in pounds may be operated only under terms of a permit issued by the Department.
3. Pounds for the taking of herring spawn-on-kelp in pounds may be operated only in waters of Section 13-C west of the longitude of Nismeni Point.
4. The harvest limit for the taking of herring spawn-on-kelp in pounds is 11 tons; no more than 150 tons of herring may be impounded.
5. The Department shall divide the harvest allocation and the amount of herring available for impounding equally among permit holders.
6. The operator of a pound shall apply for a permit issued by the Department prior to March 1 of each calendar year. The last day to apply will be February 28.
7. The permit must specify the following:
  - (a) The location where pounds may be operated.
  - (b) The date by which pounds must be operational.
  - (c) The size of, identification requirements for, and method of operation of pounds.
  - (d) The location and methods for taking, retainment, and release of herring and kelp to be used in a pound for the production of herring spawn-on-kelp.
  - (e) The harvest reporting requirements for pound operators; and
  - (f) Other guidelines determined by the Department to be necessary for the conservation and management of herring and kelp, and the health, safety, and general welfare of the public.
8. The holder of a herring pound permit shall weigh all spawn-on-kelp taken at the time it is removed from the pound. A representative of the Department will inspect and seal each container of spawn-on-kelp before it is transported from the grounds for processing.

## LOCATION

The fishery was designated for the waters of Hoonah Sound, located in regulatory Section 13-C, west of the longitude of Nismeni Point and north of Pogibshi Point (see attached map). The area is located in Peril Strait approximately 30 miles northeast of Sitka.

## HERRING STOCK STATUS

Available historical information indicates the herring spawning population in Hoonah Sound is relatively small. Since the early 1970's until 1988, the spawning population has produced 2-5 nautical miles of documented spawn annually. Based on completed dive egg deposition surveys, the mature spawning population has been estimated to be less than 3 million pounds in most years. However, in 1989, a record spawn of 17 nautical miles was recorded and the spawning population was estimated to be approximately 8 million pounds.

Herring spawning normally occurs in Hoonah Sound between the last week in April and the first week in May. This past spring, spawning began on April 18, the earliest date recorded for this stock. Traditionally, herring spawn along the shoreline between Fick Cove and Ushk Point (located at the northern entrance to Ushk Bay) and around Emmons Island (see map). Some spawning has also been documented along the north shore of Hoonah Sound from Broad Island into the North Arm.

## PERMIT APPLICATION PROCEDURES

To establish eligibility for the 1990 fishery, a pound operator must submit an application for a Hoonah Sound pound permit to any Southeast Alaska Fish and Game office by February 28, 1990. Applications sent by mail must be post marked no later than February 28. Applications received or post marked after this date will not be accepted. Permit applications will be available by January 1, 1990 at any Regional Department office or they can be obtained by writing the Department of Fish and Game, Division of Commercial Fisheries, 304 Lake Street, Room 103, Sitka, Alaska 99835.

On, or about, March 5, the Department will issue a permit to each applicant who has met the February 28 deadline. The permit will specify conditions that will be required of each pound operator.

## PERMIT REQUIREMENTS

Regulations require the Department to establish permit stipulations for management of the fishery. The following stipulations will be specified on each permit:

1. Each permit holder is required to have a completed pound in the fishing area by April 5. A pound will be considered complete when it is fully assembled, anchored offshore, and ready for the installation of the webbing. The permit holder is responsible for notifying the Sitka Fish and Game Office of the location of his pound by April 5. A Department representative will be in the fishing area on April 6 to ensure that each pound is fully assembled. The permittee must be at his pound site when this inspection is being conducted.
2. Each pound must be identified in a conspicuous place with the permittee's name and a number which will be assigned to each pound operator. Letters and numbers must be at least 6 inches high and with lines at least one half inch wide that contrast with the background.
3. The pound must be constructed so there is a minimum inside water surface area of 250 square feet. This restriction is necessary to avoid over-crowding herring, which can cause mortality from reduced dissolved oxygen, heavy scale loss, and rubbed noses and fins from fish rubbing against the webbing.
4. Webbing used for the pounds must be no larger than 1 1/4 inch mesh (standard herring web is suggested). This restriction is necessary to avoid gilling of herring in the pound.
5. Pound operators may cooperatively work among themselves by connecting and anchoring their pounds together. However, each pound must have its own net enclosure and be capable of retaining herring when separated from other pounds.
6. Each pound must be constructed to include 6 feet of surplus webbing. The webbing should be gathered at the surface in such a manner that it can be easily lowered into the water if the submerged webbing becomes egg-saturated to the extent that it prevents adequate water circulation which could cause suffocation of impounded herring.
7. Each permit holder must be physically present at the pound site continuously from the time herring are introduced into the pound until the spawn-on-kelp is harvested and sealed.
8. A permit holder who discontinues his operation must notify the Department and surrender his permit.
9. A permit will become invalid if a pound is not complete (including web attached) and ready to receive and hold fish when the fishery is open to the capture and transfer of herring to the pound.

