

# CRAIG/KLAWOCK HERRING SPAWN-ON-KELP POUND FISHERY

## 1993 MANAGEMENT PLAN



Prepared by

Southeast Alaska Region Staff

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## INTRODUCTION

This plan provides an overview of the management approach and regulations for the 1993 Spawn-On-Kelp Pound Fishery on the west coast of Prince of Wales Island near the communities of Craig and Klawock in Southeast Alaska. Alaska Department of Fish and Game (department) staff biologists listed at the end of this document are available to answer questions regarding this plan. Pound operators are also advised to review requirements of other agencies as described on pp. 9-11.

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 then sold. Examples of two types of herring pounds are shown in Figure 1.

Winter food and bait herring fisheries have occurred in District 3 (Meares Passage and in the Bocas de Finas area) since the 1960's. Seasonal landings from the 1960's through 1985 were small, with yearly landings averaging approximately 210 tons. From 1987 through 1992 the herring population has grown dramatically in Section 3-B with annual landings averaging approximately 2,225 tons (Table 1).

The estimated size of the Section 3-B (Craig/Klawock area) herring population is based upon the spawn deposition surveys conducted by department herring research personnel. Spawn deposition studies have been used since 1988 to determine the herring biomass. Prior to 1988, hydroacoustical surveys were used to estimate population size (Table 1).

Annual harvest levels are based on a graduated scale that allows for higher harvests rates as the herring population increases relative to the threshold level (Figure 2). The established threshold level for the Craig/Klawock stock is 10,000,000 lbs. The scale provides a uniform method for establishing harvest levels for each of the herring fisheries in the region. No harvest is allowed if the biomass estimate for the stock is less than the threshold level; when the estimate of mature stock is at the threshold level a 10% harvest is allowed. The harvest rate increases 2% each time the estimated spawning biomass increases by an amount equal to the threshold level, and reaches a maximum of 20% when the population is six times the threshold level.

In 1992, 243 pounds were operated in the initial year of this fishery and 229 fishermen landed product (Table 2). There were 25.7 tons of roe-on-kelp harvested at an average price of \$3.50/lb, giving the fishery an exvessel value of \$180,000. Fishermen averaged \$785 each. The capture of herring began on March 18 and was completed by March 23.

In the spring of 1992, an estimated biomass of 24,800,000 lbs of herring spawned over 22.6 nautical miles of shoreline in the Craig/Klawock area. This will allow for a harvest rate of approximately 12.9% of the mature herring stock, or a guideline harvest level of 1,602 tons for the fishery in 1993.

In the Section 3-B spawn-on-kelp fishery, the harvest limit is 15% of the guideline harvest level for the Craig/Klawock herring stock. The remaining 85% of the guideline harvest level is allocated to the traditional herring bait and food fishery. No pound fishery will be allowed in Section 3-B if 15% of the overall quota is less than 100 tons of herring. Therefore, the guideline harvest level for the 1993 Section 3-B herring spawn-on-kelp fishery is 15% of 1,602 tons, or 240 tons of herring. This should equal approximately 19.2 tons of spawn-on-kelp product. The remaining 85%, or 1,362 tons, will be harvested in the winter food and bait fishery.

The following is a calendar of events for the 1993 fishing season:

- December 21 - Department of Fish and Game pound permit applications will be available.
- January 31 - Deadline for submitting a permit application to the department.
- February 14 - The department will issue a permit to each applicant that has met the January 31 deadline.
- February 14 - U.S. Forest Service special-use permit applications are due (if needed).
- March 8 - A completed pound must be present on the fishing grounds by this date.
- March 9 - A department representative will be on the grounds to inspect each pound.
- March 10 - Allocations will be made for each operator that has a completed pound in the fishing area.
- March 11 - Kelp permits will be available.
- May 15 - Pounds must be completely removed from the water by this date.

## REGULATIONS

The Alaska Board of Fisheries approved the following regulations creating the pound fishery in Section 3-B [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 3-B in the waters of San Alberto Bay, Shinaku Inlet, and San Christoval Channel north of a line from Entrance Point to the southernmost tip of Clam Island to the southernmost tip of Fern Point and west of 133°20'00" W. longitude with the following restrictions:

Klawock Inlet and Big Salt Lake: all waters will be closed.

