SUMMARY OF PRESCRIPTIVE MEASURES CONTAINED IN PRELIMINARY MANAGEMENT PLANS FOR THE NORTHEASTERN PACIFIC OCEAN

NORTHWEST FISHERIES CENTER

AUGUST, 1976

8/17/76

SUMMARY OF TAC'S AND CATCH ALLOCATIONS
(Metric tons)

	Washington-California				Gulf of Alaska				Bering Sea and Aleutians				Total		
	MSY	TAC	US	Foreign	MSY	TAC	US	Foreign	MSY	TAC	US	Foreign	TAC	US	Foreign
Rockfishes	?	18,000	15,000	(3,000)*	125,000+ [1]	50,000 [2]	3,000	47,000	110,000	21,500	0	21,500	89,500	18,000	71,500
Sablefish	7,000	7,000	6,300	(700)*	25,000	22,000	4,500	17,500 [3]	7,500	7,500	0	7,500	36,500	10,800	25,700
Flounders	35,000	31,500	30,000	(1,500)*	50,000+	37,500	7,000	30,500	331,000+	211,000	6,000	205,000	280,000	43,000	237,000
Halibut	-	-	-	-	20,000	~10,000	~10,000	0	?	Trace	Trace	0	10,000	10,000	0
Cod	-	-	-	-	?	6,300	5,000	1,300	58,000	58,000	1,000	57,000	64,300	6,000	58,300
Pollock	-	-	-	-	168,000+	126,000	1,000	125,000	1,100,000+	850,000	8,000	842,000	976,000	9,000	967,000
Atka mackerel	-	-	-	-	?	22,000	0	22,000	-	-	-	-	22,000	0	22,000
Hake	150,000 [4]	150,000	6,800	143,200 [4]	-	-	-	-	-	-	-	-	150,000 [4]	6,800	143,200 [4]
Jack mackerel	210,000+	55,000	20,000	35,000	-	-	-	-	-	-	-	-	55,000	20,000	35,000
Herring	?	?	>TAC	0	?	?	>TAC	0	50,000	21,000	1,000	20,000 [5]	21,000	1,000	20,000 [5]
Others	?	6,500	3,500	(3,000)*	?	16,200	1,300	14,900	?	93,600	0	93,600	116,300	4,800	111,500
Total, finfish	?	268,000	81,600	186,400	?	290,000	31,800	258,200	?	1,262,600	16,000	1,246,600	1,820,000	129,400	1,691,200
% of TAC	-	-	30	70	-	-	11	89	-	-	1	99	-	7	93
Shrimp	~18,000	~18,000	~18,000	0	~52,000	~52,000	~52,000	0	?	0	0	0	~70,000	~70,000	0
King crab	-	-	-	-	~13,600	~13,600	~13,600	0	~41,300	~41,300	~41,300	0	~54,900	~54,900	0
Tanner crab	-	-	-	-	~39,000	~39,000	~39,000	0	~101,200+	~101,200	~91,000	~10,200	~140,200	~130,000	10,200
Snails	-	-	-	-	-	-	-	-	?	3,000 [6]	0	3,000 [6]	3,000 [6]	0	3,000 [6]
Total, shellfish	~18,000	~18,000	~18,000	0	~104,600	~104,600	~104,600	0	?	~145,500	132,300	13,200	268,100	254,900	13,200
% of TAC	-	-	100	0	-	-	100	0	-	-	91	9	-	95	5

* Incidental catch only, not to exceed some percentage of target catch allocation
1/ Pacific ocean perch only
2/ All rockfishes
3/ About 3,500 mt of expected to be taken incidentally to trawl fishery; about 14,000 mt available for allocation to foreign setline fishery
4/ If Feb. 1977 larvae survey has results similar to those of 1976, TAC and foreign allocation will have to be substantially reduced
5/ No more than 1,000 mt of this may be taken by gillnet
6/ Edible meat; live weight about 3.7 times greater or 11,100 mt.

REGULATIONS APPLYING TO FOREIGN FISHERIES THROUGHOUT THE NORTHEAST PACIFIC

* NO RETENTION OF SALMON (except as specifically permitted in Japanese gillnet fishery west of 175°W or Canadian troll fishery)

* NO RETENTION OF HALIBUT (except as specifically permitted in Canadian setline fishery)

* NO RETENTION OF ANY SPECIES OF CRAB (except as specifically permitted in foreign pot fishery in parts of the Bering Sea)

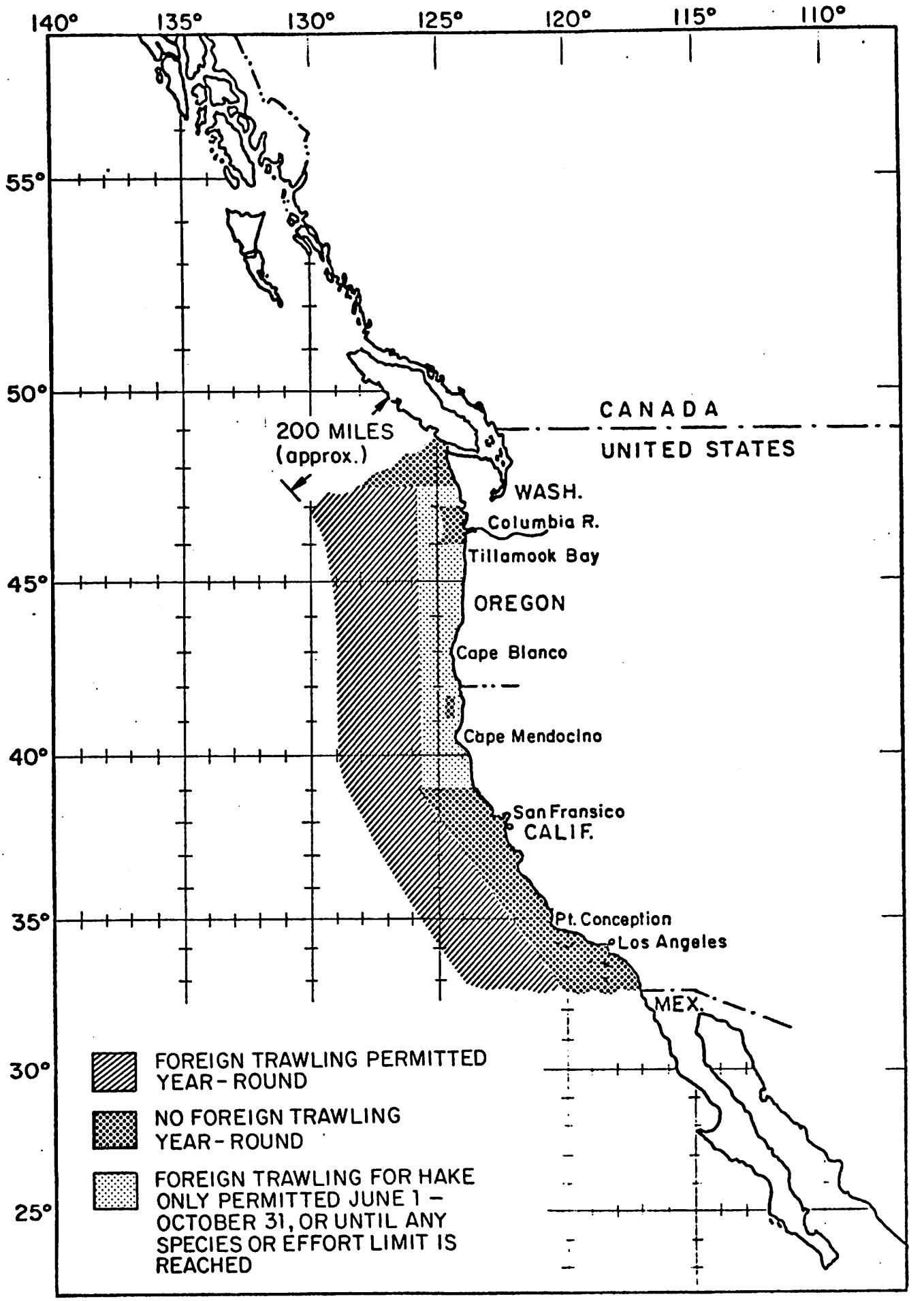
* WHEN A NATION'S ALLOCATION OF ANY SPECIES IS EXCEEDED THERE WILL BE NO FURTHER FISHING BY FISHERMEN OF THAT NATION IN THAT MANAGEMENT UNIT FOR THE REMAINDER OF THE YEAR

