27 th Annual Report of the

PACIFIC MARINE FISHERIES COMMISSION

FOR THE YEAR 1974

TO THE CONGRESS OF THE UNITED STATES AND TO THE GOVERNORS AND LEGISLATURES OF WASHINGTON, OREGON, CALIFORNIA, IDAHO, AND ALASKA

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To the Congress of the United States and the Governors and Legislatures of the Five Compacting States, Washington, Oregon, California, Idaho and Alaska, by the Commissioners of the Pacific Marine Fisheries Commission in Compliance with the State Enabling Acts Creating the Commission and Public Laws 232; 776; and 315 of the 80th; 87th; and 91st Congresses of the United States Assenting Thereto.

Respectfully submitted,
PACIFIC MARINE FISHERIES COMMISSION

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Some fishery events or developments in 1974, of general interest to the Pacific Marine Fisheries Commission (PMFC) and West Coast fisheries, will be mentioned in this introduction under three general headings: International, National, and PMFC and Local Events. Many of the events or developments could be placed under more then one of those headings.

International

Foreign distant-water fleets and independent vessels continued their intense fishing activities off the west coast of the United States and Canada in 1974. Monthly surveillance reports indicate that 188 foreign and support vessels were operating off Alaska in January. That number increased to 590 in June, when 10 high-sea Japanese salmon fleets were operating in the North Pacific and its Bering Sea, and decreased to 135 in December. Countries represented by those vessels, in order of decreasing numbers of vessels and the months when each country's representation was greatest and least, were:

Japan, June-527, December-55;
USSR, February-158, July and August-each 27;
South Korea, July-36, January-none;
Poland, one in December, the first Polish vessel seen off Alaska.

One Japanese longline vessel in February and March was the only foreign fishing vessel reported-.off the coast of the Pacific Northwest (between 42° and 49° N. Lat.) through April, 1974. In May there were 63 foreign vessels (61 Soviet and 2 Japanese) operating in that area. The intensity increased to a high of 85 vessels in September and decreased to lows of 12 in November and 16 in December. Countries represented in the area, in order of decreasing numbers of vessels and"the months when each country's representation was greatest or least, were:

USSR, September-76, January through April-none;
Poland, October -9, January through May-none, the first vessel was seen in June?
Japan, July-7, January-none
South Korea, December-5, November-2;
East Germany, one in June only.

Included among the foreign fishing vessels were trawl, longline, crab, whale, salmon gillnet, factory and support vessels. Their target species (excluding those sought by whale, salmon and seasnail vessels) were pollock, hake, cod, herring, sablefish, ocean perch and other rockfish, flatfish, and shrimp.

The intense activities of these distant-water vessels, in addition to increasing the marine hazards for domestic vessels and fixed fishing gear, have seriously reduced the abundance of many fishery resources. The commencement of Soviet fishing off Oregon in 1966 resulted in the overharvesting of Pacific ocean perch in one year to a point where ocean perch were reduced from a major to an insignificant component of landings by Oregon trawl fishermen. Since then the stocks of ocean perch off Oregon (the approximate southern limit of the species' range) have not rebuilt significantly. Meanwhile stocks in general off more northerly areas have been depleted by foreign fishing and stocks of other rockfishes are also showing signs of overfishing.

Other fishery resources from Bering Sea to California are being adversely affected by the fishing of foreign vessels. The low levels of whale populations not only off North America but throughout the oceans of the world and the Japanese and Soviet persistence in whaling are well known. The catch of Pacific halibut by Canadian and American longline-fishermen in 1974 was the lowest in over 60 years of record, due largely to the cumulative effects of incidental catches of immature and mature halibut by foreign trawlers. Bristol Bay red (sockeye) salmon and more recently western Alaska chinook salmon runs continue to fail to provide fish in normally expected amounts for the domestic inshore commercial and sustenance fisheries and for spawning escapements because of prior harvesting by the Japanese high-sea net fishery. One investigator, Loh Lee Low, has concluded for stocks in the Bering Sea that yellowfin sole and Pacific ocean perch have been overexploited and the same fate is imminent for Pacific cod. He also states that "the Alaska pollock fishery should not be allowed to expand and should be properly reduced, as it is being harvested over its MSY potential." A second investigator, Sukwoo Chang, also agrees, "The Alaska pollock stock is being overfished in the eastern Bering Sea." See *1974 Research in Fisheries,* University of Washington, College of Fisheries Contribution No. 415, Seattle, 1975.

Reference to newspapers and fishery trade publications discloses that foreign fishing problems off the Atlantic Coast of the United States were equally as serious as were those off the Pacific Coast in 1974. Much time and effort by individuals and groups-representing all tiers of U.S. private and public fishery activities extending from local to national levels-were consumed in efforts to solve these problems. PMFC pays close attention to local, national and international actions affecting U.S. fisheries, especially those in the North Pacific and its Bering Sea.