San Christoval Channel: will be closed in the waters of the main channel enclosed by 133°20'00" W. longitude, 55°35'37" N. latitude; 133°20'00" W. longitude, 55°35'10" N. latitude; 133°17'31" W. longitude, 55°33'22" N. latitude; 133°17'17" W. longitude, 55°33'30" N. latitude (Figure 3).

4. The current allocation allows for 240 tons of herring to be captured and transferred to the pounds. The spawn-on-kelp harvest objective was based on the ratio of one ton of spawn-on-kelp for each 12.5 tons of herring allocated to the fishery. This will allow for a 1993 quota of 19.2 tons of spawn-on-kelp product. The department will manage the fishery to achieve this harvest objective by restricting those persons holding permits to a specified number of kelp blades annually.
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 no later than January 31 of each calendar year.
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.
9. Herring for placement in herring spawn-on-kelp pounds may be captured only with purse seines or hand purse seines.

#### FISHERY LOCATION

The fishery, by regulation, was designated for the waters of Section 3-B, located in those waters of District 103 north of the latitude of Turn Point and south of the latitude of Cape Lynch. The open areas for pounds will be located near the areas of historical spawning. The open area for the herring pounds will be the same as the 1992 season. Pounds will may be operated only in waters of Section 3-B in the waters

of San Alberto Bay, Shinaku Inlet, and San Christoval Channel north of a line from Entrance Point to the southernmost tip of Clam Island to the southernmost tip of Fern Point and west of 133°20'00" W. longitude, with the following restrictions:

Klawock Inlet and Big Salt Lake: all waters will be closed.

San Christoval Channel: will be closed in the waters of the main channel enclosed by 133°20'00" W. longitude, 55°35'37" N. latitude; 133°20'00" W. longitude, 55°35'10" N. latitude; 133°17'31" W. longitude, 55°33'22" N. latitude; 133°17'17" W. longitude, 55°33'30" N. latitude.

## HERRING STOCK STATUS

Available historical information (Table 1) indicates the herring spawning population on the west coast of Prince of Wales Island has increased substantially since the 1970's. From 1970 through 1987, spawning averaged 5.2 nautical miles. From 1988 through 1992 the average linear miles of spawn recorded increased to 27 nautical miles. In 1992, 22.6 nautical miles of spawn was observed; dive survey estimates indicated a spawning biomass of 24,800,000 lbs.

Spawning normally occurs in the Craig/Klawock area in mid to late March. The earliest observed spawn since the mid-1970s was March 18, with the latest date of initial spawning occurring on April 6. Traditionally, herring spawn on Fish Egg, Wadleigh, Clam, and Abbess Islands. As the herring stock has grown, spawning has been recorded in the area of Portillo Channel, Port Real Marina, the northern shore of San Fernando Island, and along the Prince of Wales Island shore at San Christoval Channel and Shinaku Inlet.

## PERMIT APPLICATION PROCEDURES

To establish eligibility for the 1993 fishery, a pound operator must submit an application for a Craig/Klawock pound permit to any Southeast Alaska Fish and Game office by January 31, 1993. Applications sent by mail must be postmarked no later than January 31. Applications received or postmarked after this date will not be accepted. Permit applications will be available by December 21, 1992 at any department area office, or they can be obtained by writing the Department of Fish and Game, Division of Commercial Fisheries, 2030 Sea Level Drive #205, Ketchikan, Alaska 99901. Original applications are required.

On or about February 14, 1993, the department will issue a permit to each applicant who has met the January 31, 1993 deadline. The permit will specify conditions that will be required of each pound operator.

## APPLICATION FEES

The department is considering implementing a fee for applications permits in 1994. This fee would cover the administrative costs to the department for processing and issuing permits. The fees would not be any higher than the estimated administrative costs. Individuals who would like to comment on the use of fees to cover costs may contact the Ketchikan management staff.