* CHECK-IN/CHECK-OUT

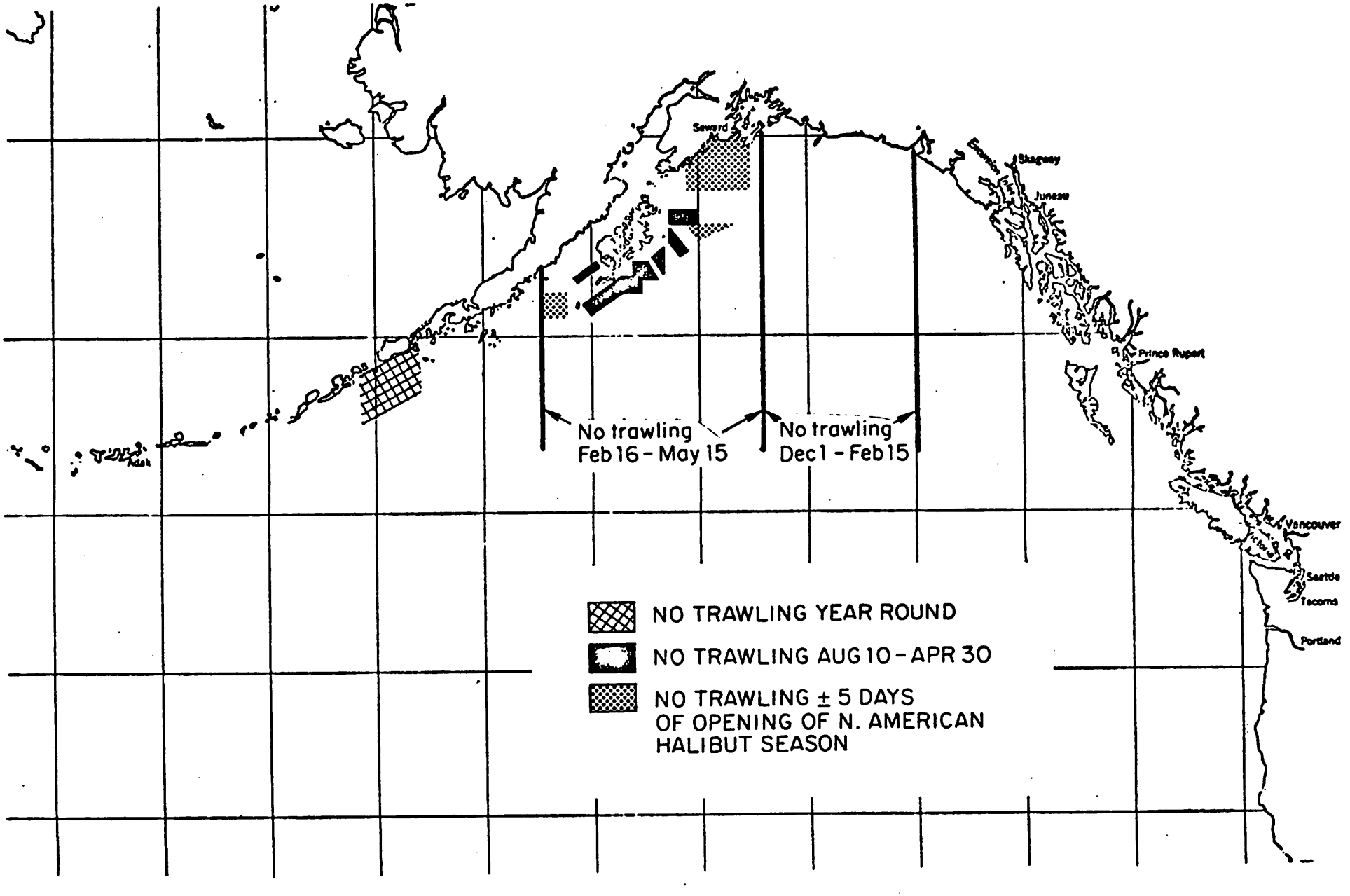
* OBSERVERS

* ANNUAL AND MONTHLY (or 10-day) STATISTICAL REPORTS

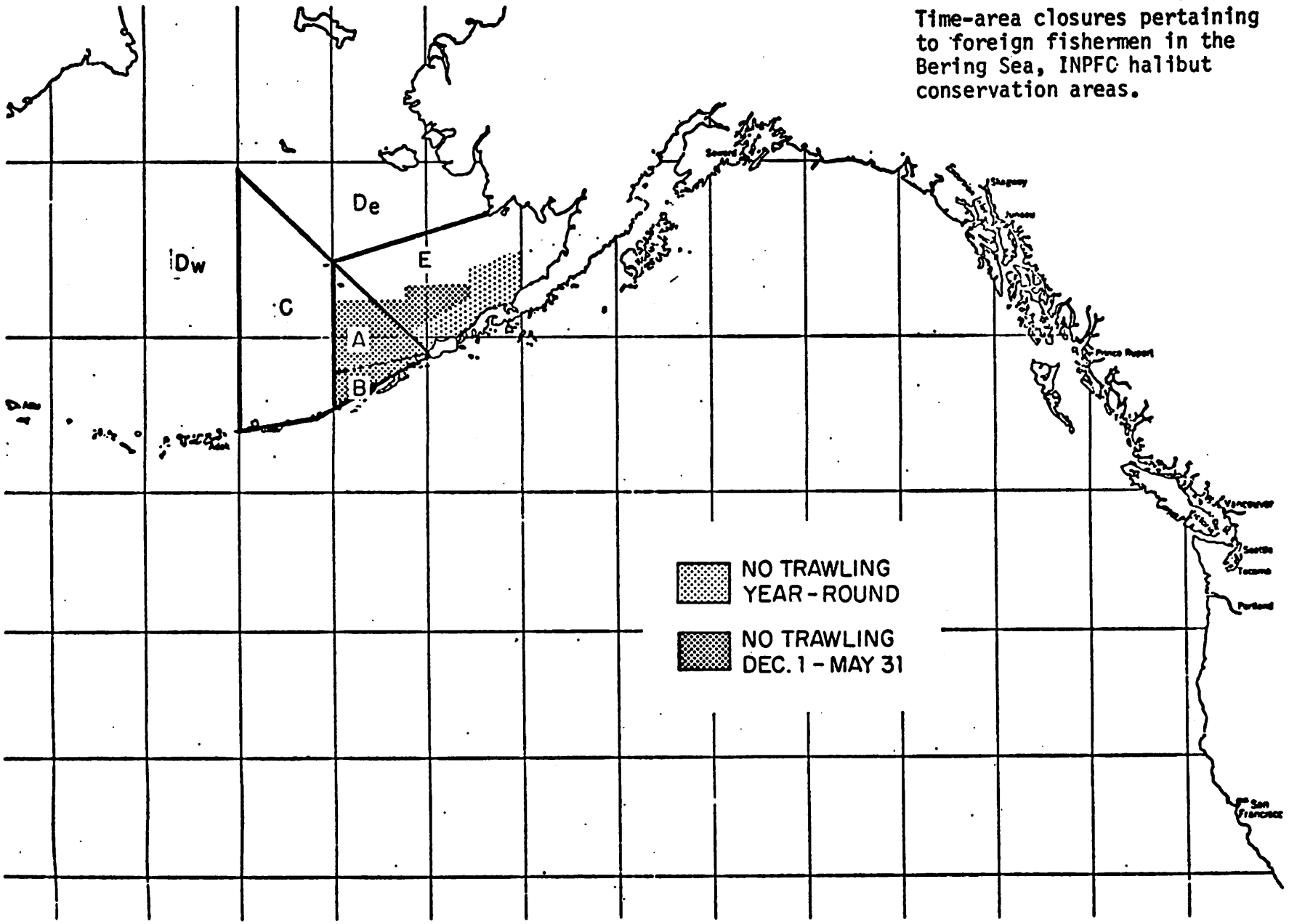
* NO FISHING WITHIN 12 MILES OF THE COAST (except in specific areas of the Aleutian Island chain).



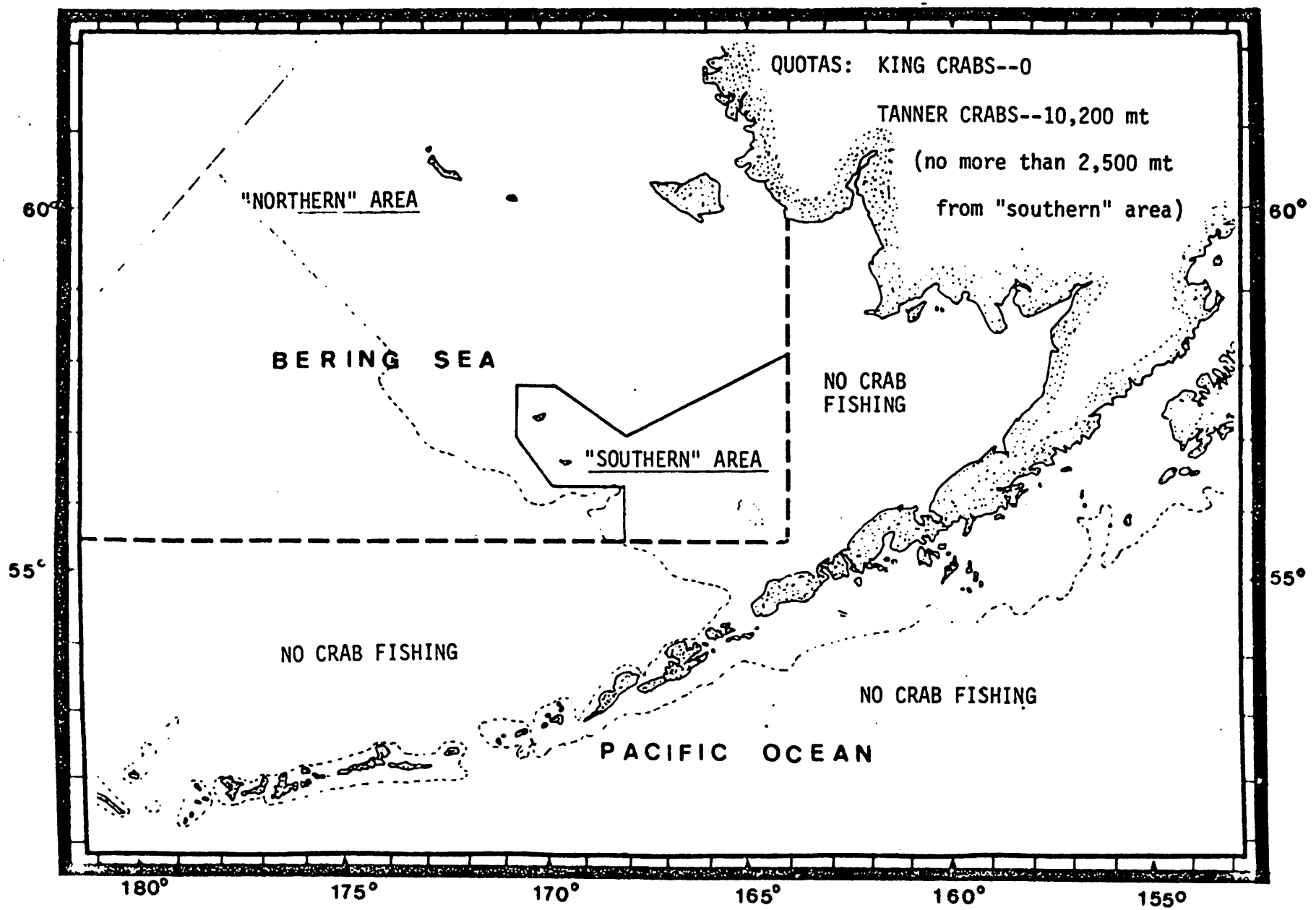
Time-area closures pertaining to foreign trawl fishing in the Washington-California Region.



Time area closures pertaining to foreign fishermen in the Gulf of Alaska.



Time-area closures pertaining to foreign fishermen in the Bering Sea, INPFC halibut conservation areas.



Area-closures and quotas pertaining to foreign crab fishing in the Bering Sea.

1. Introduction King Crab Management Plan

This plan represents the initial phase for exercising the North Pacific Fishery Management authority for managing the king crab resources off Alaska. The necessity for having a management regime in force by March 1977 that permits continuation of the fishery without disruption to the fishery industry mandates that the existing, tested, and familiar management mechanisms be adopted.

The North Pacific Fishery Management Council proposes as an initial action to establish a regulatory regime for the domestic king crab fishery of Alaska, that the Secretary adopt the pertinent Alaska statutes and regulations currently in force. These statutes and regulations require licensing and registration, designate zones where fishing is permitted, establish limitation on sex and size of king crab which may be retained, limit the type and amount of gear which may be employed, and other mechanisms to facilitate the administration and enforcement of the necessary and appropriate measures to manage king crab.

This system for conservation and management of Alaska's king crab has evolved along with the growth of the fishery in the 1960's and during its stabilization in the 1970's. These procedures have been successful in maintaining the Alaska king crab stocks and commercial harvests at a

generally satisfactory level. These measures have evolved through public participation in Alaska's regulatory process including considerations of regulatory proposals submitted by the public, public comment on regulatory proposals, extensive public testimony at hearings convened by the Alaska Board of Fisheries and its advisory committees, and the consideration of petitions for regulatory change similar to the requirements in the Federal Advisory Committee Act. This process has reflected a wide range of social and economic considerations.

This initial phase, consisting of the adoption of the existing State of Alaska regulatory regime, will be followed by a second phase of systematic review and analysis of each management and conservation measure and its supporting data base by a continuing management plan development team. The process will include recommendations for the development of pertinent new biological and socio-economic data. These actions may result in a modification of existing management measures as given in an evolving and updated Council Management Plan.

1.A. Conservation and Management Measures

The measures influencing the precise level of annual king crab harvest of at or near optimum yield while perpetuating sufficient brood stock to maintain the

resource include a system of fishing seasons, area closures, fishing gear regulations restrictions on sex of crab harvested, harvest levels, and minimum size limits.

(1) Fishing seasons expressed as periods of time when fishing is permitted within areas; seasons can be manipulated to:

   (a) permit economically efficient harveesting while assuring that a necessary proportion for brood stock will be conserved.

   (b) selectively protect weak stocks.

   (c) protect sensitive periods of crab life cycles, e.g., in soft shell periods.

   (d) effect greater dispersion of excessive fishing efforts.

(2) Area closures delineate the area where fishing may not be conducted, and often complement seasonal regulation. Subareas such as bays may be closed to protect female, immature, or soft-shell king crab from excessive handling. In-season closures are necessary when the appropriate harvest level has been taken.

(3) Fishing gear regulation involves defining permissible gear types and amounts; e.g., restricting

legal gear to king crab pots and where appropriate to ring nets and scuba diving.

(4) Sex limitation regulation protects the reproductive potentials of king crab stocks by restricting the harvest to males only.

(5) Size limits and harvest levels are used in concert to optimize the annual harvest and to avoid industry dependence on a recruits only fishery. These measures operate to establish a sufficiently broad spectrum of legal size crab in sufficient quantities and are determined by or concerned with:

(a) Growth per molt after maturity;

(b) Size dependent mating behavior;

(c) Avoiding dependence on a "recruits only fishery";

(d) Maintaining productivity of all segments of brood stock.

In season readjustments to guideline harvest levels are made as the fishery provides a real-time measure of the status of stocks.

I. B. Mechanisms to Implement Management Measures and Facilitate Enforcement

The expanse of Alaska's coast precludes the capability of directly patrolling all the potential king crab fishing grounds for enforcing the consideration and management measures. Clearly, indirect measures are necessary so that the regulations implementing the necessary management measures are enforceable. This section sets forth such a system to minimize the need for and cost of direct enforcement. This system of mechanisms consists of a landing law approach, area landing laws, catch reporting requirements, area registration and inspection, and deployment, description, and marking of king crab gear.

(1) The Landing Law Approach: The landing law system prohibits the landing, including the possessing, vending, trading, transporting, or purchasing all king crab taken contrary to regulations, and it applies to the possession of king crab gear in operable condition in areas or at times contrary to regulation.

The immediate alternative to this form of regulatory program is direct enforcement--a costly, inefficient program.

(2) Area Landing Laws provide for separate and flexible management and enforcement of individual king crab fisheries according to local conditions to prevent depletion of stocks in any area.

(3) Area Registration and Inspection: Area registration is designed to implement the landing law concept for individual registration areas and thereby facilitates management of individual king crab fisheries according to local conditions. Area registration provides an important information base for instituting conservation measures. The regulation areas generally conform to the biological boundaries of the stocks within each area. Registration provides the manager with information on the size and capacity of the fleet that will be operating.