The 21st annual meeting of the International North Pacific Fisheries Commission (INPFC) was held in Seattle on November 4-8, 1974. INPFC was established in 1953 by a Convention between Canada, Japan and the United States to ensure that the fishery resources of the Convention area are maintained at the level of maximum sustained productivity. INPFC's Seattle meeting was preceded by two weeks of discussions by scientists from the member countries. Elmer E. Rasmusen of the U.S. section chaired the meeting in which about 120 administrators, scientists and industry advisors participated with the assistance of consultants from the International Pacific Halibut Commission. At this meeting, INPFC

adopted a resolution recommending that the governments of Canada, Japan and the United States give full consideration to the conservation needs of salmon stocks in areas of intermingling when preparing fishing regulations for future operations, bearing in mind the patterns of fishing activities. This pertains particularly to western Alaska salmon which range westward beyond the provisional abstention line at 175°west longitude. No agreement was reached on measures recommended for the conservation of halibut in the eastern Bering Sea in 1975, although there was agreement that some measures were needed.

Robert W. Schoning, Director, National Marine Fisheries Service, in his closing statement expressed the deep disappointment of the United States, "at the failure of the Commission at this meeting to provide even the modest protection for salmon and halibut that we have sought, and that we feel is so needed. Further, the lack of positive response to our plea for overall reduction in the total catch from the region to restore badly depleted stocks and prevent overfishing on others is very discouraging."

Other U.S. statements called for Japan to:

Provide better catch statistics on all species;
Reduce the large incidental catch of halibut by trawlers;
Reduce the large incidental catch of tanner crab by trawlers; (In this regard Mr. Schoning said, "I wish to reiterate the United States' position that we have exclusive sovereign rights over creatures of the cont inental shelf. Our position and plans for implement ing this doctrine were conveyed to the embassies of relevant fishing nations recently.")
Reduce effort generally on groundfish; and
Improve enforcement of observation of the abstention line. **""" *

Voluminous scientific documents, introduced and in most cases accepted by INPFC scientists, showed that the halibut resource has been hurt and is in danger because of high incidental landings by Japanese fleets. Sever blows are also being dealt" American and Canadian salmon stocks by Japanese high-sea salmon fishing. Much of the groundfish resource yet to be utilized by American fishermen has already been overexploited. American harvesting is expected to begin in 1975, but according to U.S. scientists attenSing the meeting, "Signs point to a serious deterioration in the condition of the pastern Bering Sea pollock resource. The yellowfin sole resource was much reduced by the intense fishery in the early 1960's and that the stock has remained at this low level up to the present time. The continued decline (of Pacific ocean perch) and the very low abundance of fish older than age 10 are signs of poor stock conditions."

Adding to INPFC's problems is the increased fishing in the north Pacific and its Bering Sea by nonmember countries, particularly the Soviet Union. Other nonmember countries fishing the area are Republic of (South) Korea, Poland, East Germany, and Taiwan which sent its first vessel, a 1,700-ton factory stern-ramp trawler, to Bering Sea in October 1974. The 22nd annual meeting of INPFC will be held in Vancouver, B.C., beginning November 3, 1975. Clifford R. Levelton of Canada will be Chairman.

The first of two meetings between Soviet fleet and U.S. fishery personnel was held off Coos Bay, Oregon aboard the Soviet vessel *POSYET* on May 13 and 14, 1974. The vessel (a 278-foot BMRT stern trawler with a crew of 85 men and women, including fishermen and scientists) was the lead ship for a 44-vessel fleet operating off the Pacific Northwest. Donald R. Johnson, Regional Director, National Marine Fisheries Service, led the U.S. 15-man delegation which included one woman who also boarded the gently rolling ship via a Jacob's ladder. News media personnel accompanied the U.S. delegation which included Arthur H. Paquet, veteran trawl fisherman, member of PMFC's Advisory Committee since 1948, and Administrator for the Otter Trawl Commission of Oregon. Vladimir Ivanovich Semenov, from the Administration, DAL'RYBA, led the Soviet delegation. A second meeting was tentatively scheduled for September 19. These meetings are in accordance with the bilateral agreement Between the United States and the Union of Soviet Socialist Republics.

