

1988 Herring Fishery Management Plan
Nelson Island and Nunivak Island Districts

By

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INTRODUCTION

This management plan was developed to inform fishermen and processors of strategies that will be employed by the Department of Fish and Game to manage the herring fisheries in the Nelson and Nunivak Island Districts. Included in this management plan is a review of the status of the fisheries and herring stocks, processor buyer requirements and a summary of on-going Department studies. Figures 1 and 2 describe district boundaries. The district boundaries were adjusted in both districts by the Alaska Board of Fisheries and fishermen should note the changes. Fishermen are urged to contact the Department of Fish and Game before fishing if they have any questions.

FISHERY BACKGROUND

The Nelson/Nunivak Islands area was closed to commercial fishing by emergency order in 1978 when commercial herring fisheries first began in the Kuskokwim Area (Area W). The Alaska Board of Fisheries closed the area by regulation in 1979 to protect the subsistence fishery that was occurring on herring stocks of unknown magnitude. Increased knowledge of herring abundance, subsistence fisheries and increased public interest in a commercial fishery resulted in the Alaska Board of Fisheries establishing a commercial fishing season for the first time during 1985. Table 1 presents the available data on herring stock and harvest magnitude in these districts.

Nelson Island:

In 1987 two commercial fishing periods were allowed from 23-24 May for a total fishing time of 6 hours. The total catch was 923 st, 685 st were taken on 24 May by 229 fishermen. Sac roe herring accounted for 99% of the harvest. The average roe recovery was 9.2%. (Table 1)

Nunivak Island:

During the 1987 season seven commercial fishing periods were allowed from 13-26 May for a total fishing time of 39 hours. The peak catch day was 24 May when 47 fishermen took 220 st of the total 440 st catch. Average sac roe recovery for the season was 7.8%. (Table 1)

FISHERY OUTLOOK

Status of Stocks:

The arrival of herring in the Nelson and Nunivak Islands

districts occur from mid-May to mid-June depending on ice and weather conditions. Peak herring spawning probably occurs 10-20 days after that of Togiak District, similar with that of the Cape Romanzof District.

A peak season aerial biomass estimate of 8,100 st was made on 19 May 1987. This estimate was 2,900 st greater than the pre season estimate and the harvest guideline was increased to 810 st. Survey conditions were poor in the Nunivak Island district and a peak estimate of 1,300 st was made on 19 May 1987. The poor survey conditions and subsequent analysis of the age structure of herring sampled in the Nunivak Island district resulted in the pre-season forecast of herring biomass 4400 st being used as the biomass estimate in 1987.

Ages 8, 9, and 10 herring comprised over 70% of the total biomass in both districts. Projections from 1987 post-season escapement estimates using mean rates of natural mortality and growth for each age class indicate that the 1988 herring biomass should be approximately 5,000 st and 2,800 st in Nelson and Nunivak Island Districts, respectively. Increased mortality of old herring (age 9+) and the recruitment of young herring (age 4 and 5) could alter these projections. Department personnel will be conducting aerial surveys and sampling age class composition in-season to gain information on current biomass levels.

Management Strategies:

Harvests should approach 500 st for Nelson Island and 280 st for Nunivak Island. Herring harvest levels will be adjusted in-season based on the observed herring biomass. If it is not possible to determine herring abundance using aerial surveys, stock condition and abundance will be assessed using a combination of the data including age class composition, commercial catch rates, percentage roe recovery, ratios of pre to post spawners from test and commercial catches, spawn deposition observations and the pre-season projection.

The Alaska Board of Fisheries amended the "Policy Statement of Management of the Nelson Island District Herring Fishery" and "5 AAC 27.895 HARVEST STRATEGY" at the request of local residents. The exploitation rate will now range from 0-15 percent of the estimated herring biomass for each district. Nelson and Nunivak Islands' herring stocks will be exploited at a 10% exploitation rate, as discussed with the Board, in 1988 due to the continued decline in the herring biomass in these districts.

Commercial fishing season openings and fishing periods will be regulated by emergency order. To open the season within each district a minimum herring biomass of 1100-1700 st or significant spawning activity must be observed. Periodic closures of

commercial fishery will be scheduled to allow undisturbed subsistence fishing. In-season closures may also be implemented if (1) the harvest accelerates at a pace which makes it difficult or impossible to construct meaningful accumulative harvest estimates; (2) if the total harvest is nearing the guideline harvest level and stock strength has yet to be entirely defined; and (3) if large numbers of spotter aircraft create a safety hazard for ADF&G personnel conducting aerial surveys. A significant increase in effort is expected in 1987. This will probably result in shorter commercial fishing periods and season.