The nine registration areas are composed of two kinds - exclusive and non-exclusive. Exclusive registration areas encompass generally well developed fisheries. Non-exclusive regulation areas are generally areas of developing king crab fisheries, or relatively unexplored areas, or areas where fishing effort has been encouraged in order to

gain further information concerning the resource in that area. Area registration acts to prevent to some extent sudden over-exploitation and consequent overburdening of the processing capability within any one area, and resultant wastage from deadloss while waiting to land.

Inspection is used to validate the registration of vessels immediately prior to fishing. A vessel may only be validly registered for one area at a time in order to insure accurate reporting of catch location. The combined purpose of registration, inspection, and landing restrictions, through practical limitations on operations, allows only those landings of king crab where it is highly probable that such crab were not taken from unauthorized areas. In order to minimize the impact of limiting markets for fishermen in that area, provision is made for landing in other areas by radio contact.

Catch Reporting: Catch reporting by the fishermen and the buyers is necessary for proper management, revenue collection, value determination and fishery

enforcement. When a king crab fisherman lands his catch, a report in the form of a "fish ticket" must be made. The information requested provides a statistical data base on the fishery.

(5) Deployment, Description, and Marking of Crab Pot Gear: King crab buoys should be marked in a manner to identify the vessel fishing the gear. King crab pots are to be described, by regulation, in a manner which will separate them from pot gear being fished for other species of shellfish or bottomfish and the use of pots described as king crab pots should be prohibited in waters closed to king crab fishing. Storage of pots in non-fishing condition in shallow water can be permitted. The purpose of these requirements is to preclude fishing of king crab in closed waters. Preseason placement and postseason retrieval of pots is allowed, through a 72-hour grace period as a safety measure for pot transportation by reducing the risk of vessels overloading to carry legal limits of pots to and from the fishing grounds.

Meetings of Regional Fishery Management Councils

November 12, 1976

CY	Month	New England	Mid Atlantic	South Atlantic	Caribbean	Gulf of Mexico	Western Pacific	Pacific	North Pacific
1976	September		28. Baltimore, Md.		28-29. St. Thomas V.I.				
1976	October	1.E. Boston, Mass. 12-13. Boston, Mass.	19-21 Philadelphia Pa.	18-19 Charleston, S.C.		12-13. New Orleans, La.	19-21. Honolulu Hawaii	12-15 Seattle, Wash.	5-8 Juneau, Alaska.
1976	November	8-10 Waltham, Mass. 22-23 Boston, Mass.	18-19 Arl., Va	3-5 Jacksonville, Fla. 18-19 Savannah Ga.	21-22 San Juan, P.R. 29-	3-5 Jacksonville, Fla.		22-23 San Francisco Calif. (Sci. & Stat. Comm) 22-23 San Francisco Calif.	29-
1976	December				2. Christensted, V.I.	8-10 Houston, Tex.		14-16. Portland, Ore.	1. Anchorage, Alaska (Sci. & Stat. Comm.) 2-5. Anchorage, Alaska (Advisory Panel) 2-5. Anchorage, Alaska

November 22, 1976

TO: Members;
North Pacific Fisheries Council

FROM: Ketchikan Alaska Trollers Association
Box 825
Ketchikan, Alaska 99901

Gentlemen:

Enclosed is a copy of the Ketchikan Alaska Trollers Association comments on the Draft - Pacific Coast Troll Fishery Plan - which we are forwarding to the Regional Director, NMFS.

We are discouraged that this plan was made without the input of the North Pacific Fisheries Council, expecially in light of the fact that the majority of the stocks that Alaskan trollers fish on are Alaskan salmon. We feel that because the North Pacific Council was not involved, many errors in statistics and conclusions were made. We also feel that we have the right to expect that the North Pacific Fisheries Council and its advisors will have an equal say in determining the future of Alaska's troll fishery.

Sincerely,

J B Colant

Ketchikan Alaska Trollers Assoc.
Southeast Alaska Trollers Assoc.

To: Regional Director
National Marine Fisheries Service
NOAA/DOC
1700 Westlake Ave. North
Seattle, Wash. 98109

From: Ketchikan Alaska Trollers Assn.
Box 825
Ketchikan Alaska 99901

Subject: DRAFT ENVIRONMENTAL IMPACT STATEMENT / FISHERY MANAGEMENT PLAN
Troll Salmon Fishery of the Pacific Coast

Dear Sir;

Enclosed is a copy of the Draft Troll Fishery Management Plan that we have underlined in areas that we feel need correction, revision or comment. Of primary concern to our organization are the facts that:

1. (1.3.3.1) The Pacific Council had the responsibility for preparation of the management plan without equal input from the North Pacific Management Council or its resources.

2. The Management Plan for the Troll Fishery is actually no plan at all and perpetuates th expansion of the Canada Troll Fleet at the expense of U.S. fishermen.

As we analyzed the Draft we found that corrections, revisions, or comments were needed on the following paragraphs:

Page 32, 2.1.2

This paragraph explaining the King and Coho sport catches in Alaska is misleading because of the following reasons:

1. 1973 figures came from a Boeing Economic Survey that the ADF&G considers to be incorrect.

2. These are statewide figures that include the Cook Inlet fishery. 1974 and 1975 figures reflect a downward trend because of massive closures in Cook Inlet. It is important to note that the Cook Inlet sport fisheries are the largest sport fisheries in the state and exploit fish that are almost never exploited by a Troll Fishery.

Page 38, 2.1.3.

The figures on troll licenses in Alaska are misleading because they do not distinguish between the Commercial Power Troll Fleet and the Sport Commercial Hand Troll Fleet. Historically the Alaska Commercial Troll fleet has remained constant at around 1,000 boats with quite a lesser number actually being active in any one year. The Sport Commercial Hand Troll fleet who are primarily week-end fishermen has shown substantial increases in recent years because of the following reasons:

1. There is no catch limit and the fish can be sold.
2. They use their commercial license to buy their fuel at a discount.
3. They use their sport boats as a tax write-off.
4. Commercial licenses are very cheap.

Historically this fleet has contributed only a small percentage to Alaska's total Troll catch.

Page 41.

It is very discouraging for Alaska Trollers to read of the increased efficiency of the Pacific Troll Fleet because we know that this has occured everywhere except in Alaska. This is because Alaska Trollers are restricted to only 4 lines inside the three mile limit. Unlike the other states and Canada, Alaska's Troll Fishery occurs inside the three mile limit with the exception of the Fairweather Grounds. This 4 line restriction has also kept the size of our vessels from increasing over the years.

Figure 8.

Concerning interceptions of salmon between Alaska and Canada the balance shown in Figure 8 is in Alaska's favor only because the ADF&G and the NMFS have made no effort to find and evaluate Canada's interceptions of Alaska's fish. Furthermore, Canada has not been totally honest and has expanded interception fisheries in the Portland Canal and Dundas Island areas. Unfortunately we do not have a measurement on these problems. A good example of the poor data that we receive from Canada on interceptions of Alaska's fish is exemplified on page 45 where Canada's Troll effort in Alaska's off shore waters is illustrated. Any troller who has spent any time on the Fairweather Grounds could tell you that these figures are extremely low. An example is year 1974 where 34 boat days is shown. These figures are being used in the measurements for figure 8 but have never been challenged by the U.S. delegation during negotiations. Why would Canada have such incorrect figures? Obviously because the Canadian Fishermen landing their fish from the Fairweather cannot sell their Kings smaller than 26 inches unless they say they came from inside canada. Further it strengthens their position in negotiations.

Page 48, 2.1.5.

We wish to take strong exception to the statement that Canada conforms and point out that:

1. Canada does not enforce its 26 inch limit on outside waters and therefore does not have a limit. Never have any of our members observed BC trollers shaking small fish. The U.S. recognizes and inforces the 26 inch limit.

2. Canada has no restrictions on number of lines fished while Washington is restricted to 6 and Alaska to 4. Canadians have been observed fishing as many as 12 lines. Obviously a troller's efficiency is related to the number of lines fished and has a direct bearing on the size of the vessel that would be efficient in the fishery.

Page 50, 2.1.6.

Concerning the "History of Cooperative Research and Statistical Exchange" we have already pointed out problems resulting from this exchange on Figure 8. We would further like to bring to your attention the Alaska Position concerning the Bilateral talks. We are enclosing not included a copy for your perusal. It is generally recognized by Mr. McKernan that research and statistics in the northern sector (northern BC and Alaska) are totally lacking or unusable.

Page 59, 2.2.2.

Alaska's history in the troll fishery we feel disputes the contention that we are totally unmanageable and dangerous. Alaska's share has been constant for many years through regulation. Furthermore, the Alaska Troller has provided science with much of the ocean research on salmon and will in the future play an even greater role in this research.

Page 60, 2.3. Page 62, 3.2.

The sentences underlined in these two paragraphs are extremely strong arguments for adopting Alternative Plan 6.1 "Eliminating the Canadian Fishery". It is our belief that Alaskan would not receive similar treatment from Canada if the status quo were retained. The draft noted in the text that in recent years U.S. Trollers have quit fishing the Canadian coast. There is a good reason for this. That is that the Canadian Govt. has been extremely hard on U.S. fishermen forced into Canada by weather.

Page 65, 5.2.2.

The statement underlined in this paragraph is obviously false when the U.S. 26 inch limit is considered. We would like to point out further that there have been no studies made on mortality at sea due to natural predation, disease and loss to foreign draggers to show that it is more advantageous to catch salmon as spawners. Irregardless, troll caught salmon bring such a high price that the loss in weight is more than offset by the high price.

Page 66, 5.2.2.

It is generally recognized that Alaska has no shaker problem.

Page 68, 5.4.

We feel that the 200 Mile Commissions have the responsibility to inact this "legislation" as it was intended. U.S. Trollers are already being restricted from Canada. Any negotiations with Canada from this time on should reflect the will of Congress through this law. The only U.S. fishermen who might gain from this inaction would be U.S. draggers and this would be only short term. We also feel that circumventing this law through inaction at the direction of the State Dept. would be a dangerous precedence that could be further damaging to U.S. fishery interests.

Page 69, 6.1.

It is the opinion of this organization that the North Pacific Commission and the Pacific Commission jointly approve Alternative Plan 6.1. Elimination of the Canadian Fishery.

Page 70, 7.0.

The paragraph underlined spells out who will pay in both the short run and long run if no action is taken. The Canadian Troll Fishery will continue to expand at the expense of the U.S. people.

SUMMARY.....

In summary this organization finds that this Draft is lacking in the descriptions of the History of Alaska's Exploitation, Alaska's vessels and Gear Employed, Alaska's part in Competition for Stocks and The History of Management, expecially in regard to Canada's willingness to conform to coastwide regulations. We also disagree in general with the Draft recommendations.

The Ketchikan Alaska Trollers Assoc. recommends the following action be taken:

1. That the Draft Management Plan for the Troll Fishery be reviewed jointly by the North Pacific Fishery Council and the Pacific Fishery Council.