## PERMIT REQUIREMENTS

Regulations require the department to establish permit stipulations for management of the Section 3-B pound fishery. The following stipulations will be specified on each permit:

1. A herring spawn-on-kelp pound is defined as a rigid frame structure with adequate buoyancy to support a net enclosure and spawn-on-kelp, used to retain herring alive over extended periods of time. If 150 lbs. of weight placed on any side of the pound submerges a side of the structure, the pound will be declared ineligible.
2. Each permit holder must operate a single pound. 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. Pounds may not share a common wall.
3. Each permit holder is required to have a completed pound in the fishing area by March 8, 1993. A pound will be considered complete when it is fully assembled, anchored offshore, and ready for the installation of the webbing. A department representative will be in the fishing area on March 9, 1993 to ensure each pound is fully assembled. It is not necessary for the permittee to be at his pound site when this inspection is being conducted. However, pounds must be clearly identified as stated in Requirement 4 below.
4. Permit holders may locate their pounds only in locations identified by the department. Pounds will may be operated only in waters of Section 3-B in the waters of San Alberto Bay, Shinaku Inlet, and San Christoval Channel north of a line from Entrance Point to the southernmost tip of Clam Island to the southernmost tip of Fern Point and west of 133°20'00" W. longitude with the following restrictions:  
  
Klawock Inlet and Big Salt Lake: all waters will be closed.  
  
San Christoval Channel: will be closed in the waters of the main channel enclosed by 133°20'00" W. longitude, 55°35'37" N. latitude; 133°20'00" W. longitude, 55°35'10" N. latitude; 133°17'31" W. longitude, 55°33'22" N. latitude; 133°17'17" W. longitude, 55°33'30" N. latitude.
5. Each pound must be identified by an upright sign in a conspicuous place with the permittee's full name and the number which is assigned to each pound operator. In addition, the pound numbers must also be permanently affixed to the top surface of the structure. Letters and numbers must be at least 6 inches high and with lines at least 1/2

inch wide that contrast with the background. Operators with pounds that are not clearly identified will not be allowed to participate in the fishery.

6. The pound must be constructed so there is a minimum inside surface area of 250 square feet. This requirement is necessary to avoid over-crowding herring. **Presently there is no maximum pound size. However, it is likely the department will impose a maximum pound size requirement for the 1994 season.**
7. 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.
8. Each pound must be constructed to include six 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.
9. Each permit holder must be physically present at the pound fishing site at all times during operation of the pound. "Operation of the pound" is defined as: 1) the placement of kelp into the pound structure, 2) the capture and transfer of herring into the pound, and 3) the collection and sale of herring spawn-on-kelp product produced by the pound.
10. The opening date when pound operators may capture herring to be transferred into the pounds will be set by department personnel on the grounds. The department will give sufficient on-the-grounds notice of the opening date and time so that all fishermen are given a chance to capture herring.
11. Purse seines and hand purse seines will be the only legal gear to harvest herring for the pounds. The size of the sets should be small, usually no more than ten tons of herring should be harvested at one time.
12. 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 advised to tow slowly to avoid crushing herring against the net.
13. 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.
14. As a general rule, herring may be held for a maximum of eight 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.
15. Open pounding will not be a legal method of operating a pound. Nets may not be lowered in a pound to allow for free movement of herring into a pound. Pound operators may only lower their nets when transferring herring into the pound and when releasing herring immediately prior to the time the spawn-on-kelp will be harvested from the pound.

16. A pound operator may only introduce one allocated limit of herring into his/her pound. Pound operators will not be allowed to release their herring and then capture more for the same pound.
17. Each permit holder's spawn-on-kelp product must remain separate from the other permit holders until after processing.
18. After release of the captured herring, the pound, including webbing, will remain in place for a minimum of four weeks. Egg covered webbing must remain on the pound frame in the original configuration with adequate water circulation on all sides to optimize hatching success. The department will notify pound operators through a news release when pounds may be removed from the water.
19. Permit holders who discontinue their operations must notify the department and surrender their permits within 24 hours.
20. The permit must be in the possession of the pound operator at all times.
21. The pound structure must be completely removed from the water by May 15, 1993.