10. Purse seines will be the only legal gear to harvest herring for the pounds. To minimize mortality, sets should be small (less than 10 tons). Seining will be restricted to areas where herring spawning has not occurred. This restriction is necessary to minimize disturbance to spawning herring and to avoid dislodging spawn-on-kelp with the seine net.
11. The transfer of herring from the purse seine to the pound must be conducted in such a manner that handling mortality is minimized. Brailing, dipnetting or rolling herring into the pound will not be allowed. An acceptable method is to bring the seine and pound together and sink a portion of each to allow herring to swim freely from the seine into the pound.
12. As a general rule, herring may be held for a maximum of 8 days or until they are 80% spawned out, whichever occurs first. Retention of herring for longer periods will be allowed only with special authorization by the Department.
13. After release of the captured herring, the pound, including webbing, will remain in place for a minimum of four weeks. This restriction is necessary to allow eggs on the webbing an opportunity to hatch.
14. The pound structure must be completely removed from the water by June 1.

#### **HARVEST OF KELP**

A separate permit is required to harvest the kelp to be used in the pounds (5AAC 37.900). An application for a kelp cutting permit will be included with each pound permit issued by the Department. Kelp harvest permits may also be obtained from local Department offices. Approximately 2.2 tons (4,400 lbs.) of kelp is needed to produce 11 tons of spawn-on-kelp. This assumes that a 500% weight gain is realized from the kelp to the spawn-on-kelp product harvested.

#### **ALLOCATION OF GUIDELINE HARVEST**

On, or about, April 7th, the 11 ton spawn-on-kelp guideline harvest, as well as the 150 ton allocation of herring, and the 4,400 lbs. allocation of kelp necessary to produce the spawn-on-kelp will be divided equally among all permit holders who have completed pounds in the fishing area by April 5. Notification of the individual allocations will be sent by mail to each permit holder as an addendum to the original permit.

Further adjustments to the individual allocations may occur after April 7 if any permit holder drops out of the fishery after this date or if a permit holder does not have a pound ready to receive herring when the fishery is opened.

Deadloss resulting from the capture, transfer and holding of herring will not be subtracted from individual pound allocations.

### **SEALING AND WEIGHING REQUIREMENTS OF SPAWN-ON-KELP**

The permit holder must weigh all product harvested from his herring pound. All product must be in containers that have sealable lids. A representative of the Department will inspect and seal each container of spawn-on-kelp before it is transported from the grounds for processing.

All spawn-on-kelp above the permittee's allocation will remain in the pound so the eggs have an opportunity to hatch.

### **REQUIREMENTS FOR BUYERS**

Operators of floating processing vessels will be required to report in person, by VHF radio, or by telephone, to the Department of Fish and Game office in Sitka before the start of processing operations in Hoonah Sound. These reporting requirements are specified by regulation 5AAC 39.130 (f).

Fish tickets must be submitted to the Department within 7 days after landing. They should be sent to the Department of Fish and Game, Division of Commercial Fisheries, 304 Lake St. Room 103, Sitka Alaska, 99835, or submitted to a representative of the Department before leaving the fishing area.

### **LICENSE REQUIREMENTS**

In addition to the Alaska Department of Fish and Game permits required to operate a pound and harvest kelp for transport to a pound, pound operators must also obtain an interim use permit (L21A) from the Commercial Fisheries Entry Commission. Individuals who do not have pound permits but are assisting in the operation of the fishery in any manner must have a crew member license. All commercial vessels (including skiffs) used in the fishery are required to be licensed with the Limited Entry Commission. Fishermen 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 interim use permits are available from all offices of the Department of Fish and Game or can be obtained by writing the Commercial Fisheries Entry Commission, P.O. Box KB Juneau, AK 99811. Fishermen are reminded to apply for these licenses well in advance to the fishery

since it often takes up to 3-4 weeks to obtain them. Crew member licenses may be obtained from local vendors in most communities.