Several important subsistence herring fishing areas occur throughout the Nelson Island District, particularly in waters of Cape Vancouver. These areas were closed by the Board of Fisheries to commercial fishing. Fishermen should refer to Figure 1 to determine the areas open to commercial fishing.

The Nunivak Island district was extended to include Cape Corwin for the first time in 1988. This extension includes a portion of the Nunivak Island Wilderness, which includes the waters approximately 1 and 1/2 miles off shore. The United States Fish and Wildlife Service has been given the responsibility of managing this area for several special values and all fishermen and processors will be required to have a permit from the USFWS to operate in this area. Please see the attachment describing the USFWS requirements. The cooperation of everyone involved will be necessary to successfully allow a commercial fishery while protecting the special values of this wilderness area.

Due to the nature of the herring gill net fishery significant wastage can occur from unmarketable herring have poor roe recovery. Unmarketable fish can be used for subsistence. Gill net fishermen can minimize wastage by "testing" herring quality. This is accomplished by setting part of the net for a short period of time and checking the roe quality of a small catch. If roe quality is acceptable, then fishermen can then set all their gear. The volume of herring that are discarded (not sold or utilized for subsistence) will be estimated and included in the total harvest.

Both the Departments of Public Safety and Fish and Game received a number of complaints from the residents of Nunivak Island and Nelson Island about people stealing or vandalizing their personal property. Non-local fishermen should be very cautious while exploring on shore. Wood is scarce on the island and it is easy to mistake a disassembled fish rack for a pile of drift wood. All the cabins and the items left in and around them are in use. These are private property and visitors should not take or damage them.

Management Research Projects:

Fishery biologists and technicians will be stationed in Nelson and Nunivak Island districts at Toksook Bay and aboard a tender vessel. Duties will include conducting aerial biomass assessment surveys, processor registration, catch monitoring, spawn deposition monitoring and sampling the commercial and department variable mesh gill net catches for age, length, weight and gonad condition information. Daily fleet broadcasts will be made in each district on VHF 11 and CB 7 to inform fishermen and processors of current fishery status. The Department would also like to thank all the companies that cooperated in housing the Nunivak Island monitor last year.

Herring abundance will be estimated primarily by aerial surveys. Surface area estimates will be made of each school and depending on water depth, a surface area to tonnage conversion factor will be selected. Tonnage conversion factors have been determined by capturing schools of herring with known surface areas and weighing the resulting catch. The data base for tonnage conversion is updated annually from research conducted in the Togiak District. There are problems inherent with aerial surveys and some of these are inclement weather, variable densities and depth of schools, fish school species identification and multiple school counting. The Department plans to monitor test fishing catches in order to better assess the incidence of capelin, smelt and other schooling fish in each district.

Enforcement:

Fishery regulation enforcement will primarily be handled by Fish and Wildlife Protection Division of the Department of Public Safety. Season and period openings and closures will be patrolled, licenses "spot checked" and other enforcement duties performed as warranted.

FISHING REGULATIONS

Following is a summary of commercial herring fishing regulations for the Nelson Island/Nunivak Island areas. This is not a complete listing, but was meant as an aid to fishermen. Some wording may vary slightly from the final form.

The Commercial Fisheries Entry Commission has declared a moratorium on new fishermen while they issue permits in the Nelson and Nunivak Islands districts. Only those fishermen who landed herring in the Nelson Island District in 1986 or before may obtain an interim-use permit for 1988. Only those fishermen who landed fish in the Nunivak Island District in 1987 or before may obtain an interim-use permit for 1988.

NEW

5 AAC 27.060. BERING SEA HERRING FISHERY MANAGEMENT PLAN. (a) The department shall follow the directives of the Bering Sea Herring Management Plan, as well as the regulations that govern the individual herring fisheries, when managing the commercial herring fisheries that take place in the Bering Sea.

(b) Unless otherwise specified in this chapter, the department shall manage the fisheries so that the exploitation rate on eastern Bering Sea herring stocks does not exceed 20 percent of the biomass of those stocks.

(c) The following thresholds are minimum biomass levels for each herring fishing district. When the department estimates, in season, that the biomass in a district is below its threshold, the department may not allow a commercial harvest of herring in that district.