#### HARVEST OF KELP

A separate permit is required to harvest kelp to be used in the pounds (5AAC 37.900). Kelp harvest permits may be obtained from local department offices. Approximately 4.5 tons (9,000 lbs) of raw kelp is needed to produce 19.2 tons of spawn-on-kelp. Kelp permits may be pooled and one or more individuals can harvest for a group of pound operators. Kelp permits may be obtained from the department's office in Ketchikan and must be completed and returned to the department within 30 days after the harvesting of kelp.

#### ALLOCATION OF GUIDELINE HARVEST

On or about March 10, 1993 the 19.2 ton spawn-on-kelp guideline harvest, as well as the 240 ton allocation of herring, and 9,000 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 March 8. Notification of the individual allocations will be announced by news release. Further adjustments to the individual allocations may occur after March 10, 1993 if any permit holder drops out of the fishery after this date.

Deadloss resulting from the capture, transfer, and holding of herring will be subtracted from individual pound allocations.

## FISHERY CONDUCT AND MANAGEMENT

Suitable sites for pounds in the Craig/Klawock area 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 will station personnel in the Craig/Klawock area beginning approximately March 4, 1993. 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 in the Craig/Klawock area by vessel and aerial surveys. The department will set a date and time that pound operators may capture herring to be transferred into pounds by Emergency Order.

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 conducted 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. The department will regulate the fishery by setting and enforcing a strict limitation on the number of kelp blades that can be placed in each permit holder's pound. Pound operators will then be allowed to harvest all of the spawn-on-kelp from their pounds.

## 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. Permit holders will be allowed to harvest all the product produced in their pounds. A permit holder's fish ticket must report only the spawn-on-kelp harvested from his/her pound. A representative of the department must inspect and seal all containers of harvested spawn-on-kelp (including trimmings) before it is transported from the fishing grounds for processing.

## 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 Ketchikan before the start of processing operations. Reporting requirements are specified by regulation 5AAC 39.130 (f).

Fish tickets must be submitted to the department within seven days after landing. Fish tickets should be sent to the Department of Fish and Game, Division of Commercial Fisheries, 2030 Sea Level Drive #205, Ketchikan, Alaska 99901 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 into a 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 1 inch wide that contrast with the background.

Applications for vessel and interim use permits are available from all offices of the department or they can be obtained by writing the Commercial Fisheries Entry Commission, 8800-109 Glacier Hwy, Juneau, Alaska 99801-8079. Fishermen are reminded to apply for all licenses well in advance of the fishery since it often takes up to three to four weeks to obtain them. Crew member licenses may be obtained from local vendors in most communities.

## REQUIREMENTS OF OTHER AGENCIES

Prospective pound operators are advised to consider the requirements that other agencies may have to construct and operate pounds in the Craig/Klawock fishery. Some of these requirements are discussed briefly below; however, a pound operator is urged to contact the Alaska Department of Natural Resources (DNR), the U.S. Forest Service, National Marine Fisheries Service and the United States Coast Guard for additional requirements or restrictions. The fishery may also be adjacent to privately held lands. Pound operators should check current maps available at the department to determine land ownership.

### *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.). No DNR permits will be required for pound operations; however, a permit is needed for longer term storage of logs.

### *U.S. Forest Service*

In the Craig/Klawock area, the U.S. Forest Service has jurisdiction over, and manages the land above mean high tide which is not privately owned. 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. These land uses include temporary camps, temporary equipment storage, and herring pound storage. Since this is a commercial venture, free wood will not be available for pound construction.

Special use permit applications are available at the Craig Ranger District. Completed applications should be submitted to the Craig Ranger District by February 14, 1993. The permit fee is \$100.00, and in most cases a bond will be required.

Firewood for personal use may be taken free of charge. Only dead or downed trees may be used for firewood.

Please contact the Craig Ranger District with any questions about use or occupancy of National Forest lands.

### **PRIVATE LANDS**

Some of the area in which pounds may be operated is adjacent to privately owned lands. Pound operators should contact the land owners if they intend to use any of that land above mean high tide. Private land owners may include the Klawock/Heenya Corporation, Shaan-Seet Corporation, and SeaAlaska Corporation. Figure 4 shows the approximate areas of privately held lands in the Craig/Klawock area.

#### *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.

#### *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 Craig/Klawock Spawn-on-Kelp Pound Fishery do not require permits for private aids to navigation at this time, provided the owners:

1. Place a two-sign marker on opposite corners of the structure. These markers will be worded "Danger, Fish Pens" (see Figure 5).