During the meeting off Coos Bay, the U.S. visitors were fed and berthed aboard the *POSYET* and had free run of the ship. Photography was permitted and one complete trawl tow which caught almost 100% hake was witnessed. Discussion during the official meeting was according to an agreed upon agenda and covered the following:

Gear markers (lights versus radar reflectors on fixed U.S. gear); Gear location reports; Direct communications between U.S. and USSR fishing vessels; Soviet catch and effort data (need for increased precision and timeliness); Current matters (arrange US-USSR meeting in Alaska); Incidental catches (salmon, halibut, rockfish, Dover sole, need for observers, trawling demonstration, courtesy visits to Soviet vessels to increase contact between U.S. and USSR fishermen and scientists); Projected activities (U.S. groundfishery in Bering Sea growing at moderate rate; Soviets are not fishing anchovy except for scientific work off Mexico); Medivac; Oil spills; AMVER System (worldwide "Automated Merchant Vessel Emergency Reporting System"); and Soviet desire for a loading zone between latitudes 37°-38° N within the U.S. contiguous fishing zone.

The *POSYET* made a port call from May 22 to 24 at Portland, Oregon where it was moored along the seawall on the Willamette River in the City's center. While moored the general public was invited aboard to see the ship and its fishing equipment.

During 1974, there were a number of violations of the INPFC abstention line and the U.S. 12-mile fishery zone (3 mile territorial limit plus 9-mile contiguous fishing zone) and several vessels were seized. The following are details regarding three of the violations.

The Soviet trawler *SRTM 8458* was seized on February 5, south of the Alaska Peninsula, near the Semidi Islands for fishing within the U.S. contiguous fishing zone. Fines of $225,-000 against the vessel and $25,000 against its captain were levied by U.S. District Court in Anchorage. The vessel was released when the Soviet Government agreed to pay the record $250,000 fine. Subsequently the Soviet Union ordered its fishing vessels to observe a 22-mile limit off Alaskan shores.

The Japanese trawler *EBISU MARU No. 88* was taken into custody on March 19 near Dutch Harbor for fishing inside the 3-mile territorial limit off Umnak Island of the Aleutian Chain. The U.S. District Court at Anchorage levied a record fine of $290,000 against the vessel which the Japanese Government agreed to pay and a fine of $10,000 against the vessel's captain.

The Japanese gillnetter *MYOJIN MARU I* on June 17 was sighted, by a Coast Guard aerial patrol, fishing 150 miles south of Adak Island and 17 miles east of the abstention line. The vessel was hauling two nets of salmon but fled immediately west of the line before a Coast Guard cutter could reach the scene. The *MYOJIN* ignored orders to heave to. Photographs and other evidence gathered by the Coast Guard and National Marine Fisheries Service were forwarded to the State Department.

The intense foreign fishing has resulted also in legislative activity. In March, Senator Warren G. Magnuson, writing in the *Los Angeles Times,* deplored the intense Japanese and Soviet fisheries in the North Pacific and said that not only are the sockeye runs faced with extinction but the halibut fishery in Bering Sea faces collapse due to overfishing. Because of Japan's and the Soviet Union's failure to cooperate, he felt forced to seek unilateral action that would provide for economic retaliation against all nations destroying marine resources. Senator Magnuson and Congressman Gerry E. Studds, respectively, had introduced S. 1988 and H.R. 8665 in the 1st Session (1973) of the 93rd Congress to extend on an interim basis U.S. fishery jurisdiction to 200 miles offshore until the U.N. Law of the Sea Conference developed an acceptable solution to world fishing problems. Many other Congressmen and Senators sponsored some kind ojvl.egjslation to extend fishery jurisdiction but when the 2nd Session (1974) of the 93rd Congress expired none of the legislation had passed.

A special session of the State of Oregon's Legislature in 1974 adopted a law, over Governor Tom McCall's veto, prohibiting fishing by foreign fishermen within 50 miles of Oregon's^cbast. Subsequently the Governor asked the State Emergency Board for money-to operate 10 fishery patrol vessels to monitor the 50-mile fishing limit, even though the constitutionality of Oregon's law had been questioned. (As of this writing the law has not been implemented.-Editor)

A third U.N. Law of the Sea Conference (LOS 3) has been looked to for solutions to international fishery problems, but the first 10-week session of LOS 3 in Caracas, Venezuela from June 20 to August 29, 1974 was viewed as a failure in terms of law-making; no new treaties or laws resulted. A second 8-week session was scheduled to convene in Geneva, Switzerland on March 17, 1975 to be followed by a third session in Caracas in late 1975.

An interesting development in U.S. position regarding extension of territorial limits, fishery jurisdiction, etc., was revealed by support of a 200-mile economic zone in an address by U.S. Ambassador John R. Stevenson during the plenary session at Caracas on July 11, 1974. Quotations from a reprint in *The Fishermen's News* (vol. 30, no. 16, August 1974, Seattle) of his address follows.

"Most delegations that have spoken have endorsed or indicated a willingness to accept, under certain conditions and as part of a package settlement, a maximum limit of 12 miles for the territorial sea and of 200 miles for an economic zone, and an international regime for the deep seabed in the area beyond national jurisdiction.