2. That Alternative Plan 6.1., "Elimination of the Canadian Fishery" be recommended and inacted.

Sincerely,

J. B. Catanzaro

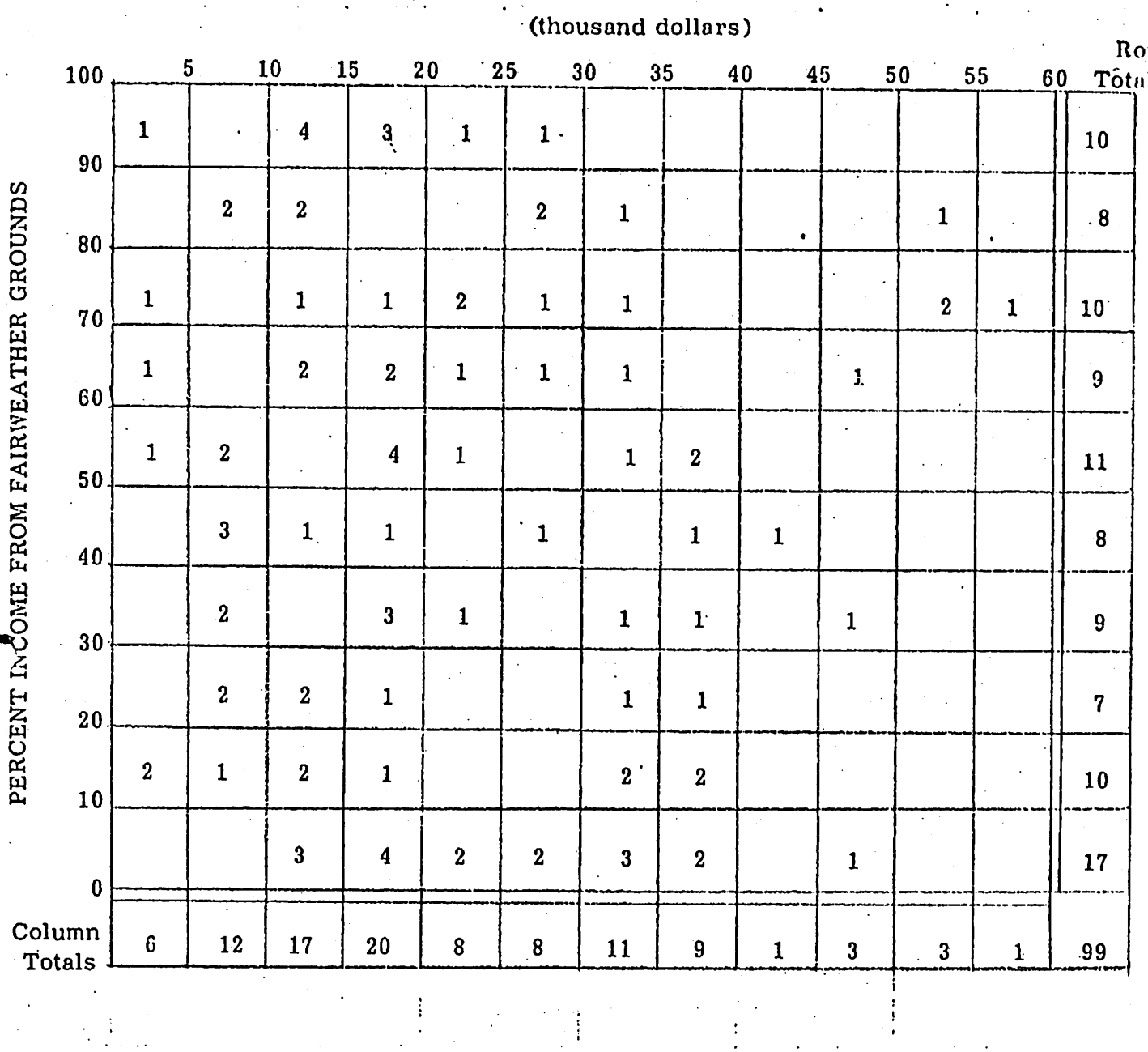
Ketchikan Alaska Trollers Assoc.
Southeast Alaska Trollers Assoc.

Salmon caught by troll gear in the Fairweather Grounds were landed by 99 vessels in 1976 (98 power, 1 hand). Six of these vessels fished exclusively in the Grounds with their largest income being $20,000.

The total income from salmon for the 99 vessels was $2,152,000 with 45 percent of this ($969,000) being attributed to the Fairweather Grounds.

The average income from troll salmon fishing for these fisherman was $22,000 with 46 percent ($9,900) attributed to the Grounds. The largest income for an individual in the Grounds was $43,000.

GROSS INCOME FROM SALMON TROLLING



PERCENT INCOME FROM FAIRWEATHER GROUNDS	5	10	15	20	25	30	35	40	45	50	55	60	Row Total
100	1		4	3	1	1							10
90		2	2			2	1				1		8
80	1		1	1	2	1	1				2	1	10
70	1		2	2	1	1	1			1			9
60	1	2		4	1		1	2					11
50		3	1	1		1		1	1				8
40		2		3	1		1	1		1			9
30		2	2	1			1	1					7
20	2	1	2	1			2	2					10
10			3	4	2	2	3	2		1			17
0													
Column Totals	6	12	17	20	8	8	11	9	1	3	3	1	99

NUMBER OF VESSELS BY INCOME BY PERCENT INCOME FROM FAIRWEATHER GROUNDS. 99 VESSELS FOR 1976.

(Data compiled by CFEC)

Tab 4

In-season Adjustment of Time and Area
(to be included in Section 8.3.1(p.81)

Management of shellfish fisheries by the State of Alaska in recent years compares very favorably with management of most other fisheries in the United States and elsewhere. The shellfish resources are in a good biological condition and the dependent user groups are in an economically viable condition. The success of this management program may be largely attributed to the deliberate flexibility built into the governing system by State law and the resultant ability of the Board of Fisheries and the Department of Fish and Game to undertake timely changes in the regulations to meet changing needs and conditions. This flexibility, which is realized through annual revision of the regulations by the Board together with emergency orders and regulations issued in-season by the Department, results in many benefits:

(a) New information and data relating to resource management can be immediately incorporated into the management program, even when the fishery is in progress.

(b) The management approach adopted by the Board before the season can be adjusted and refined during the season on the basis of assessments of actual resource conditions.

(c) Unanticipated resource conditions can be reacted to immediately to prevent both underfishing and wasteful under-utilization.

(d) The dangers posed by high effort levels and efficient harvesting units (such as where fleet tank capacity equals or exceeds an OY) can be closely controlled.

(e) Unexpected developments with respect to economic and social factors (natural disaster, changes in marketing, conditions, cannery fires, etc.) can be accommodated so the shellfish resources are distributed and allocated in a manner which maximizes overall public benefits.

(f) Management philosophies and policies formulated through legislative and administrative processes may be carried out in the field by biologists familiar with local conditions.

(g) Management approaches which are proving unworkable or which are imposing undue hardships on users may be changed at once.

(h) Necessary in-season refinements in management programs can be accomplished primarily in the field with the advice and assistance of the users most directly affected.

Similar management flexibility should be an integral part of the Federal Regulatory System which will be applicable to the tanner crab fishery pursuant to this plan.

NPFMC FINDING ON THE SPECIFICATION OF THE OPTIMUM YIELD AND THE ISSUANCE OF FIELD ORDERS

The Council finds that the Optimum Yields in this plan, which are based upon projections of the status of the stocks, economic and other conditions several months in advance of the actual conduct of the fishery, may be found to be mis-specified in light of unpredicted and unanticipated adverse or favorable stock conditions which are revealed in-season. Under such circumstances, the Council further finds it appropriate, for conservation purposes only, the Regional Director of the National Marine Fisheries Service, Alaska Region, in close coordination with the Commissioner of the Alaska Department of Fish and Game, take immediate action by issuing field orders adjusting time and/or area restrictions; therefore, this plan provides that seasons and areas shall be subject to in-season adjustment by the Regional Director of the National Marine Fisheries Service. The Regional Director or his designee may adjust season opening and closing dates based upon the following considerations:

1. the effect of overall fishing effort within the registration area;

2. catch per unit effort and rate of harvest;

3. relative abundance of tanner crab within the area in comparison with pre-season expectation;

4. the proportion of immature or soft shell tanner crab being handled;

5. general information on the condition of tanner crab within the area;

6. information pertaining to the optimum yield for tanner crab within the registration area; or

7. Any other factors necessary for the conservation and management of the tanner crab resource.

In order to assume effective management of the tanner crab resource as a unit throughout its range, in-season adjustments made by the Regional Director must be coordinated with similar actions taken by the State regarding waters under state jurisdiction. It is necessary that the Regional Director, to the extent possible, act in conjunction with the Alaska Department of Fish and Game in order to effect uniformity of management in State waters and the Fishery Conservation Zone. As a result, any changes proposed by the Regional Director will be accompanied by advance notice to the State to allow for opportunity to maintain such uniformity. In most cases, the Regional Director will exercise his authority on the basis of recommendations received from the Department, and will rely on the Department for season data, reports and assessments necessary to make a determination as to the advisability of any action contemplated. In all cases, continuous consultation between ADF&G and the Regional Director will be maintained.

It is expected that the actual opening and/or closing dates for the seasons prescribed in this plan will be adjusted by the Regional Director pursuant to the authority described in this section. Such action is not considered emergency action that would require amendment of the plan, or regulations implementing the plan; adjusting the season opening and closing dates is meant to be an inherent part of the seasons themselves. For this reason, any adjustments made by the Regional Director or his designee will be effected by the issuance of a field order and announcement in the manner currently utilized by the State of Alaska. Any in-season amendment of the Plan's season or area or other implementing regulations beyond the scope of the above described authority will be accomplished by emergency regulation, as provided by section 305(e) of the Act, in accordance with the recommendation of the Regional Director and the Commissioner of the Department of Fish and Game. It is understood that time will often be of the essence in making effective the aforementioned adjustments and changes.

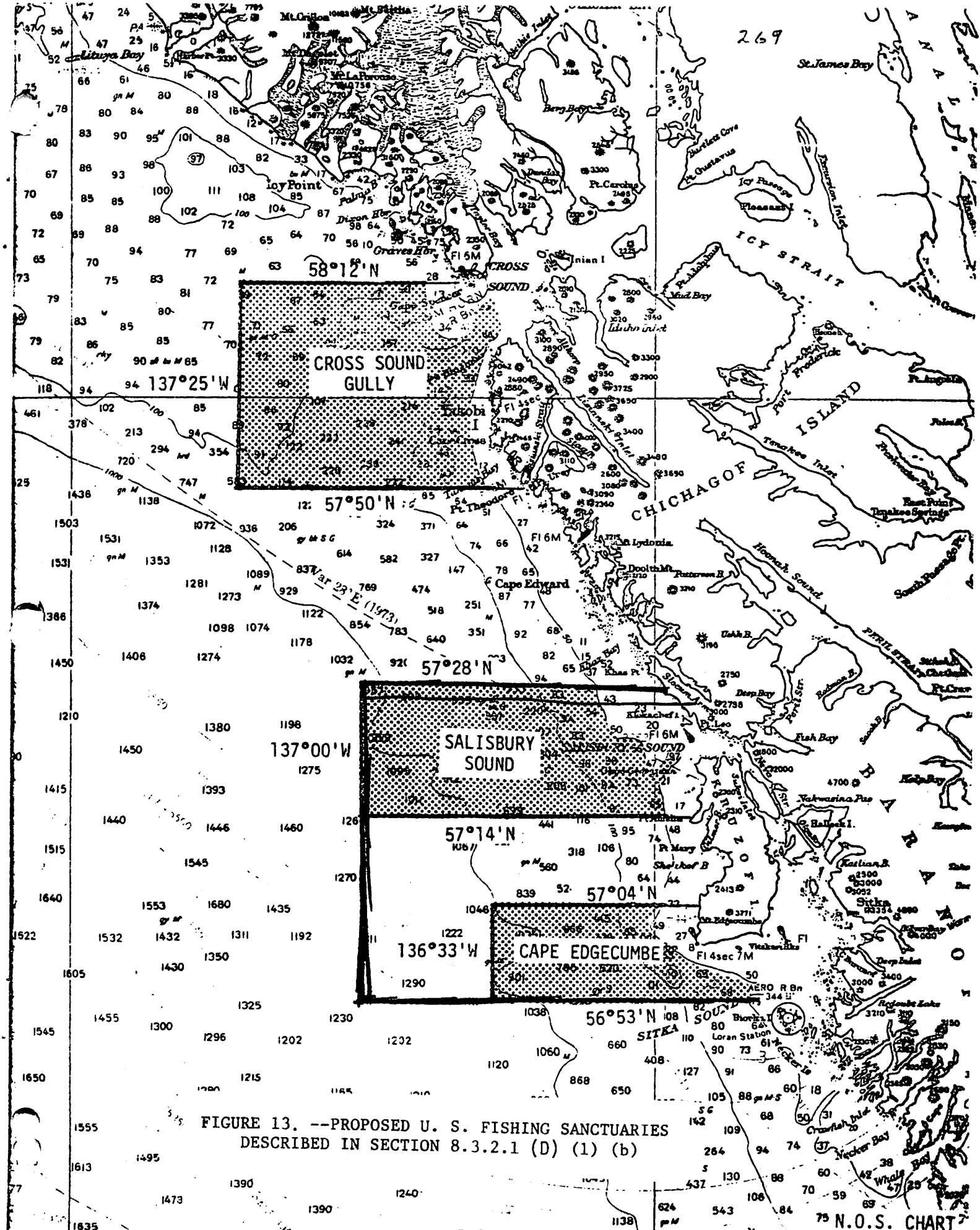


FIGURE 13. --PROPOSED U. S. FISHING SANCTUARIES DESCRIBED IN SECTION 8.3.2.1 (D) (1) (b)