2. Place a single all-round white light on one corner marker on structures less than 400 sq. ft. in size.
3. Place a single all-round white light on every marker on each structure larger than 400 sq. ft. in size.
4. Place and anchor fish pens within the boundary area specified by this permit.
5. Remove the pens from the waterway by May 15, 1993.

If all these conditions are not met, the permit holder must apply to this office for an individual "Private Aids to Navigation permit". If you have any questions, please call Master Chief Yates at the Coast Guard Aids to Navigation office, at 463-2245.

Table 1. Craig/Klawock Herring stock and bait harvests, 1986-1992.

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YEAR	MILES OF SPAWN	BIOMASS (10 <sup>6</sup> )	BAIT QUOTA	BAIT HARVEST
1986	2.0		350	370
1987	5.0	20.5	1,056	1,043
1988	27.0	32.7	2,728	2,014
1989	31.7	39.6	1,810	1,691
1990	30.0	36.7	3,150	3,220
1991	22.0	35.6	2,814	3,272
1992	22.6	24.7	2,280	2,295

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Table 2.

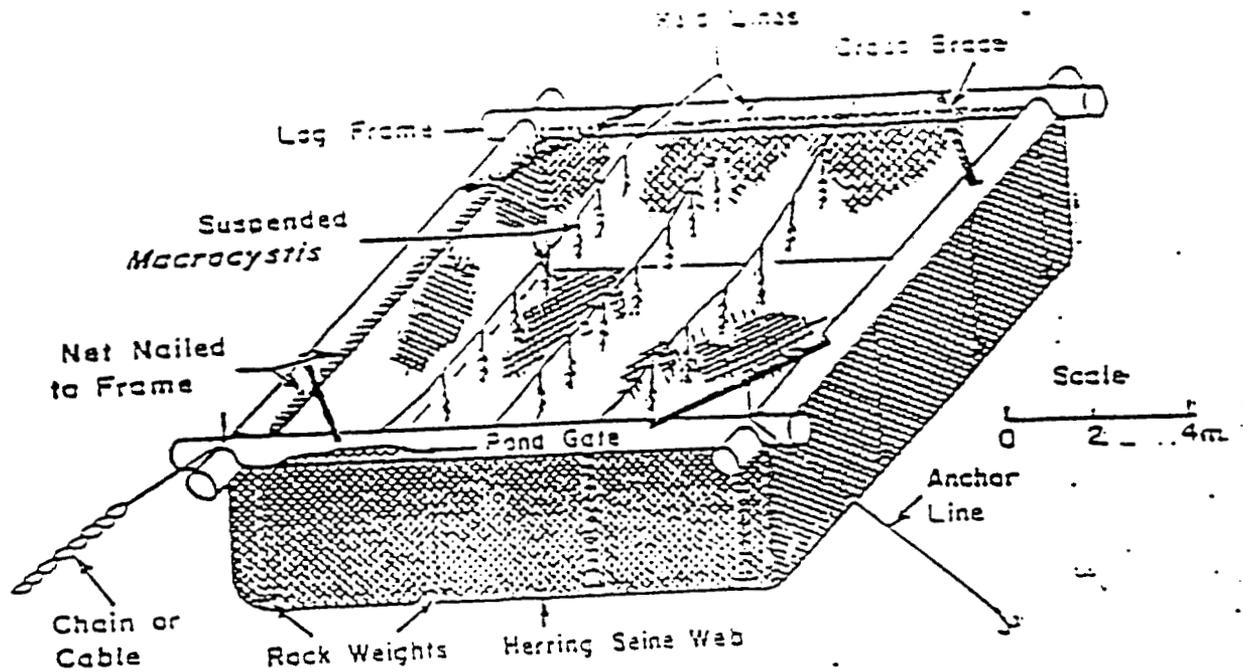
## District 3, 1992 Roe-on-kelp fishery summary.