".we are prepared to accept, and indeed we would welcome general agreement on a 12-mile outer limit for the territorial sea and a 200-mile outer limit for the economic zone provided it is part of an acceptable comprehensive package, including a satisfactory regime within and beyond the economic zone and provision for unimpeded transit of straits used for international navigation. Coastal state economic jurisdiction beyond 200 miles with which the Conference must deal: jurisdiction over the resources of the continental margin when it extends beyond 200 miles and jurisdiction over anadromous fish such as salmon, which originate in coastal rivers but swim far out into the ocean before returning to the stream of their birth to spawn and die.

"In the case of fisheries, coastal state management and preferential rights over coastal and anadromous species would be recognized. The principle of full utilization will ensure that renewable resources which might not otherwise be utilized will give some economic benefit to the coastal state and help meet the international community's protein requirements. Agreed international conservation and allocation standards for the rational management of tuna should in the long run benefit coastal states which seek to engage in fishing these species and would maintain the populations of the tuna that migrate through their zone. Finally most states are prepared to agree to coastal state enforcement jurisdiction with respect to resource exploitation within the economic zone."

Further evidence of changed U.S. policy are contained in the following excepts from an article by Harold Lokken, "200-Mi'les", in *The Fishermen's News* ("Pacific Fisheries Review," vol. 31, no. 2, Feb. 1975, p. 42-46).

The Continental Shelf Treaty had its beginning in the 1958 Law of the Sea Conference and "While all maritime countries have not yet signed this treaty, it is nevertheless having great influence on thinking on law of the sea issues." The United States signed the treaty long ago but did not take steps to implement it until September 5, 1974. "On that date the Department of State notified Senator Magnuson that 'the taking of continental shelf fishery resources from the United States continental shelf will result in the arrest and seizure of any vessel taking such resources except as provided by the United States in bi-lateral agreements.' " Enforcement of U.S. continental shelf regulations was to begin on December 5, 1974. "That the United States is now prepared to enforce the treaty against fishermen of non-signatory nations is a most significant development in the fishery policy of this country."

"Furthermore fisheries are receiving more attention than ever before by the National Advisory Committee on the Oceans and Atmosphere, the Marine Fisheries Advisory Committee, the National Fisheries Plan now being put to-

gether through public meetings in all parts of the country, the Ocean Policy Study of the U.S. Senate headed by Senator Hollings, the inquiry set in motion by Senator Eastland through the [interstate] State marine fishery commissions [to establish a National Fisheries Policy to afford the U.S. fishing industry all support necessary to have it strengthened, and to provide adequate protection for our coastal fisheries against excessive foreign fishing] and. . ."

"Many fishermen have assumed that once the 200-mile fisheries zone becomes effective that all foreign fishing will cease in the zone and that domestic fishermen will then catch fish formerly taken by the foreigners. *This is far from the truth for along with our extended jurisdiction will come new management controls over the marine resources in the 200-mile zone."* Nationally, "Many decisions are yet to be made. Who will control the extended areas: the federal government, the regional commissions or the states?"

In response to the developments in Law of the Sea and national fishery policy, the Pacific Marine Fisheries Commission (PMFC) at its annual meeting on October 9-10, 1974 in Anchorage, Alaska sponsored a symposium on "Extended Jurisdiction: Impacts on Fisheries Plans and Policies" and adopted a proposal for a PMFC Committee on Preparedness for Shared Fisheries Jurisdiction Beyond the 3-Mile Limit. The text of the adopted proposal follows on page 33. The Gulf and Caribbean Fisheries Institute at its annual meeting on November 11-13 at Miami Beach, Florida held a symposium on Law of the Sea *(The Fish Boat,* vol. 20, no. 1, Jan. 1975, p. 16-17).

PMFC endeavors to keep abreast of Canadian fisheries affairs, especially those affecting Pacific Coast fisheries. Fishermen of Canada and the United States share many fishery resources and this sharing sometimes leads to problems of mutual concern. Although these problems are classified as international they are often of great concern locally to fishermen sharing and/or living adjacent to a particular resource. The controversy between Canada and the United States regarding whose frshermen intercept the greatest number (or value) of Pacific salmon hatched in the other country's freshwater^ continued in 1974, notwithstanding attempts by representatives of the two countries to find an equitable solution. Much of difficulty arises from charges by fishermen organizations to their respective governments that the other country's fishermen are getting the best of existing arrangements.

About mid-1974 the Hon. Jack Davis, member of Parliament and Minister for Environment and Fisheries was succeeded in the latter dual cabinet post by Hon. Mme. Jeanne Sauve as Minister for Environment and by Hon. Romeo Le Blanc as Minister of State for Fisheries. Mr. Davis during his 6-year tenure represented Canadian fisheries and his constituency in the British Columbia area of Coast-Capilano ably. Under his leadership the Fisheries Service and persons responsible for the salmon fishery developed plans for a $200 million investment in salmon enhancement.