N.O.S. CHART NO. 16016

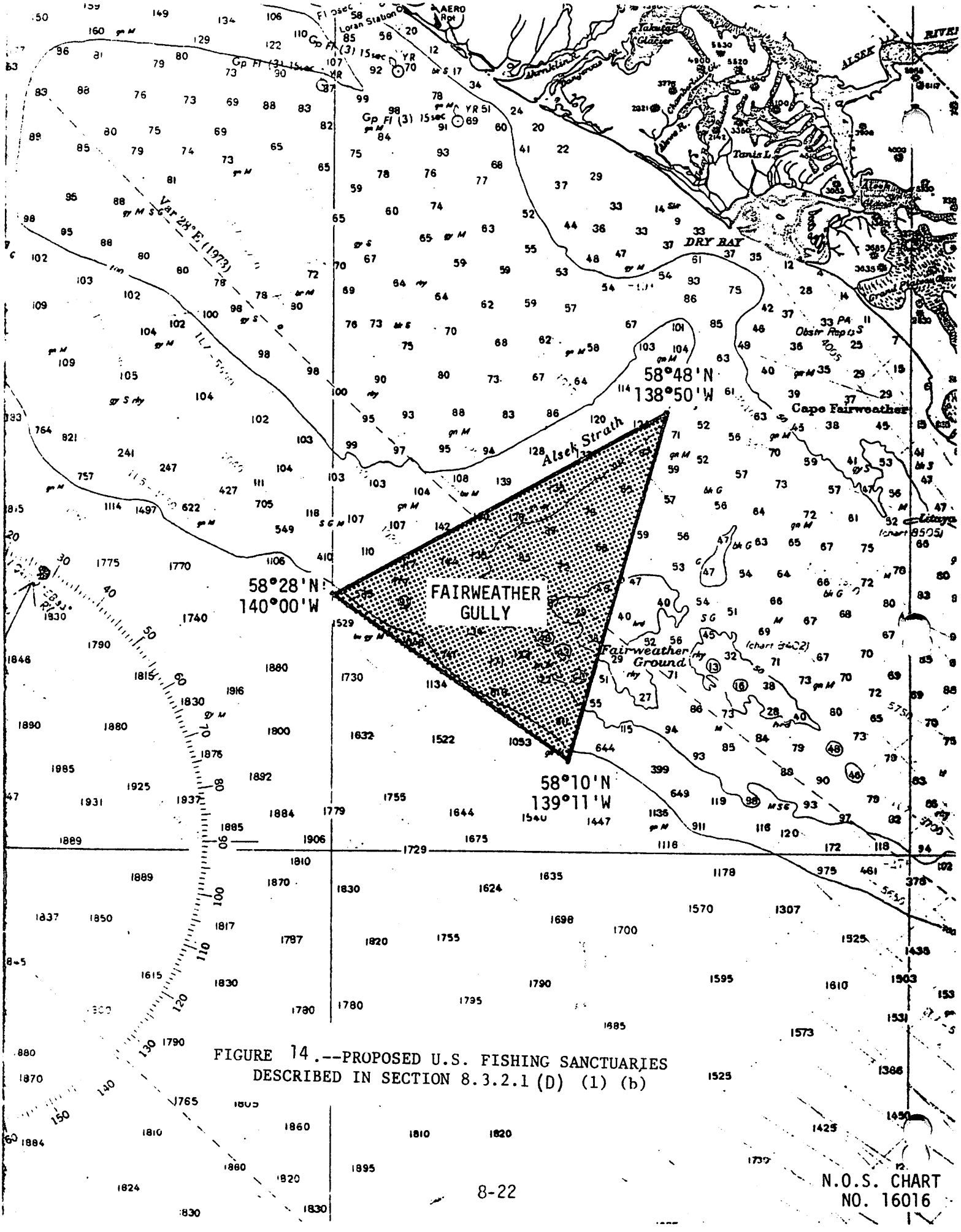


FIGURE 14.--PROPOSED U.S. FISHING SANCTUARIES DESCRIBED IN SECTION 8.3.2.1 (D) (1) (b)

N.O.S. CHART NO. 16016

INFO #34

The following represents a list of issues that must be dealt with in a very specific manner in order to implement the Tanner crab plan.

1. Emergency Order (Field Order) provisions allowing in-season management flexibility to respond to unanticipated stock conditions. Should these provisions be in the plan or the regulations? What are the actual mechanics (procedures) to carry out such field orders? Who will recommend the time and/or area adjustments? How will the appropriateness of the action be verified? How will the public be notified? How will the State and NMFS coordinate their actions to ensure compatability of regulation inside and outside of three miles? What, if any, restrictive conditions will be placed upon the Regional Director's authority to issue these orders? Can he open the season early or extend it beyond the dates in the plan? Can he allow the harvest to exceed the OY specified in the plan if stock conditions permit? In addition to domestic harvesting activities, can the R.D. close a foreign fishery if the continued harvest will injure the stocks?

2. Area registration (exclusive and non-exclusive). Again, what are the mechanics (procedures) to facilitate the registration of vessels. Who will do it? What kind of registration forms will be used? What data will be required on the forms? Will there be a system of dual registration such that if a vessel registers once will it be for both inside and outside three?

3. Vessel license (permit). What kind, if any should be required of vessels operating in the FCZ? Could the State's vessel registration form be used with a federal stamp (duck stamp type) placed on the form for vessels intending

to fish in the FCZ? Would such licensing help track the activities of the vessels in the fleet and make post-season data summaries easier? If limited entry is ever deemed appropriate for the fishery, would a system of licensing help verify past participation etc.? What should the licensing fee be? Who will issue the license?

4. Data reporting systems (fish tickets). What specific kinds of data would be collected? Who will collect it and under what authority? What are the confidentiality problems and how may they be over come? What kind of post-season summary statistics are to be published? What data will be submitted to the Secretary of Commerce? What data will be needed on a real time basis for in-season management? How will data be collected from factoryships operating only in the FCZ? Will they be required to fill out ADF&G fish tickets?

5. Enforcement Agreement. Will an enforcement agreement between the Secretary of Commerce and the Department of Public Safety and ADF&G be written? What will the authority of the State be under the agreement? What authority will Federal officers have in State jurisdictional waters?

6. Regulation books. How are the State and Federal regulations going to be made available to the public? Will they be combined into a single booklet? Who will print? Who will pay? Who will do it? When and how will they be distributed?

7. Implementation date of the plan and regulations. The Tanner crab MP/EIS and regulations are now scheduled to become law on February 7, 1978.

This would occur in the middle of a season and could prove to be seriously disruptive to the fishery. How can the transition be best handled?

8. Operational implementation of the management plan (in-season on the grounds management and research). Should a cooperative agreement be developed between NMFS and ADF&G specifying the duties and responsibilities of each agency in the implementation of the plan? Should the agreement be between ADF&G and NMFS or ADF&G and the Secretary of Commerce? Who will develop the details of such an agreement? When?

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Washington, D.C. 20235

OCT 21 1976

FILE	ACT	INFO	ROUTE TO	INIT
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TO: Distribution*

FROM: for Robert H. Schoning, Director
National Marine Fisheries Service

SUBJECT: Revised DEIS/DPFMP Schedule

The following is a revised schedule covering a portion of the events in the DEIS/DPFMP process:

Oct. 12 — Notice to Regions to print (with corrections) DEIS/DPFMP (except Pacific and Atlantic Longline Fisheries). (Suggest 500 copies be printed.)

Oct. 21-22 — Regions provide Central Office copies of Notice of Public Meetings to be published in Federal Register to appear on October 29 (except NE and SE). Requires departmental clearance.

Oct. 22 — DEIS/DPFMP printed and available for public distribution (except NE and SE). 50 copies transmitted to Central Office by pilot carrier (to arrive not later than Friday morning, Oct. 22) for distribution to CEQ (by noon, Oct. 22), Heads of Agencies, members of Congress, and selected national conservation and private agency groups.

Oct. 22 — Central Office notifies and distributes to CEQ copies of DEIS/DPFMP. Regions and Central Office begin distribution of DEIS/DPFMP (CEQ intends that all scheduled reviewers have their copy in hand when the Federal Register notice is printed and the 45-day period begins October 29).

Oct. 22 — Central Office will send all "Galler transmittal letters" to complete mailing list (for the Regional distribution list noting "... sending under separate cover ...").

Oct. 22-28 — NE and SE DEIS/DPFMP printed and available for public distribution.

Oct. 28-29 — 50 copies of each SE and NE documents to Central Office by pilot carrier for distribution to CEQ (by noon Oct. 29), Heads of Agencies, etc. SE and NE to provide Central Office with copies of Notice of Public Meetings for publication in Federal Register (Nov. 5). (Requires departmental clearance.)

Oct. 29	CEQ DEIS listing (notice of availability) appears in Federal Register (FR). (The 45-day review process begins. PFMP cannot be adopted for at least 90 days.)
Oct. 29	Notice of Public Meetings published in FR (15 days must elapse between CEQ notice of availability and date of meeting).
Nov. 5	CEQ DEIS listing (notice of availability) appears in Federal Register. (The 45-day review process begins. PFMP cannot be adopted for at least 90 days.) (For NE and SE.)
Nov. 5	Notice of Public Meetings published in FR (15 days must elapse between CEQ notice of availability and date of meeting). (For SE and NE.)
Nov. 15-19	Public Meetings conducted in Regions (except NE and SE--to be scheduled).
Nov. 20 thru Dec. 14	Regions compile and assess public comments; consultation with Coast Guard, State Department, and Councils. (Regions must accomplish this task in accordance with the Preliminary Guidelines for Preparation of EIS's--memo from F to CD's and RD's of July 8, 1976.)

Any DEIS/DPFMP not received in the Central Office by Friday (October 22) morning will be delayed at least an additional week. Any questions regarding this schedule should be directed to Bob Scott on 634-7516.

*Distribution:

Directors: FNE, FNW, FSW, FSE, FAK

COUNCIL MANAGEMENT PLANS

All fishery management units (exact number and identity is still undetermined) must have management plans developed for them by the Council. The eight PMP's developed by NMFS and currently in draft form apply only to fisheries involving foreigners. Domestic fisheries, even though involved in most of the eight FMU's identified, cannot be managed on the basis of those plans alone. At the October meeting, the Council identified several plans for immediate priority including those for shellfish which are currently under development by a working team consisting of ADF&G and NMFS employees at Kodiak. They include management plans for (1) king crab, (2) tanner crab, (3) Dungeness crab, (4) shrimp, (5) scallops.

A similar working group in Seattle is in the process of developing management plans for the Council on the finfish off Alaska.

The working structure for developing and drafting plans was developed by the Council at its October meeting. The Scientific and Statistical Committee designates the working groups to draft plans and will review them prior to submission to the Council. A more detailed outline is shown in the charter for the Scientific and Statistical Committee (Section D, Tab 1).

Guidelines for developing management plans are found in Section 303 of PL 94-265 and expanded in Section III of the Council Operating Manual.

References: PL 94-265
- Sec. 303 Contents of Fishery Management Plans
- Sec. 304 Action by the Secretary
- Sec. 305 Implementations of Fishery Management Plans

Council Operating Manual
- Sec. II-9-14
- Sec. III Fishery Management Plans
- Sec. IV Fishery Management Resolutions

D R A F T

Options and Considerations for Developing Alaska Fisheries Resources Under Extended Jurisdiction

Briefing Paper for

North Pacific Fisheries Management Council

prepared by
Walter G. Jones, Chief, Fisheries Development Alaska Region,
National Marine Fisheries Service Juneau, Ak.