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Herring Quota	403 tons
Product Quota	19.2 tons
Total Harvest	25.7 tons
Ex-vessel Value	\$180,000
Aver. Price/Lb	\$3.50
Aver. Income	\$785
Number Applicants	531
Permits Issued	248
Fishermen Selling	229
Herring Allocation	1.6 tons
Kelp Allocation (Blades)	310
Kelp Harvest for Craig Fishery	7.8 tons
Total Kelp Harvest (Blades)	73,935
Herring Spawn Dates	3/15 - 3/29
Miles Spawn	22.6
Spawning Stock Biomass (10 <sup>6</sup> )	24.7
Seining Opened - Closed	3/18 - 3/23
Harvest Occurred	3/27 - 4/4

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A



B

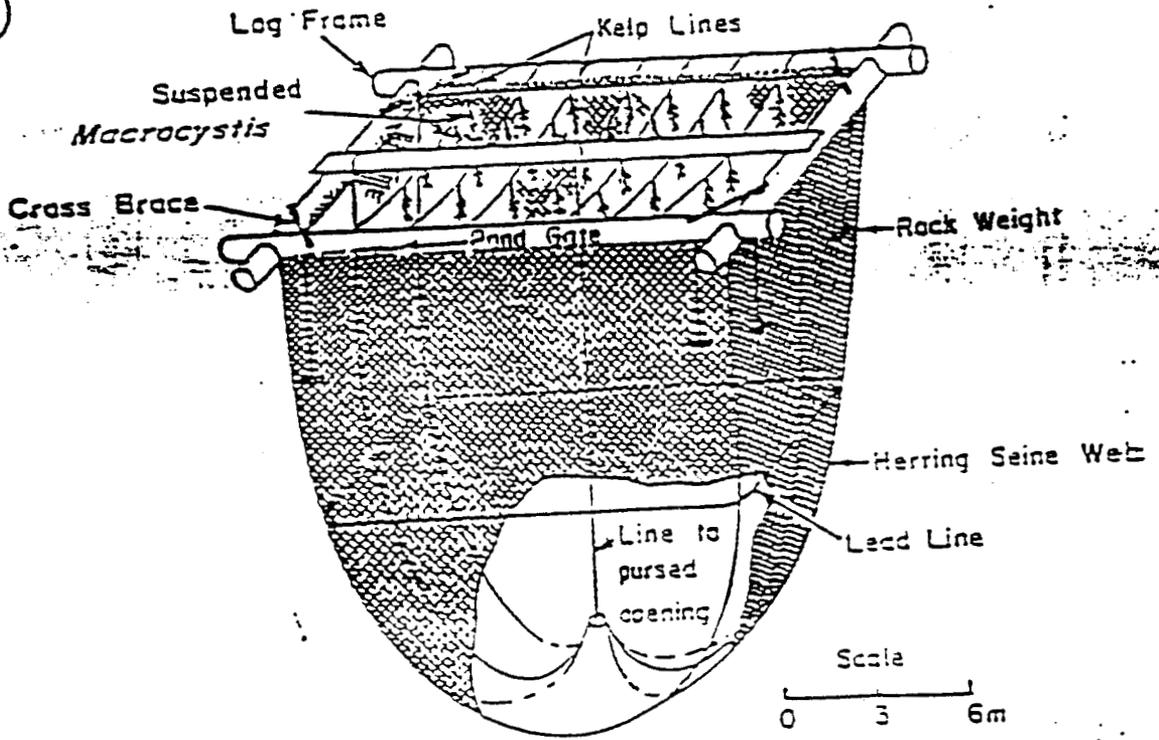


Figure 1. Diagram of typical herring spawn-on-kelp impoundments. A. shallow water. B. deep water.