National

All manner of crises and changes in 1974 at the national level tended to divert attention from fisheries matters to those more noticeable and of more immediate concern to the residents of all 50 States. The year began with the energy crises due to the Middle East oil embargo and ended with an economic crises due to double-digit inflation and the worst recession since World War II. Richard M. Nixon resigned as 37th President, and Vice President Gerald R. Ford became the 38th President of these United States of America on August 8.

The name of the Bureau of Sport Fisheries and Wildlife was changed to the U.S. Fish and Wildlife Service, effective June 24. The name change for the Department of the Interior agency is the latest of many changes in name and from one department to another. In 1871 it was part of the Bureau of Fisheries when Congress created the latter as an independent agency which was subsequently put in the Department of Commerce. A second predecessor agency was the Bureau of Biological Survey which was established in 1885 in the Department of Agriculture. In 1939 the Bureaus of Fisheries and Biological Survey were transferred to the Department of the Interior and designated the Fish and Wildlife Service. In 1956 the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife were created within the Fish and Wildlife Service. In 1970 the Bureau of Commercial Fisheries was transferred to the Department of Commerce and renamed the National Marine Fisheries Service while the Bureau of Sport Fisheries and Wildlife remained in the Department of the Interior.

The National Marine Fisheries Service (NMFS) in January, under the auspices of the International Association of Game, Fish and Conservation Commissioners, initiated a series of meetings with fish and wildlife directors from the coastal and Great Lakes States. A second meeting was scheduled for February 1975 and the three interstate marine fisheries commissions and the International Association of Game, Fish and Conservation Commissioners were asked to assist in development of an agenda.

The National Oceanic and Atmospheric Administration (IMOAA) in mid-summer issued a contract to the council of State Governments (COSG) to conduct a comprehensive study of present and potential roles of state governments in managing fisheries along the seacoasts and Great Lakes. The purpose is to develop "model" legislation to assist state legislation for managing fisheries. James M. Ridenour and Robert D. Matthews of COSG are project coordinator and assistant coordinator, respectively. Dr. W. Mason Lawrence, past chairman of COSG, has been retained by COSG as project director. An organizational meeting was held in late July at Denver, Colorado and an 11-man task force composed of state fisheries directors (or their representatives) and legislators was established. The task force held its first full-scale meeting in Portland, Oregon on September 19-20. Dr. Lawrence at a dinner meeting on October 8 at PMFC's annual meeting discussed the project. West coast members of the task force are Dr. T.E. Kruse, Fish Commission of Oregon, and E.J. Huizer, Alaska Department of Fish and Game.

Early in 1974 the NMFS in response to a recommendation by the National Advisory Committee on Oceans and Atmosphere began efforts to develop a National Fisheries Plan (NFP) to provide a basis for increasing the contributions which marine fisheries can make to the national interest through the

provision of industry, recreation and food. In order to ensure that the plan would be comprehensive a large number of federally sponsored meetings and/or surveys were conducted throughout the coastal areas of the United States to obtain the advice from as wide a range of concerned people as possible. To facilitate the reviewing and gathering of advice, the National Oceanic and Atmospheric Administration (NOAA) for its NMFS made arrangements with the Atlantic States, Gulf States and Pacific marine fisheries commissions to assist in development of the NFP, and the NMFS distributed, *"For Review Purposes Only"* a 225-page draft outline for the NFP, dated August 1974. The procedural details for nationwide development of the NFP in the areas of the Atlantic and the Gulf state marine fisheries commissions' jurisdiction differed somewhat from those utilized in PMFC's area of jurisdiction.

For PMFC's area of jurisdiction, NOAA entered into peontract with PMFC for its Executive Director to act as Conference Director within its area beginning June 1, 1974. On July 9-11 a leadership conference in Portland, Oregon was attended by representatives from NMFS (Washington, D.C., and Southwest, Northwest, Alaska, and Northeast regions), Pacific coast state fishery agencies, and Sea Grant Program Marine Advisory Service (Washington, D.C.; and Pacific coast universities including University of Hawaii). The Executive Directors from the Atlantic and Gulf states marine fisheries commissions and representatives from Marine Advisory Service at the University of Rhode Island and Clemson University also attended. At this conference, procedures were agreed on for a series of 27 local workshops and/or townhall-type meetings that were held in coastal communities, including 4 Hawaiian communities, during the period October 15 to December 3. In most instances local Marine Advisory personnel arranged these local meetings. Climaxing the local meetings were 4 regional review conferences: Juneau, November 6-8; Bellevue (Seattle area), December 2-4; San Francisco, January 7^9, 1975; and Anchorage, January 15-17, 1975. These review conferences were conducted according to a modified "American Assembly" of Columbia University type format under the direction of PMFC's Executive Director.