Table of Contents

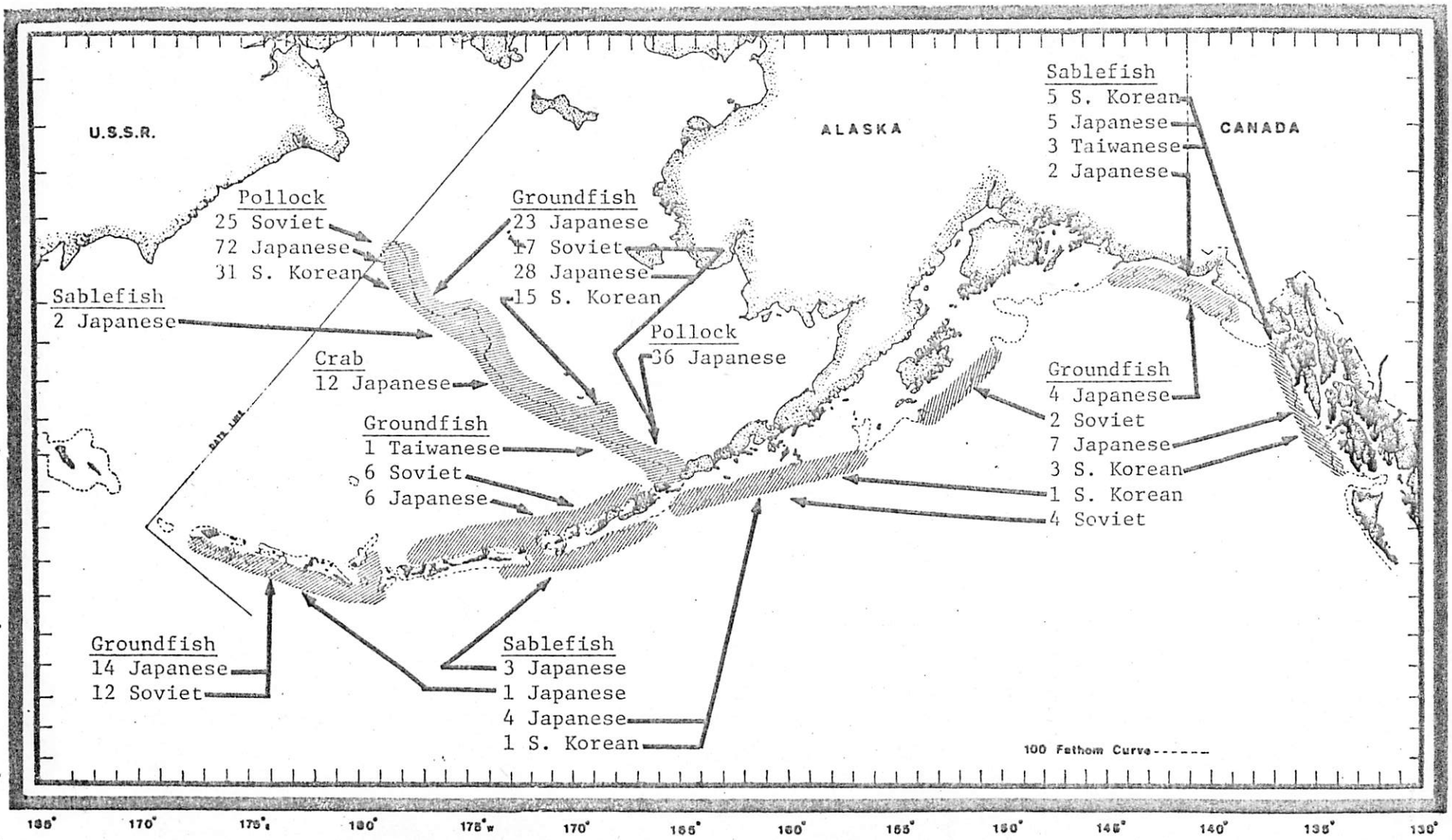
Options and Considerations for Developing Alaska Fisheries Under Extended Jurisdiction

Introduction

The Fisheries Conservation and Management Act of 1976-- better known as the extended fisheries jurisdiction law or the 200 mile fisheries law--is now a fact. Government machinery is in motion to implement the law which takes effect March 1, 1977. It provides for U.S. management of fishery resources within the extended jurisdiction zone which will eventually restore fish and shellfish stocks to sustainable yield levels.

This is particularly important in waters off Alaska where about 73 percent of the total foreign catch off the U.S. occurs. About 1200 vessels from Japan, Russia, South Korea, Taiwan and Poland harvest around two million metric tons annually of fish and shellfish in waters within 200 miles of Alaska shores. The dispersion of these vessels in Alaska waters from these fisheries is widespread throughout much of the year. Types of fisheries, numbers of vessels and country of origin are shown in Figure 1 for August 1976. Harvest from these fisheries consist of several species but is composed primarily of groundfish and pollock resources which have not been utilized by Alaska Fisheries. Attempts have been made by U.S. fisheries over the past several years to harvest and process groundfish species off Alaska,

Figure 1



Foreign fishing off Alaska in August 1976, by country, number of vessels, principal fishing grounds and species fished.

but have not succeeded. High developmental cost combined with minimal or uncertain profit margins has retarded development by U.S. fisheries.

The picture is changing, however. U.S. and world demand and prices for seafoods has increased. Economic factors indicate it may be feasible for the U.S. industries to utilize some or all of the fishery resources currently exploited be foreign fleets.

Conservation and proper management of the ocean fish and shellfish resources are the major purposes of the Conservation and Management Act, but, development of fishery resources in the 200 mile fisheries zone by U.S. fisheries is also one of the stated purposes of the Act.

Fisheries management and fisheries development are inextricably linked, in utilization of these renewable resources. The Act stipulate in Section 2(a) (7) on Findings, that "A National program for the development of fisheries which are underutilized or not utilized by United States fishermen, including bottomfish off Alaska, is necessary to assure that other citizens benefit from the employment, food supply, and revenue which could be generated thereby." In a similar statement under the proposed Act, Section 2(b) (6), there is a stated purpose "to encourage the development of fisheries which are currently underutilized or not utilized by United States fishermen, including bottomfish off Alaska."

To establish the required mechanisms for greater and more efficient utilization of fisheries in the 200 mile zone, the Secretary of Commerce has established the following Department policies.

1. The Federal Government will encourage greater utilization of these natural renewable resources. This will be undertaken with the fullest possible participation and cooperation of the states, commercial interests, recreational interests, consumer groups, and the general public.

2. Fisheries development programs will be developed and implemented on the local regional level.

3. User groups with interest or concern will advise on the development and implementation of programs.

It should be noted, however, that development of underutilized fishing resources in Alaska does not depend soley on the availability of resources now taken by foreign fleets, although these resources are vital to realizing the potential growth of fisheries enterprises in Alaska. Many species available inside the 12 mile zone offer considerable development potential.

Fisheries Development Definition and Scope

Fisheries development as defined for the purpose of this paper is the application of research results, industry experience, labor and capital to make maximum economic utilization, consistent with good resource management, of fish and shellfish resources not currently fully utilized or which are inefficiently used by U.S. fisheries.

The scope of Alaska fisheries development activities is broad. A primary goal includes utilization of fishery resources which are little used or not used at all. It also includes actions to diversify fishing from overfished species; to improve efficiencies and lower costs of fisheries operations from harvesting through marketing; to improve quality of finished products and otherwise to upgrade values; and to promote and undertake research and development projects as needed to develope target resources.

What Alaska Fishery Resources Have Development Potential?

All living marine resources which are currently produced plus the abundant and not so abundant underutilized/unused fish and shellfish species which offer potential for human and animal food or industrial use should be examined for development potential. This literally includes about everything which swims, crawls, slithers, floats or is anchored in marine waters off Alaska.

What species--in what quantities--at what values are we talking about? Information on major target species is summarized in Table 1. The maximum sustained yield (MSY) and total allowable catch (TAC) have been computed by NMFS scientists from the best information available including discussion with fisheries organizations and individuals. These figures may change--undoubtedly will change--next year and in future years as better information becomes available from research and production. For some species not enough information is available to determine its MSY, TAC or value. Considerable additional research and actual production statistics are needed to fill the information gaps. Enough is known, however, about the major target species to make production and value estimates and to evaluate developmental potential.

The following species are suggested for priority development consideration. Included also are comments on problems to be overcome before optimim utilization can occur.

Alaska Pollock--MSY=1,268,000 mt.; TAC=976,000 mt.--is the most abundant species harvested and available for harvest in Alaska waters. It is, however, currently one of the lower value fillet products in the U.S. markets and is not fully accepted. The economic feasibility of production by U.S. fisheries is in question by many industry members.

Problems other than market image also face production of Alaska pollock

COMPARATIVE PRODUCTION AND VALUE OF MAJOR DEVELOPMENT SPECIES IN ALASKA WATERS

	Alaska Production Estimates 1,000 Metric Tons				Potential Value Estimates Million $ Based on TAC	
	MSY	TAC	U.S.	Foreign	Ex-Vessel	First Wholesale
Alaska Pollock	1,268+	976	9	967	107.5	268.8
Flounders	381+	249	13	236	65.8	150.7
Rockfishes 1/	235+	72	3	69	15.8	35.6
Pacific Cod 2/	58+	64	6	58	15.5	24.5
Sablefish	33	30	5	25	9.9	29.0
Atka Mackerel	?	22	0	22	?	?
Herring 3/	50	21	1	20	?	?
Capelin	?	?	?	?	?	?
Smelt	?	?	?	?	?	?
Salmon Aquaculture/Ranching	?	?	?	0	?	?
Tanner Crab	140	140	130	10	61.6	152.5
Clams	?	?	?	0	?	?
Snails 4/	?	3	0	3	?	?
Squid	?	?	?	0	?	?
Octopus	?	?	?	0	?	?
Sea Urchin	?	?	?	0	?	?

1/ Mostly Pacific Ocean Perch
2/ MSY does not include Gulf of Alaska for which not enough information is available to make estimate
3/ Bering Sea only
4/ Edible meat

Ex-vessel value estimated @ Pollock .05; Flounders .12; Rockfishes .10; Cod .11; Sablefish .15; Tanner crab .20
Wholesale value estimated @ 25% recovery for Pollock, flounders, rockfishes & cod. 80% recovery for sablefish; 15% recovery for Tanner crab
Pollock .50; Flounders 1.10; Rockfishes .90; Cod .70; Sablefish .55; Tanner crab 3.30

products. Per unit cost of products must be reduced to compete with imported Alaska pollock and similar products. Yield of edible flesh must be increased through development of acceptable minced flesh products or other new products. Maximum harvesting and processing efficiencies must be achieved. Maximum quality preservation at sea and through processing and distribution must be researched and results applied by industry to improve the image and acceptance in market places. The economic feasibility of commercial production should be demonstrated through cooperative industry-government public projects to evaluate problems, opportunities and costs, such affermative action will help to reduce the initial economic risk to industry, and would help to attract investment capital to the fishery.

Snow (tanner) Crab --MSY=140,000 mt.; TAC=140,000 mt. --can be considered a semi-underutilized resource. It is a candidate for development primarily in the marketing and processing areas. The value and image of snow crab products must be upgraded in U.S. markets. European markets must be cultivated to lesson U.S. dependence on Japanese export outlets and to provide better competition in the market places. Snow crab meat yields must be increased through improved processing methods. Perhaps the fisheries should be managed for harvest at maximum yield periods which would help to improve operating efficiencies and product quality at harvesting and processing levels.

Flatfishes (flounders) --MSY=381,000 mt.; TAC=249,000 mt. -- encompasses a variety of species which vary by area. Flounders are potentially the most valuable in total weight of the finfishes under the proposed TAC. They are abundant in varying degrees throughout Alaska waters in environmental locales peculiar to a species. More specific resource assessment details are needed concerning migration patterns, seasonal occurence in specific locales and other information which will help to evaluate the abundance, recruitment, physical condition, and location of each species or mix of species. Market expansion and market stabilization for products from traditional sole (flounder) species must be sought. Product and market development research must be undertaken for the species which have been little used.

Pacific Cod --MSY=58,000 + (Bering Sea and Aleutian only): TAC=64,000 mt. (all Alaska)--resources are not fully defined and need similar resource assessment treatment as indicated above for flatfish in all areas. Atlantic cod products are usually in good to excellent market demand. The Pacific cod market image, however, needs to be improved through introduction of high quality boneless fillets into markets, market promation efforts and quality improvement. Traps, sunken gill nets or other types of fishing gear need to be tested for use on grounds too rough for trawling. Pacific cod offer an opportunity for diversification by small vessel fishermen. Mechanical filleting machinery is required for processing.

Pacific ocean perch --MSY=235,000 + (also includes other rockfishes) TAC=72,000 mt. --stocks are overexploited. More refined resource assessment studies are needed. Ocean perch products will be in demand if Alaska fisheries could produce them for a competitive market. Thorough market and economic analyses are needed to define production feasibility limitations and opportunities. Most important, however, are management regulations which will help restore the stock's to sustainable yield levels.

Rockfishes other than P.O.P. occur in most waters with the right environmental conditions. These species are important to small boat fishermen, as well as the large trawlers. Resource abundance is unknown. Small boat fishing methods need to be studied and production trials conducted. Marketing alternatives should be evaluated.

Sablefish --MSY=33,000 mt.; TAC=30,000 mt.--support a substantial foreign fishery. If Alaska fisheries are to take over this prodominantly longline fishery, U.S. and foreign markets must be expanded for sablefish products. New product form and uses will need to be developed to attract consumers. Although Japan can be expected to be a major export outlet, strong effort should be made to diversify markets in order to improve competitive positions of fishermen and processors.