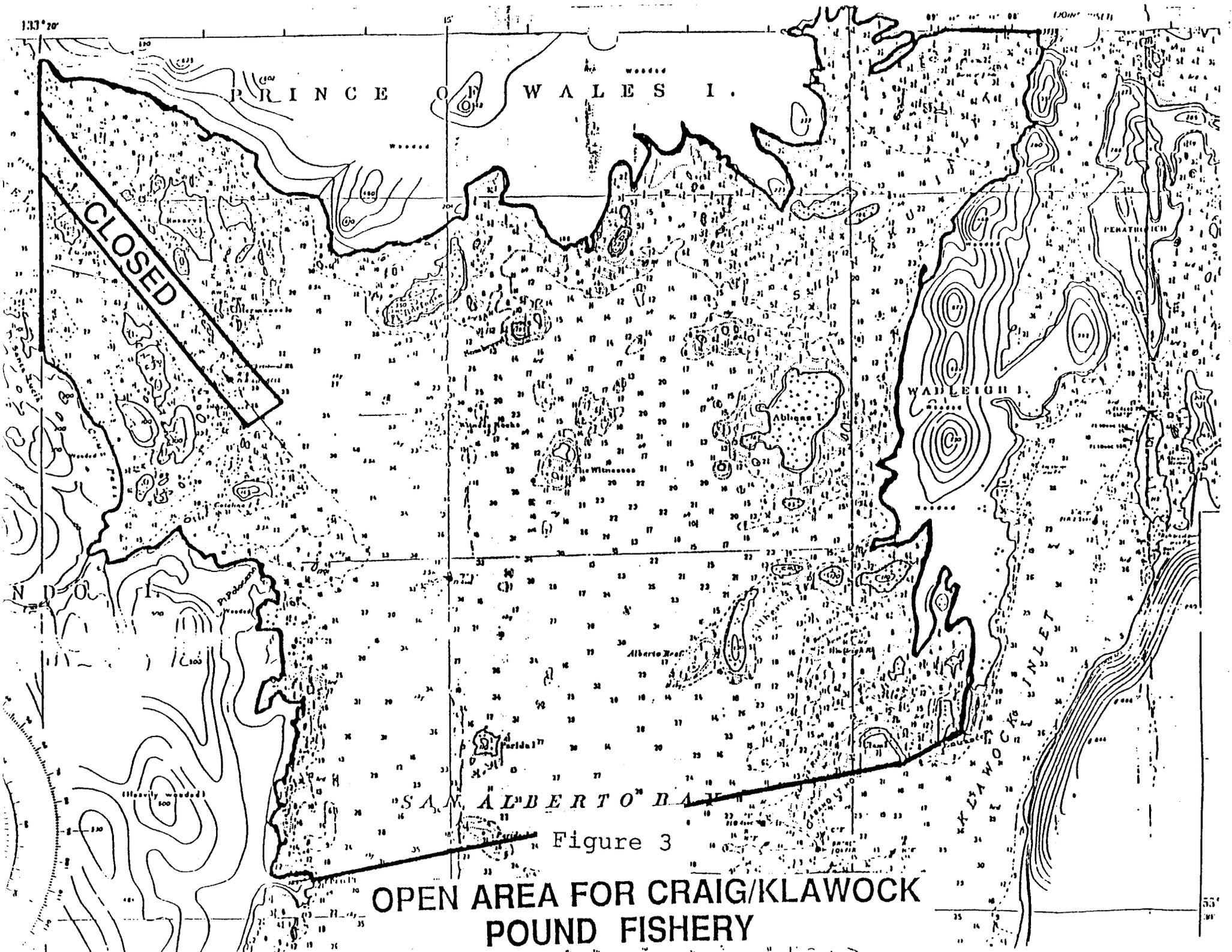
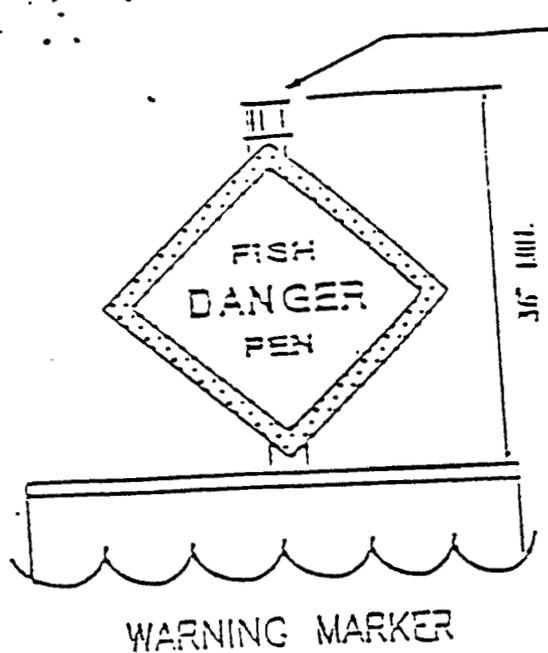
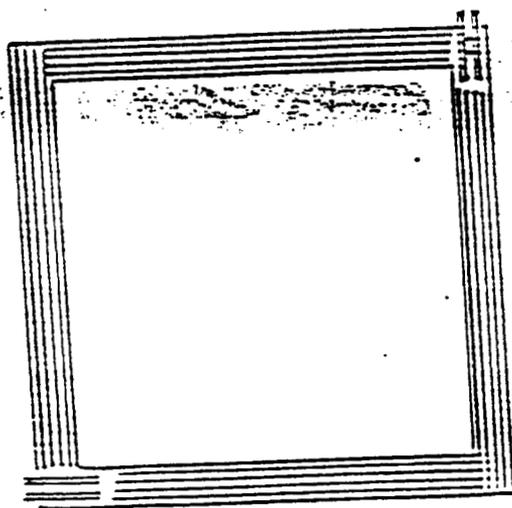
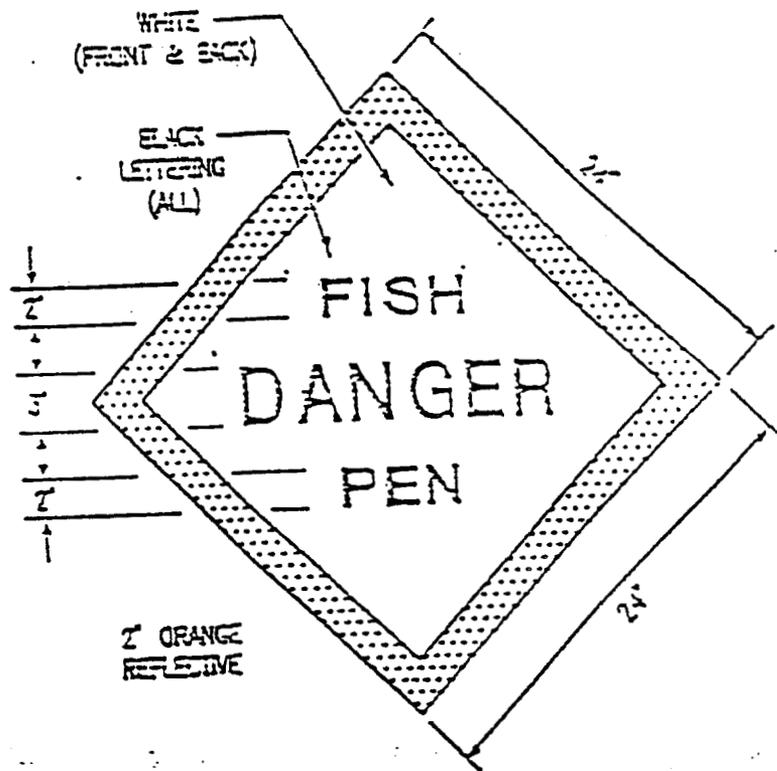


Figure 3

**OPEN AREA FOR CRAIG/KLAWOCK  
POUND FISHERY**



WHITE ALL-ROUND LIGHT  
 MARKS MAY DISPLAY ANY LIGHT SYSTEM  
 EXCEPT QUICK FLASHING, AND FLASHING & FLASHING (2).



MARKING / LIGHTING  
 LOCATIONS

WARNING MARKER

ALL PENS REQUIRE A TWO-SIGN MARKER  
 PLACED ON OPPOSITE CORNERS AS SHOWN.  
 ALL PENS LESS THAN 400 SQ. FT. REQUIRE AN  
 ALL-ROUND WHITE LIGHT ON ONE CORNER MARKER.  
 PENS LARGER THAN 400 SQ. FT. ARE REQUIRED TO  
 HAVE AN ALL-ROUND WHITE LIGHT ON EACH MARKER.

MARKING DIAGRAM

Figure 5 Coast Guard requirements for marking ponds.

## LIST OF MANAGEMENT CONTRACTS

Following are Commercial Fisheries Division contacts regarding this management plan:

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