<u>District</u>	<u>Threshold (s.t.)</u>
Port Moller	1,000
Togiak	35,000
Security Cove	1,200
Goodnews Bay	1,200
Cape Avinof	500
Nelson Island	2,500
Nunivak Island	1,500
Cape Romanzof	1,500
Norton Sound	7,000

NEW

5 AAC 27.875. DESCRIPTION OF DISTRICTS... (c) The Nelson Island District consists of all waters north of the latitude of Chinigyak Cape (60° 27' N. lat.) and east of the longitude of Atrnak Point (165° 16' W. long.) (approximately two miles west of Umkumiut), and all waters north of the latitude of Talurarevuk Point (60° 36' N. lat.) and south of the latitude of the southernmost tip of Chinit Point (60° 36' N. lat.) and east of 165° 30' W. long., and all waters north of the latitude of the northernmost tip of Chinit Point (60° 37' N. lat.) and south of the latitude of the south easternmost tip of Kigigak Island (60° 50' N. lat.) and east of 165° 30' W. long.

(d) The Nunivak Island District consists of all waters extending three miles seaward of mean low water from Kikoojit Rocks (60° 19' 30" N. lat., 166° 56' W. long.) to the small bay approximately two miles east of Ingrirak Hill (60° 17' 25" N. lat., 166° 26' 55" W. long.).

NEW

5 AAC 27.885. GEAR. Herring may be taken by gill nets only.

NEW

5 AAC 27.888. GILL NET SPECIFICATION AND OPERATION. (a) No single herring gill net may be less than 50 fathoms in length, unless

the gill net is attached to a commercial herring fishing vessel and the gill net is personally attended by a herring interim use or entry permit holder. The aggregate length of herring gill net in use by a herring interim-use or entry permit holder may not exceed 100 fathoms in length. No more than 100 fathoms of herring gill net and no more than two gill nets may be on board or operated from any commercially licensed herring fishing vessel, except that no more than 50 fathoms and one gill net may be on board or operated from any vessel taking or attempting to take herring during periods specified by emergency order for the reduced gear length.

(b) Each gill net in operation must be buoyed at both ends and at least one buoy must be plainly and legibly marked with the permittee's herring interim use or entry permit number.

(c) A vessel used to take herring or a vessel towed by it may have on board it no more than one legal limit or gear in the aggregate, except that it may have on board it sufficient unhung gear for mending purposes.

5 AAC 27.050 GEAR FOR HERRING. (c) The mesh size of a herring gill net may not be less than 2 1/8 inches and may not exceed 3 inches.

5 AAC 27.890 WATERS CLOSED TO HERRING FISHING. (a) Herring may not be taken for commercial purposes in any waters of Statistical Area W that are not set forth in Sec. 875 of this chapter.

(b) Herring spawn on kelp and herring spawn on any other substrate may not be taken for commercial purposes in any waters of Statistical Area W.

NEW

5 AAC 27.893. VESSEL SPECIFICATIONS AND OPERATIONS. (a) In the Goodnews Bay, Nelson Island, Nunivak Island, and Cape Avinof Districts, no vessel used to take herring may be more than 30 feet in overall length. For the purposes of this section, "overall length" means the straight line measurement between the extremities of the vessel.

(b) In the Nelson Island, Nunivak Island, and Cape Avinof Districts, no vessel used to take herring may have on board it any mechanical device designed to shake or dislodge herring from a gill net.

NEW

5 AAC 27.896. BUYER REPORTING REQUIREMENTS. In addition to the requirements of 5 AAC 39.130(f) each buyer or his agent shall report in person to a local representative of the department upon arrival on the fishing grounds and before commencing operations in any district in Statistical Area W. Each buyer shall;

(1) Identify and describe all vessels to be employed in

processing or transporting herring from each district;

(2) report daily all herring purchased from fishermen or other processing records in each district as specified by a department representative, this may be a requirement for fish tender operators if specified by a local department representative; and,

(3) submit fish tickets before departure from each district and no later than 10 days after termination of buying operations in each district or as otherwise specified by a local department representative.

5 AAC 27.897. POSSESSION OF SALMON. Salmon taken incidentally in conjunction with commercial herring fishing must be returned to the water.

NEW

5 AAC 27.898. SUPEREXCLUSIVE USE AREAS. (a) The Goodnews Bay and Cape Avinof Districts are superexclusive use areas. The Nelson Island and Nunivak Island Districts are a combined superexclusive use area.