Herring --MSY=50,000 mt.; TAC=21,000 mt.--are available in the Bering Sea but quantitative stock assessment information, interspecies relationships and other biological data is insufficient to access development potential. Current herring catches are harvested for roe production and bait in inside waters of state jurisdiction. Food herring production in Alaska has not revived . U.S. markets primarily because producers can't compete with imported herring or have not considered the profit great enough to do so. Market opportunities, new product development and economic feasibility studies are needed to develope herring fisheries in all Alaska waters.

Capelin, smelts and Atka mackerel require the full range of primary fishery development analysis efforts since little is known of these resources except they exist in Alaska waters and are used as food products in some world markets.

Clam resources can be divided into at least two realms for development--razor clams and hard shell clams. Currently only razor clams meat, in the fresh or frozen form from three certified beaches, may be shipped out of Alaska as human food for interstate commerce. Beaches or areas for harvesting must be certified and monitored as free of paralytic shellfish poison (PSP). Methods of quickly testing for PSP

in field conditions must be developed and approved by State and Federal agencies. Efficient methods of mechanical clam dredging in subtidal waters must be found and areas approved for mechanical digging operations for all clam species. An assessment of clam resources off Alaska must be made, current markets analyzed, and economic and market projections made.

Miscellaneous species such as octopus, sea urchin roe, sea snails, sea cucumbers, kelp and other marine life, are unharvested resources in Alaska that are utilized in other parts of the world, but very little by U.S. markets. Development of these resources are important to smaller vessel fishermen and processors and to small fishing communities. Resource assessment, harvesting techniques, processing and product development, and marketing assistance are requirements for development. Other species such as squid, pomfret, shark, skates, and miscellaneous bottomfish species are almost totally unknown resources. A systematic program should be undertaken to evaluate commercial development potential for all these resources.

Value of Target Species

Discussion of MSY's and TAC's in relationship to fisheries development are only half complete without also considering the values of the resources. Estimates of the gross values of the target development species are shown in Table 1 based on current prices in the U.S. The figures shown are intended as an index of the relative ex-vessel

and first wholesale value of the various species. Actual prices would range below and above these figures depending on the quality of the products, consumer whims, industry ability to compete with seafood, meat and other protein products, and the general economic conditions.

Alaska pollock because of potentially massive production would provide the greatest ex-vessel and first wholesale value of the finfish target species amounting to almost twice that for flounders, the next most valuable species. Rockfishes (Pacific Ocean Perch primarily), Pacific Cod and sablefish follow in that order. Not enough information is available at this writing to estimate potential value for Atka macherel, Bering Sea herring, capelin and smelt.

Tanner (snow) crab is of the greatest potential value of the shellfish target species. Not enough information on the resources and markets for the other shellfish species is available to base reliable value estimates.

It should be noted, however, that the highest potential value does not necessarily indicate the order of priority of development. For instance, it might be more advantageous initially to fishermen and processors to catch and process species with a higher unit value such as flounders

and Pacific cod. Much would depend on the availability of the fish, ease of harvest and processing, and projected market conditions.

Market Outlook for Alaska Seafood Resources.

The general upward trend for supplies of seafoods to meet world and U.S. demand can be expected to continue and very likely to increase in future years. World landings of seafoods have tripled since 1948 to around 154 billion pounds (1974). In the United States during the same period, total utilization of food and industrial use seafoods roughly doubled to 10 billion pounds. It is projected that an additional 2.3 billion pounds of seafood supplies will be needed for U.S. consumers by 1985. Over half this increase (1.42 billion pounds) is expected to be in groundfish products, according to consumers demand projections from the U.S. Dept. of Commerce, July 1976, publication, "A Marine Fisheries Program for the Nation." (see Appendix I excerpt)

Groundfish fillets and blocks are the major product forms of particular interest to industries seeking to develop Alaska pollock, flatfish, cod and rockfish resources. Sticks and portion consumption in the U.S. has increased almost 400 percent since 1960. Around 383 million pounds were sold in 1975, Fig. 2. Fillets consumption increased over 150 percent during the same period to 401 million pounds in 1975, Fig. 3. Most of these products are imported. Similar products produced in Alaska will have to compete in the markets with those products from foreign fisheries, many of which are fisheries subsidized by their governments.

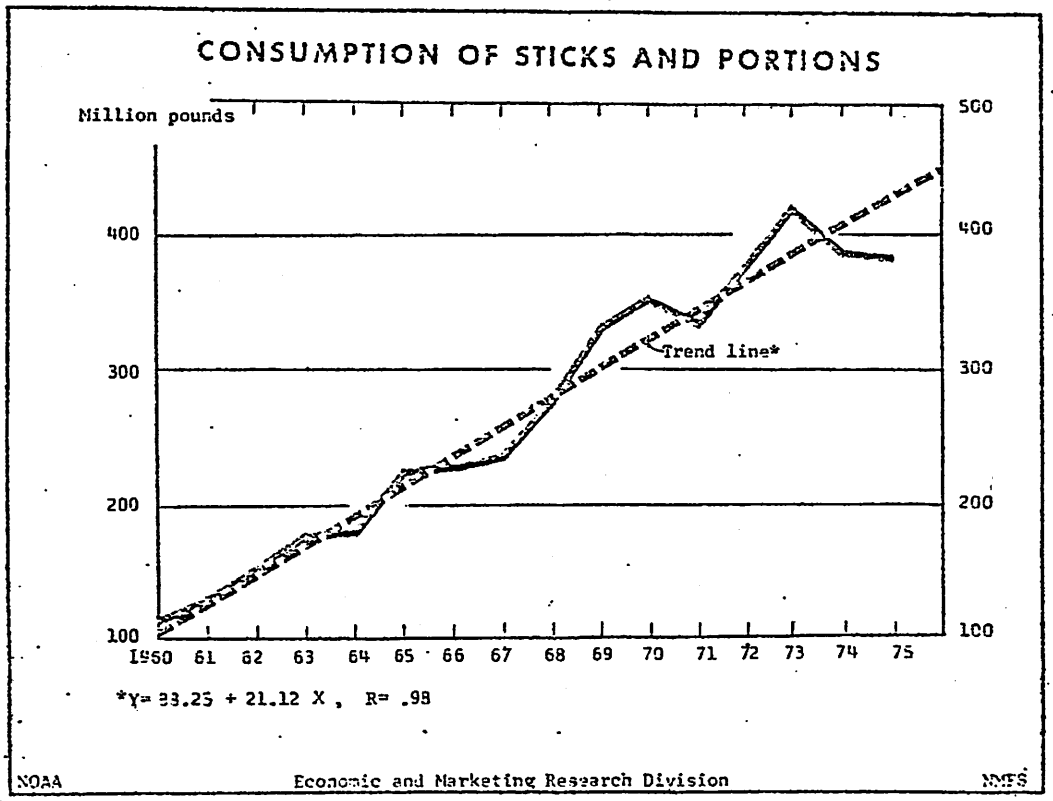


Figure 3

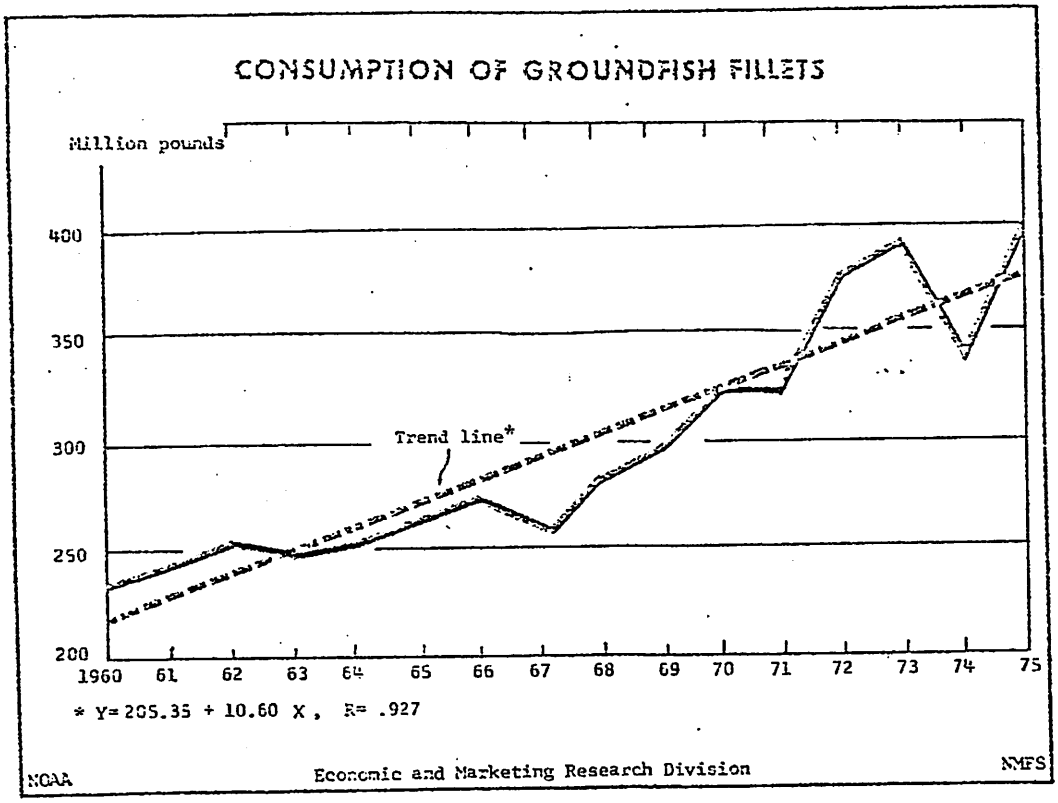


Figure 4

Factors in Developing Alaska Fisheries

Some of the many factors to be considered and problems to overcome in developing Alaska fishery resources have been touched on in discussions on target species. But, there are others. Each fishery and each species product may require different treatment depending on the state of knowledge concerning the resources and the product. Interlaced through all of the factors are management considerations for the resource including international fisheries agreements. The economic feasibility of an operation from harvesting through final marketing phases is also an over-riding consideration. This in turn bears on another highly critical factor--the availability of capital for investment in fishing and processing operations.

A summary of many of the problem areas and other factors to be considered in developing Alaska fisheries are outlined below for each stage of development.

Resource

State of fisheries (current stock status--recruitment rate--species interaction)

Environmental assessments

Seasonal availability/distribution

Management of fisheries including OSY and TAC determination

Harvesting

Fishing efficiency

Preservation of catch

Foreign fisheries allocations/treaties

Limited markets and low prices

Inadequate knowledge of most efficient fishing gear

Inadequate knowledge of fishing grounds

Increased operating costs/under-optimum operating efficiencies

Partial utilization of catch

High capital costs for equipment, vessel upgrading and new vessels

Processing

High capital costs for new plant operations and expansion/ building/equipment/financing

Limited financing sources

Uncertainty of economic feasibility

Available labor restrictions

Seasonal operations

Need for better product quality control

New product development for underutilized species

Increase yields/processing efficiencies

Increase utilization of fish delivered

Government regulations - OSHA, EPA, State sanitation

Processing waste desposal/ utilization

Marketing/Distribution

Need for current information on domestic and foreign seafood market conditon and trends

Market research and analysis needed for defining opportunities and potentials

Competition from imported products--poor quality/low price

Need for aggressive cooperative industry-government program to develop new markets for new products from underutilized species and to promote seafoods.

Geographic Areas of Development

Each Alaska fishing community from Kotzebue, out the Aleutian Chain and down to Ketchikan must be examined for fishery development potential, desire and capability for capitalizing on development opportunities.

The greatest development potential for groundfish and shellfish is from areas of the Eastern Bering Sea, the Aleutian Islands and the Western Gulf of Alaska. Figure 4, principle processing points are Kodiak, Dutch Harbor, Sand Point and possibly Adak. As U.S. industries develop the Bering Sea fishery, the Pribilof Islands, Nome, Dillingham and/or other Western Alaska cities may become important seafood processing points. Floating processors, strategically based temporarily near fisheries concentration, will be important factors in developing target species in distant water fisheries.