### **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 from where the herring are captured and the pound site should also be considered since long towing distances can cause considerable stress and mortality of herring. The Department expects the area between Emmons Island and Vixen Island and south of Emmons Island to be the main focus for anchoring pounds since herring normally spawn near this area.

The Department will station a state vessel and personnel in Hoonah Sound beginning approximately April 15. Department personnel will closely monitor herring activities and all phases of the fishery to assure compliance with permit conditions. All fishery announcements, including updates of herring activities and fishery openings, will be broadcast by VHF radio, Channel 10. Fishermen are strongly encouraged to have a VHF radio.

The Department will be closely monitoring herring activity before the fishery in Hoonah Sound by vessel and aerial surveys. Test fishing will also be conducted in cooperation with fishermen. When herring are close to spawning the Department will authorize, by field announcement, the capture of herring to be transferred into pounds. A minimum 24 hour advance notice will be given prior to the opening of the season. This procedure will be followed unless a loss of the fishery will occur due to earlier than normal spawning.

Pound operators are required to notify the Department within 24 hours after the capture and transfer of herring into their pounds. Department personnel will closely monitor the capture and transfer of herring into pounds to ensure that allocations are not exceeded and to document any mortality of herring.

Pound operators are advised to use extreme caution when towing herring from the capture site to the pound site since towing can be a source of significant mortality if not done properly. To avoid mortality the transport of herring to the pound site must be done with the pound itself or a towable net pen. Transporting with a purse seine will not be allowed. Pound operators are also advised to tow slowly to avoid crushing herring against the net.

## OTHER AGENCY REQUIREMENTS

Prospective pound operators are advised to consider the requirements that other agencies may have to construct and operate pounds in Hoonah Sound. Some of these requirements are discussed briefly below; however, a pound operator is urged to contact the Alaska Department of Natural Resources (DNR), the US Forest Service, and the National Marine Fisheries Service as soon as possible to consider any others.

### *Department of Natural Resources*

The Alaska Department of Natural Resources (907-465-3400) controls use of tide and submerged lands seaward of mean high water (9.1 ft.). We understand that no DNR permits will be required for pound operations; however, a permit is needed for long term storage of logs. Existing lease areas (primarily for log rafting) occur in Poison Cove and portions of Ushk Bay. Permission of the lessee should be obtained before using leased tidelands for pounds.

### *US Forest Service Uplands*

The Uplands are managed by the Sitka District of the US Forest Service (907-747-6671). The proposed herring roe fishery in Hoonah Sound could have impacts to the National Forest Lands in the vicinity. Some concerns include camp sites, shore ties, firewood, storage of equipment on uplands, harvesting of trees for float logs, and conflicts with wildlife habitat management along the shoreline.

Persons entering this fishery who wish to utilize National Forest Land will have to apply for a special use permit. Before a special use permit will be issued by the Forest Service, an applicant will have to complete an environmental impact analysis which takes a minimum of 2-3 months, depending on the impacts involved and the number of permits received. These analyses will be coordinated with the City and Borough of Sitka and affected State and Federal Agencies. To assure that herring pounds are in place by April 5, 1990, it is recommend that applications for special use permits be submitted to the Forest Service no later than January 10, 1990. Application forms are available from the Sitka Ranger District office. The minimum fee for a special use permit is \$100.00. A bond may also be required.

As this is a commercial venture free wood will not be available for construction of the floating pens. Using the current rates published by the Forest Service, the cost of logs would be \$8.00 per linear foot. Requests for timber should be made to the Sitka Ranger District no later than January 10, 1990.

Firewood used for personal consumption may be taken free of charge. Firewood should come only from dead or downed trees.

*National Marine Fisheries Service*

The National Marine Fisheries Service (907-747-6940) regulates activities which might harm marine mammals. Herring pounds are classed as a Category 3 fishery, which means that participating fishermen do not need to apply for an "exemption". Fishermen may not kill sea lions, sea otters or whales, porpoises or dolphins. Fishermen must report mortality of marine mammals associated with their activities. Since Federal regulations may change at any time, fishermen should check with their local NMFS office before fishing.