(b) A person who participates in the commercial taking of herring as a CFEC permit holder in a superexclusive use area at any time from February 1 through June 30 may not participate or have participated in the commercial taking of herring, either as a CFEC permit holder or a crew member aboard a vessel used to take herring, in another superexclusive or non-exclusive use area at any time from February 1 through June 30 of that same year.

(c) A person who participates in the commercial taking of herring as a crew member aboard a vessel that is used to take herring in a superexclusive use area at any time from February 1 through June 30 may not participate in any commercial taking of herring as a CFEC permit holder in another superexclusive or non-exclusive use area at any time from February 1 through June 30 of that year.

(d) A vessel used in the taking of herring in a superexclusive use area at any time from February 1 through June 30 may not be used or have been used in the taking of herring in another superexclusive or non-exclusive use area at any time from February 1 through June 30 of that year.

(e) Notwithstanding (a), (d) of this section, any person who participate in the taking of herring and any vessel used to take herring in the Goodnews Bay District may also participate in the taking of herring or may be used to take herring in the Security Cove District.

5 AAC 39.002. LIABILITY FOR VIOLATIONS. Unless otherwise provided in 5 AAC 01 - 5 AAC 41 or in AS 16, a person who violates a provision of 5 AAC 01 - 5 AAC 41 is strictly liable for the offense, regardless of his intent.

5 AAC 39.119. VESSEL IDENTIFICATION. (a) Unless otherwise specified, commercial fishing vessel required to be licensed under AS 16.05.490 must display its permanent vessel license plate number.

(1) In permanent symbols at least 12 inches in height and with lines at least one inch in width that contrast with the background.

(2) on both sides of the hull, cabin, or mast;

(3) In a manner such as to be plainly visible and unobscured; and

(4) at all times when registered to fish.

Subsistence Fishing

5 AAC 01.020. SUBSISTENCE FISHING BY COMMERCIAL FISHERMEN. Commercial fishermen may retain fish for their personal use from their lawfully taken commercial catch.

NEW

5 AAC 01.285. LIMITATIONS ON PARTICIPATION IN SUBSISTENCE FINFISH FISHERIES... (d) Only those residents domiciled within 20 miles of the coast between the westernmost tip of the Naskonant Peninsula and the terminus of the Ishowik River and on Nunivak Island may take herring and herring roe in those locations.

PERSONAL USE HERRING FISHERY

5 AAC 77.010. METHODS, MEANS AND GENERAL RESTRICTIONS. (a) Finfish may be taken for personal use only by a holder of a valid resident Alaska sport fishing license or by an Alaskan resident exempt from licensing under AS 16.05.400...

(b) It is unlawful to buy, sell, trade or barter fish or their parts taken under the regulations in 5AAC 77....

(d) Each personal use fishermen shall plainly and legibly inscribe his or her first initial, last name and home address on a keg or buoy attached to a gill net or pot...

Table 1. Comparative herring fishery data, Nelson and Nunivak Islands
Districts, 1979-1986.

	1979	1980	1981	1982	1983	1984	1985	1986	1987
EST. BIOMASS (st) + 1/	+	2,700	+	7,300	11,000	9,500	7,300	8100	
SUBSISTENCE									
Catch (st)	93	97	64	83	94	- 3/	99	167	124
Fishing Families	54	70	93	65	43	-	65	72	96
COMMERCIAL									
Catch (st)	-	-	-	-	-	-	997	886	923
No. Fishermen	-	-	-	-	-	-	143	163	235
No. Buyers	-	-	-	-	-	-	6	4	9
Av. Roe %	-	-	-	-	-	-	10.6	10.3	9.2
Peak Catch Date	-	-	-	-	-	-	6/13	5/26	5/24

Nunivak Island District 4/

EST. BIOMASS (st)	-	-	+	-	7,600	7,600	5,700	6,000	4400
COMMERCIAL									
Catch (st)	-	-	-	-	-	-	358	511	414
No. Fishermen	-	-	-	-	-	-	37	36	61
No. Buyers	-	-	-	-	-	-	5	5	4
Av. Roe %	-	-	-	-	-	-	8.9	10.1	7.8
Peak Catch Date	-	-	-	-	-	-	6/10	5/26	5/24