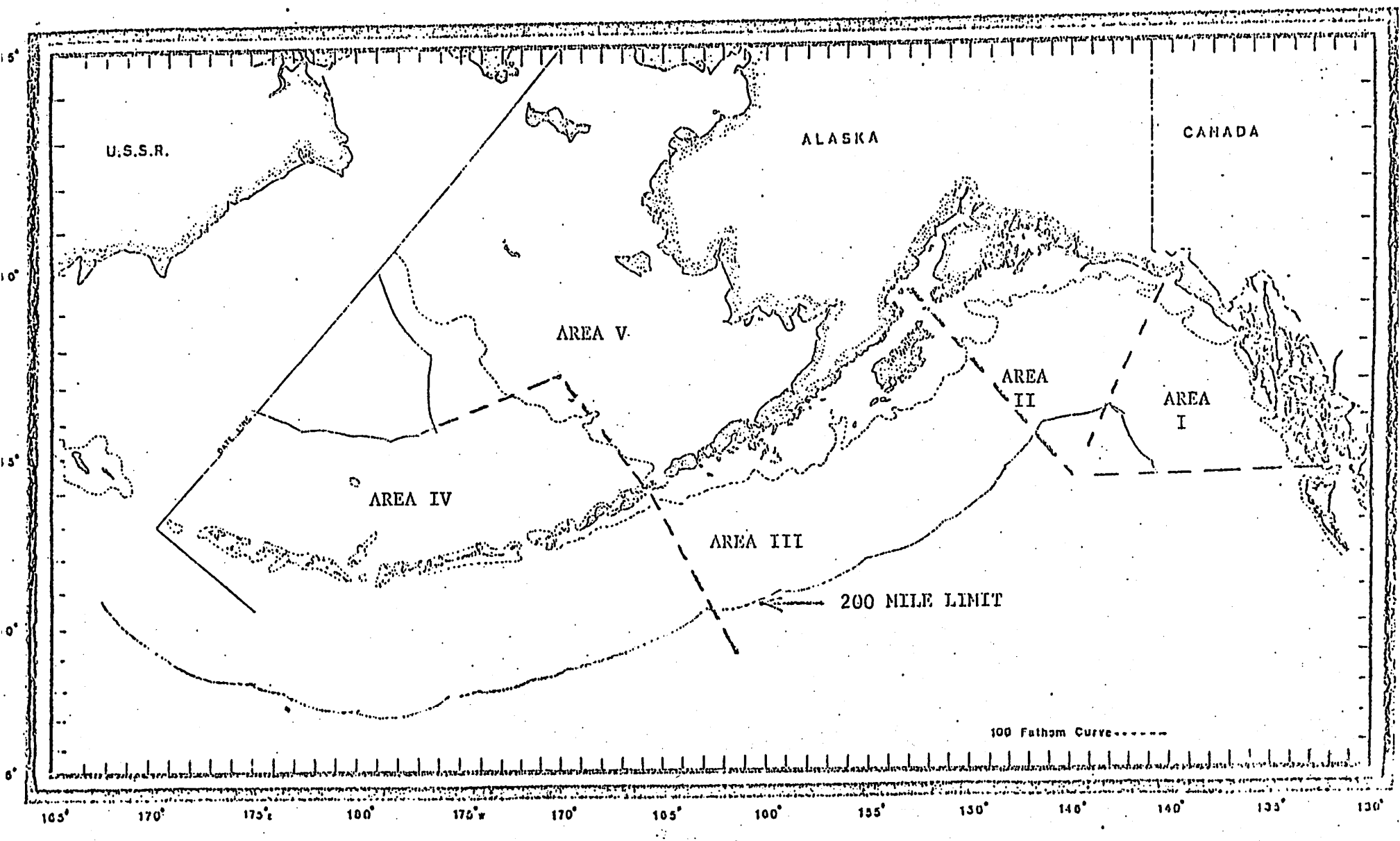


FIGURE 4

ALASKA FISHERY DEVELOPMENT GEOGRAPHIC ZONES

The Southeastern Alaska and Central and Eastern Gulf of Alaska areas are no less important as they are areas with abundant pollock resources, potentially abundant Pacific Ocean Perch and sablefish resources and unknown quantities of flounders, cod and other species.

Options for Developing Alaska Fishery Resources

We have the raw resources; market development opportunities look promising; we know generally many of the problems to be overcome in developing the fisheries even though we don't now have solutions to them; and we have a mandate from Congress to develop fisheries--and specifically to develop Alaska bottomfisheries. How do we go about it?

Some of the more obvious options are noted below.

* License foreign fleets to harvest and process fishery resources in the Alaska extended fishery zone under close U.S. management of resources

* Encourage foreign investment in Alaska shore-based seafood processing plants

* Sanction U.S. fishermen deliveries of underutilized fish species to foreign processors within the extended fisheries zone.

* U.S. industry take full responsibility for developing Alaska under-utilized living marine resources at its own pace with little or no government involvement

* Increase fisheries research by government and universities but leave fisheries development efforts to industry

* Provide economic incentives to industry to initiate Alaska fishery development enterprises through low-cost government loans, development grants and/or other types of incentives

* Initiate an aggressive Alaska fisheries development effort through cooperative industry-government-university joint venture projects, increased research and financial assistance program

We will license foreign fleets to harvest and process certain fishery resources off Alaska. We have substantial foreign investment in shore based plants. We can permit U.S. fishermen to deliver to foreign processors. These three "options" are now part of the status quo. U.S. industry has always had the perogative to develop the fisheries on its own. If U.S. fisheries are to eventually harvest a greater share of the TAC off Alaska shores, however, one or more of the last three options must be aggressively pursued.

Fishery Development Administrative Alternatives

We can assume that fishery resources off Alaska in the 3 to 200 mile zone which are not fully utilized by U.S fisheries will be allocated with management constraints to forgeign fleets as well as U.S. fisheries to the limit of the TAC. It is also reasonable to assume that there will be aggressive efforts by industry and government cooperatively and industry individually to develop Alaska fishery resources. It is also reasonable to assume that industry will request Federal and State funds for research and other types of assistance for development activities and that monies will be made available. Who then has the responsibility to get development programs underway? What type of organization is needed to solicit, plan, initiate, and monitor development programs and projects? Four possibilities are presented here:

* The North Pacific Fisheries Management Council may direct and administer Alaska fisheries development projects and programs with the help of an advisory council composed of industry and government agency specialists.

* An advisory fishery development council composed of members appointed by the Alaska Govenor from industry, appropriate Federal and State agencies, native corporations and University of Alaska could coordinate Alaska fisheries development projects and programs.

* NMFS might take the major responsibility of fisheries development efforts in cooperation with industry.

* Alaska fisheries industry form a non-profit fisheries development corporation or foundation which could solicit and administer funds for programs it would select and direct.

To establish an effective development mechanism presents a formidable challenge to industry, state and the Federal Government people invloved and other parties who may be interested. Development of fisheries on the scale that is needed and is envisioned has not yet been attempted in the United States. Innovations in concepts, organization, and procedures will be required.

A new mechanism will have to be created which will define the risks involved in fisheries development so that industry may make decisions as to whether to invest in a fishery and to petition for greater allocations of TAC. We now have the opportunity to eliminate a major deficiency of past development efforts: the lack of coordination multi-disciplinary efforts to attack problems of development.

Suggested Alaska Fisheries Development Projects

It is not certain at this writing how strong a role the North Pacific Fisheries Management Council (NPFMC) will take in planning and operational functions for developing Alaska fishery resources. It will be assumed that the council will take a positive and strong role since the council will be formulating management policies for all fisheries resources whether fully utilized or undeveloped.

The NMFS has a mandated responsibility to assist industry in developing Alaska fisheries regardless of action taken by the Council. The NMFS Alaska Region, however, will where practical, intergrate its fishery development activities with the Council projects, if as expected the Council assumes a major responsibility for fisheries development.

It will be assumed that the official U.S. and NPFMC policy will be to:

(1) Maximize U.S. share of the TAC in the extended fisheries zone as U.S. fisheries demonstrate their capability to utilize the resource.

(2) Stimulate U.S. industry production of target species in the initial phases of development.

(3) Provide follow through research and services activities to increase production, improve quality, expand markets and upgrade value.

With this preface the following suggestions are offered for projects and programs to develop Alaska fishery resources. These suggestions were derived from discussions with fishing industry members, ADF&G staff, other state agencies and the NMFS staff.

1. Solicit and incorporate ideas and participation from members and community fisheries related businessmen in planning for fishery development projects.

2. Form fishery development steering committees composed of industry, Federal and State members for each of the four development areas. Each area steering committee would select target species or primary subjects of concern according to pre-determined criteria. Selection of projects for funding would be accomplished by the Council and NMFS and/or a separate industry development foundation, if such exists. Each area would be assured of at least one major development project for its fisheries.

3. Support the Alaska Division of Economic Development groundfish development projects in S.E. Alaska and the Kodiak area with supplemental funds and services for productive trial fisheries, economic analysis and market development sufficient to determine the feasibility of each area project.

4. Set up training program for fishermen to effectively use various types of fishing gear for taking bottomfish or other target species selected for an area and which can be adapted to their vessels.
5. Train plant workers in hand filleting and other manual dexterity processing skills which would help small processors use a greater share of the fishery resources available to them. Conduct workshops or training courses to teach local labor forces techniques of mechanical processing seafood such as machine filleting, minced flesh processing and use of other specialized equipment. Train plant workers and supervisory personnel in special product handling, packageing and shipping. Training might be carried out through the Alaska Sea Grant program, Community Colleges, or arranged through contracts with individual firms.
6. Explore the possibilities of using satellites in fishery resource assessment of North Pacific waters or for other uses; in management and development of Alaska fishery resources.
7. Initiate efforts to obtain funding and to convince U.S. Corps of Engineers to build a protective harbor in the Pribilof Islands at a suitable location for operating one or more seafood processing plants.

8. Conduct an inventory of all seafood processing and cold storage plants in Alaska, including types of operation, use capabilities, expansion potential and other information which would help evaluate industry needs--facilities, labor and financial--for developing the fishery resources over next 10-20 years.
9. Initiate a cooperative industry-NOAA-State commercial feasibility demonstration venture on fishery resources available to Westward Alaska processors and fishermen. Utilize existing processing plants for demonstration projects. Place initial emphasis on species other than groundfish unless the groundfish species present different problems than those processed in Kodiak or S.E. Alaska.
10. Conduct intensive all-season fisheries resource assessment studies in S.E. Alaska and Prince William Sound waters using industry contracted vessels, as well as Federal and State research vessels available. Prove resource availability with production trial fisheries. Increase resource assessment studies in Westward Alaska areas.
11. Conduct research which can be applied by industry with minimum cost to preserve maximum quality of pollock and other bottomfish at delivery to the processing plant.
12. Establish and staff NMFS wet laboratory facilities at kodiak for developing minced fish products and other new products and techniques which will increase total yield for commercial purposes of fish harvested and of fish processed.

13. Initiate and conduct research in cooperation with industry at Homer on utilization of seafood processing waste for commercial uses and to meet EPA standards.
14. Design an economic feasibility model for production of bottomfish products aboard a floating U.S. processing ship which would fish Bering Sea and Western Gulf of Alaska waters.
15. Conduct hard shell clam resource assessment studies in Eastern Bering Sea. Work with State agencies to obtain approval for mechanical harvesting and certification of harvestable clam beds of all clam species.
16. Certify the NMFS Kodiak laboratory for paralytis shellfish poisoning analysis, staff the laboratory for a five year program of Alaska clam research activities in cooperation with the State.
17. Conduct gear research and production trials of pot, long line, or other gear, which can be adapted to small fishing vessels, to fish octopus for bait in Prince William Sound. Conduct similar research and provide assistance to small boat fishermen for cod and rockfishes.
18. Work with industry to expand U.S. and European markets for tanner crab.
19. Conduct analyses of conditions, trends and prices of seafood in U.S. and world markets which affect distribution and sales

of traditional and developmental Alaska seafood products. Special attention should be given to Japanese seafood markets.

20. Work with NMFS Industry Services staff and industry to expand market outlets and to build good consumer image of Alaska seafood products.

21. Accelerate NOAA/NMFS Alaska fisheries development research and services and resource assessment activities in cooperation with industry requirements and NPFMC management and plans. Provide funding to increase effort in FY77 for cooperative activities with the State of Alaska, and industry.

22. Aquaculture is a separate aspect of fisheries development which will not be discussed in depth at this time. Private salmon ranching, State and Federal salmon rehabilitation, stream enhancement, and artificial culture programs are development activities which will have profound impact on future Alaska fisheries. These programs are largely State planned, funded, and controlled, but some coordination mechanism should be set up between salmon and other fisheries development programs in order to forestall possible conflicts.

Consideration should be given to research and development of other aquaculture possibilities in Alaska such as scallops, oysters, abalone, other shellfish and finfish.