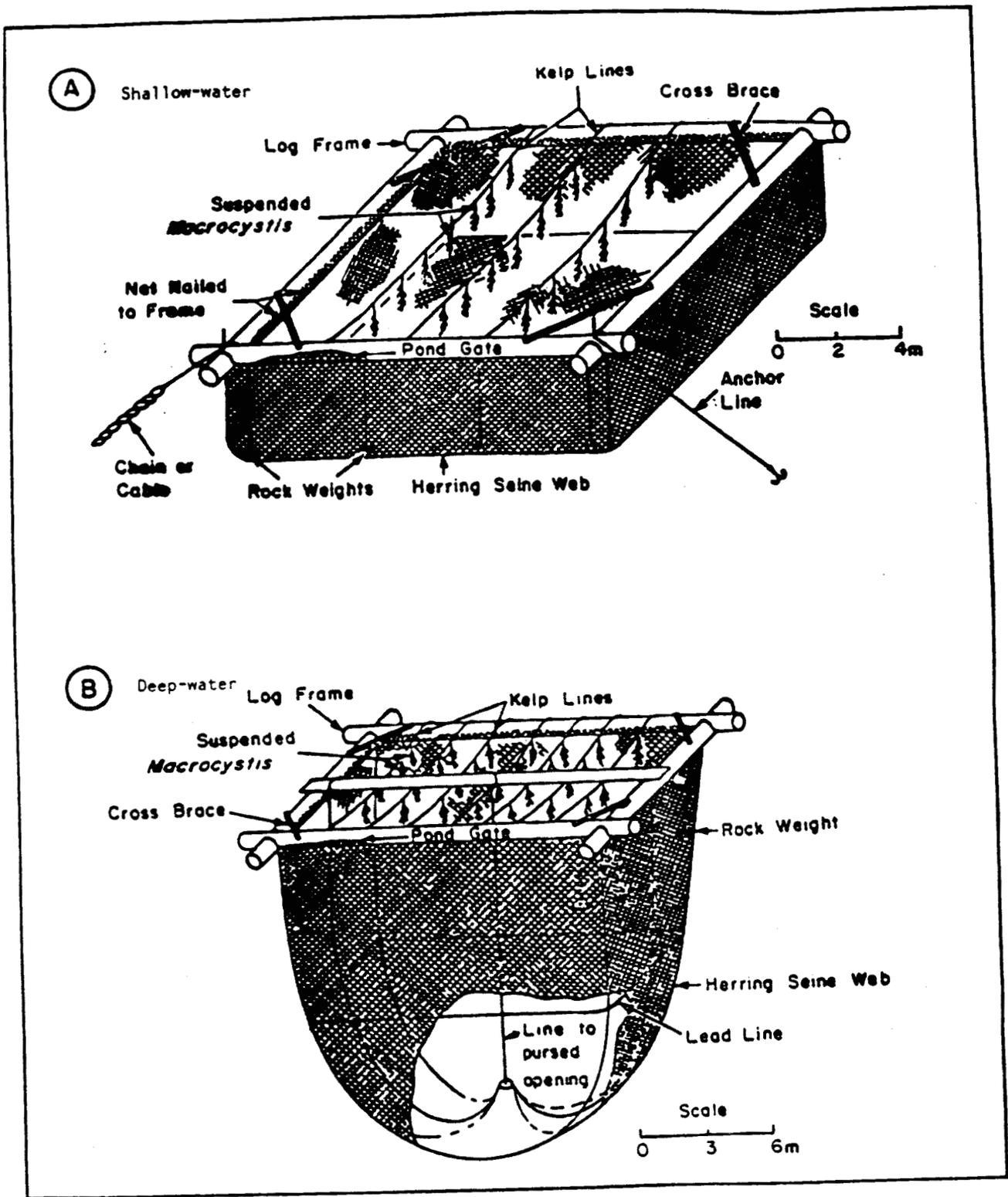


Figure 1. Diagram of typical herring spawn-on-kelp impoundments.