Thte tesults from the Pacific coast meetings plus information collected in the Atlantic and Gulf coast areas will be*used by NMFS to prepare a second draft of the NFP which will be distributed early in 1975 for review. In PMFC's area of jurisdiction three conferences in NMFS*Regions (Alaska, Northwest and Southwest) are sceduled in 1975 to review the latest draft: San Francisco, April 16-17; Seattle, April 23-24; and Juneau, April 30-May 1.

Along with the NMFS effort to develop a National Fisheries Plan, Congress in 1974 adopted without a dissenting vote Senate Concurrent Resolution 11, which had been introduced by Senator James 0. Eastland on February 7, 1973 and which is commonly referred to as the "Eastland Resolution." Its purpose is to fashion, for the first time in this nation's history, an inclusive and comprehensive legislative package to revitalize commercial fishing and support sport fishing. The three interstate compacts-Atlantic States Marine Fisheries Commission, Gulf States Marine Fisheries Commission, and Pacific Marine Fisheries Commission-which Congress created, are designated its agents to reach the millions of Americans whose livelihoods are linked to fishing so they will have an opportunity to participate in the formulation of a National Fisheries Policy.

The interstate compacts will hold meetings: ASMFCfrom Main to Florida; GSMFC from Key West to the tip of Texas; and PMFC up and down the west coast. Their officers and members will meet with representatives of every segment of the commercial and sport fishing industries. To finance these meetings Congress provided funds in an Appropriations Bill which President Ford signed on October 5. NOAA and NMFS have pledged that the National Fisheries Plan will be coordinated with the yet to be developed National Fisheries Policy. Original planning for implementation of the Eastland Resolution overlooked the Great Lakes region, which falls to a far greater extent within the purview of the U.S. Fish and Wildlife Service than it does of the NMFS. To rectify this oversight, efforts are being made to involve the Fish and Wildlife Service and the Great Lakes States. A possible coordinator for the region could be one of several Great Lakes interstate commissions.

A second legislative action affecting fisheries was unanimous passage by the U.S. Senate on February 19, 1974 of Senate Resolution 222, authored by Senator Warren G. Magnuson. This established the National Ocean Policy Study (NOPS) and authorized the Senate Committee on Commerce to undertake a comprehensive analysis of national ocean policy and federal ocean programs. There is no specific time limitation to NOPS. It will focus on both the legislative and executive approaches on ocean policy, with its first area of investigation to include: fisheries; and energy potential of the outer continental shelf and the impact of extraction upon the environment and socioeconomic conditions of the coastal zone.

The General Accounting Office, in response to a request by Chairman Magnuson of the Senate Committee on Commerce, issued a report "Federal Agencies Administering Programs Related to Marine Science Activities and Oceanic Affairs." Copies are available to the general public for $1.00 from the General Accounting Office, Distribution Section, P.O. Box 1020, Washington, D.C. 20013. The Senate Ocean Policy Study Committee, chaired by Senator Ernest F. Hollings will hold hearings on fisheries matters in 1975.

A third legislative action affecting fisheries was passage in July 1974 of H.R. 11295 which extended the Anadromous Fish Conservation Act of 1965 (P.L. 89-304) for five years to June 30, 1979. The extension (P.L. 93-362) changed the federal-state cost-sharing formula for multi-state projects under the Act from 60% federal and 40% state to 66 2/3% federal and 33 1/3% state; the federal share for single-state projects was left at 50%. The authorization to appropriate federal funds was also changed from $10 million to $20 million per year. This or similar legislation was the objective of PMFC's support in its Resolution No. 6 of 1972 (see Annual Report of PMFC for the Year 1972, p.32; Annual Report of PMFC for the Year 1973, p. 19-21; and PMFC Newsletter No. 21, September 21, 1974, p. 10-15). PMFC was joined most effectively in this support by its two sister interstate fisheries compacts, the Atlantic and Gulf states marine fisheries commissions, and by individual States.

However, the extension and revision of the Anadromous Fish Conservation Act was almost immediately followed by an

Executive Branch proposal which called for Congressional action. The Anadromous Fish Conservation Act for the past 3 to 4 years had been funded only at about 50% of its $10 million per year authorization. In addition inflation had made that low level of funding increasingly inadequate. This problem was compounded further when the President on November 26, 1974 proposed in a special message to Congress to defer from NOAA's 1975 fiscal year budget $600,000 in grant-in-aid funds. These deferred funds were for federal matching of state funds for already on-going projects under the Anadromous Fish Conservation Act ($210,000 deferment) and the Commercial Fisheries Research and Development Act (P.L.-88-309; $390,000 deferment). The latter Act also had been federally funded at substantially less than the amount authorized to be appropriated annually. This $600,000 deferral represented about a 10% reduction in the initial appropriation of $5,800,000 for the two Acts, but coming nearly 6 months after the start of fiscal 1975 on July 1, 1974 and in the face of double digit inflation, it would have had an effect of over a 20% reduction and would have devastated many worthwhile projects. Some would have had to be terminated prematurely: in some instances, partially reared juvenile salmon and steelhead trout wouid have had to be released too soon; and some state employees who were partially supported by federal matching funds would have had to be discharged. The proposed deferral seemed incongruous at the time when the Nation was faced with increasing unemployment. Fortunately on March 25, 1975, the House of Representatives passed a resolution, H. Res. 309, which disapproved the $600,000 deferral. This action came early enough to restore the deferred funds and to enable the States to avert the damage the deferral could have caused.