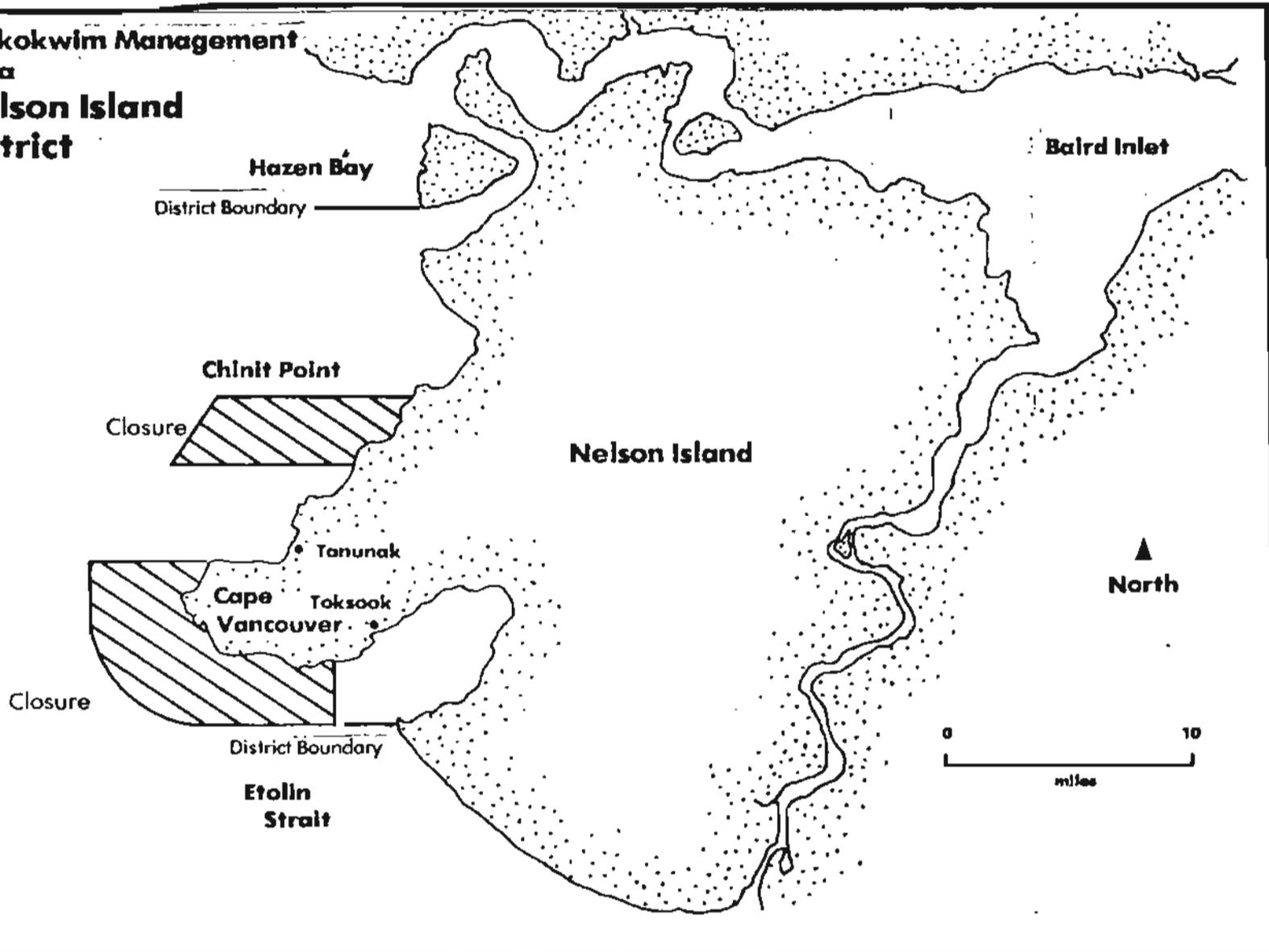
1/ (+) less than 1,000 st estimated

2/ Subsistence survey results are believed to accurately reflect harvest trends, however, reported catches reflect minimum figures since all fishermen cannot be contacted.

3/ (-) not surveyed or no available information.

4/ A subsistence herring survey conducted in Mekoryuk during 1985 resulted in a harvest estimated at less than a st.

**Kuskokwim Management
Area
Nelson Island
District**



Hazen Bay
District Boundary

Baird Inlet

Chinit Point

Closure

Nelson Island

• **Tanunak**

Cape Vancouver •
Toksook •

Closure

District Boundary

**Etolin
Strait**

▲
North

0 10
miles