Figure taken from Shields, T.L., G.S. Jamieson, and P.E. Sprout, 1985. Spawn-on-kelp Fisheries in the Queen Charlotte Islands & Northern British Columbia Coast, 1982-1983. Canadian Technical Report of Fisheries and Aquatic Sciences No. 1372 (p. 41).

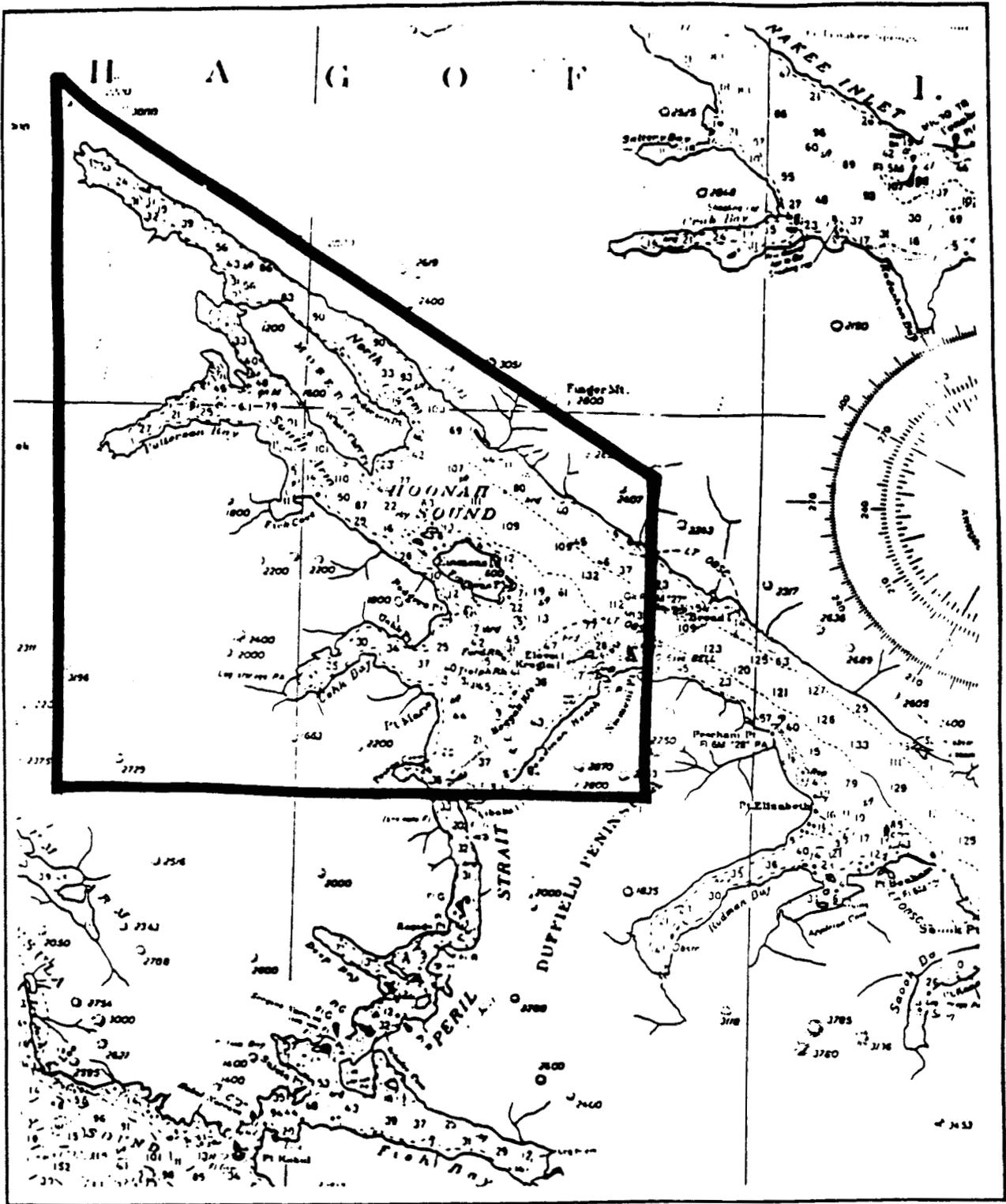


Figure 2. Hoonah Sound Herring Spawn-on-Kelp Pound Fishery Area.

Following are Commercial Fisheries contacts regarding this management plan:

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