The first of a series of annual meetings between fish and game directors from coastal and Great Lake States and NMFS' staff was held in Washington, D.C., on January 29-30, 1974. The meeting series is intended to improve state-federal relationships. Attendees numbered 94 from 28 States, 3 interstate marine fisheries commissions (Atlantic, Gulf, Pacific), the Great Lakes Fishery Commission, Department of Commerce, Department of the Interior, Federal Energy Office, Marine "Mainmal Commission, and non-government conservation organizations and the public. The purpose of the meeting was a thorough examination of fisheries research, utilization, and management issues in which the States and Federal Government share a common concern. A committee, established under the auspices of the International Association of Game, Fish and Conservation Commissioners, developed the agenda based on suggestions submitted by the States and others. The agenda included five major items: (1) Extended Fisheries Jurisdiction, (2) State and Federal Fisheries Programs and Relationships, (3) Development of a National Fisheries Plan, (4) Future Marine Game Fish Programs, and (5) Fuel Allocation.

Fish Expo 74, the eighth such annual fishery exposition, was held in Norfolk, Virginia from November 18 through 21. Over 8,000 visitors, including a very active 7-man official delegation from Mexico and many other foreign visitors, viewed the exhibits and took part in seminars. The 1975 Fish Expo will be held in Seattle, Washington.

At Fish Expo 74 a keynote speech by Congressman Thomas N. Downing (D-Va) a sponsor of the Studds-Magnuson interim 200-mile fishery zone bill was followed by a panel discussion of extending fishery jurisdiction. The panel was composed of Jake Dykstra, President, Point Judith Fishermen's Cooperative; Peter Hjul, Editor of *Fishing News* and *Fishing News International* of London; Otho Eskin, U.S. State Department; and Burton T. Coffey, Pacific Editor, *National Fisherman,* as moderator. The audience's reaction was directed to the government spokesman, Otho Eskin, who said the Administration no longer opposed the concept of a 200-mile economic zone, but he went on to enumerate all the related issues that he felt would be better settled by international agreement than by unilateral legislative action.

Congressman Gerry E. Studds (D-Mass) the featured speaker at the Expo 74 banquet, said the legislative approach was the only one that would produce a 200-mile fishery limit in the near future. He commended fishermen for their help in moving his bill forward. But he said, if they wished to get increased consideration in Washington, D.C., they needed to get still more involved politically.

Rogers C.B. Morton, Secretary of the Interior, made a surprise visit to Expo 74 where he inspected the exhibits and held a press conference, announcing the government's plans for offshore oil leasing in the Atlantic. (On May 1, 1975, Mr. Morton became Secretary of Commerce.-Editor)

The National Federation of Fishermen (NFF) held its annual meeting in Norfolk, concurrent with Fish Expo 74. NFF has grown considerably in recent years and now has 69 locals, representing about 20,000 fishermen from coast to coast. Officers elected at the meeting were: William Mustard, Executive Director; Lucy Sloan, Executive Secretary; Melodie Bonney, Administrative Secretary; Dennis Grotting, Western Region President; and Jake Dykstra, Eastern Region President. NFF intends in 1975 to follow Congressman Studds' advice and will push hard in the nation's capitol on three major goals: extended fishing jurisdiction, a ban on high-seas salmon gillnetting, and abolition of prohibitive tariffs on foreign twine, webbing and gear.

The energy problem is an international as well as a national and local problem and just how well fishermen and oil producers will get along over the longhaul remains to be seen. A British paper. *Fishing News,* shouts, "The integration of fishing and oil-related industries in the North Sea is now a real problem and, to put it bluntly, it's high time there was a showdown" *(National Fisherman,* March 1975, p. 20-A).

On August 9, 1974, the super tanker *METULA* (1,067 feet long, 210,000 dwt) went hard aground when she ran out of 62-ft depth water in the Strait of Magellan, about 75 miles west of the entrance to the Strait at Cape Virgins, and about 75 miles east of Punta Arenas, Chile's southernmost city. The *METULA* was under charter to the Royal Dutch Shell Group and was en route to Valparaiso, Chile with 195,000 tons of Persian light crude oil. This was 78,000 more tons than the ill-fated *TORREY CONYON* carried in 1967.

Thanks to a well coordinated ship salvage and oil transfer operation only an estimated 54,000 tons of crude were spilled from the *METULA,* and 5 weeks later she was to be towed to

Rio de Janiero for emergency repairs. An 8-man U.S. Coast Guard oil pollution team, in response to an invitation from the Chilean Government, was dispatched by air together with 3 complete "Air Deliverable Anti-Pollution Transfer" pumping systems to Punta Arenas. There they reported to the Chilean Third Naval Zone staff which was in overall charge of salvage and cleanup operations in the 330-mile strait. The following day they were transported to the *METULA* where they joined Chilean Navy personnel, the tanker's crew, salvors from Smit International Ocean Towage & Salvage Co., of Rotterdam, and Shell personnel. The unspilled crude was transferred to the *HAVELLA,* an 18,000-dwt Argentine tanker, owned by Shell, which transported the salvaged crude a few miles to where it was transferred to the waiting 80,000-dwt *BERGELAND.* Gales and snow made the transfers feats of seamanship.

The winter gales and swift currents of the Cape Horn-Patagonia area distributed the spilled crude many hundreds of miles amid the rich planktonic, other marine and bird life of that cold-water area. A slick covering over 1,000 square miles was observed on August 21, less than 2 weeks after the grounding.

Dr. Roy W. Hann, head of the environmental engineering program at Texas A&M University, and member of the National Academy of Science, spent 2 weeks in Punta Arenas and the wreck area. He and colleagues from Great Britain and Chile made a 6-day overland hike to investigate contamination. He reported they "found about 40 miles of beaches affected by the oil which turned into a chocolatey-mousse type substance above the high-water mark." At Cape Virgins the tidal range [above low water] is 22 feet to 29 feet. Oil covered the beaches 1 inch to 2 inches deep for a width of 60 feet inland from the water. "We counted more than 200 dead birds, mostly cormorants, and some penguins. There will be damage to mussel beds and limpids along the shoreline."

Danger to the tens of thousands of penguins that were about to start their annual migration from the Atlantic into the Strait for nesting was a matter of concern. "The slick itself soon seemed tQ dissipate in the great seas whipped up" by 50- to 100-knot gales, "but similar smaller spills and dumpings by supertankers rounding the Cape of Good Hope have prompted scientists to warn that oil will contaminate the entire Antarctic region through distribution by world-encircUng currents and winds" *National Fisherman,* March 1975, p. 11-B). The same issue of *National Fisherman* called attention to its book review headlined "Supertankers Changing Concepts and Traditions of Sea and Ships."

In the United States preparations are proceeding for expansion of offshore oil drilling and production. On November 13, 1974 the Interior Department announced a tentative schedule for drilling off the Atlantic Coast even though actual drilling must await a favorable ruling by the Supreme Court in the case of the United States versus the State of Main. In this case a special master. Judge Albert B. Maris of Philadelphia, has recommended that the continental shelf beyond the 3-mile limit is the property of the Federal Government rather than the States.

Leasable tracts in 24 offshore areas, including 3.5 million acres off the Mid-Atlantic Coast, are to be announced in February 1975. The Baltimore Canyon (a 200-mile trough off New Jersey, Delaware and Maryland), George's Bank off New England, Blake Plateau off northern Florida, south coast of Texas, central Gulf of Mexico, California south of Santa Barbara, Cook Inlet (Alaska), and the Gulf of Alaska are among those areas. An environmental impact statement is to be completed by May 1975 and is to be followed by public hearings in June, a final environmental statement in September, notice of a sale in November, and sale in December 1975. A 4-year lag between lease sale and completion of production facilities is predicted.

President Ford and Secretary of the Interior Rogers Morton assured the Governors of Atlantic Coast States, in a special meeting, that the environmental hazards of offshore oil production are less then those from hauling crude oil by supertankers. The President promised the coastal States $3-million for planning and facilities, plus legislation for liability insurance for oil spill damage.

The latest issue of *Fisheries of the United States, 1974* (NOAA/NMFS Current Statistics No. 6700. 98 p. March 1975) lists 4 West Coast ports among the 13 leading fishery ports in the United States in terms of dollar value of fish landed in 1974:

Fishery Landings in Dollars and Pounds

Port and State	$ Millions	Lb in millions
San Pedro, Calif.	78.8	438.9
Kodiak, Alaska	29.1	112.9
Brownsville, Tex.	23.2	16.1
San Diego, Calif.	22.1	78.7
New Bedford, Mass.	21.2	67.7
Aransas Pass, Tex.	19.8	?
Cameron, La.	18.7	405.2
Astoria, Oregon	13.7	44.7
Bayou La Batre, La.	13.1	26.2
Empire, La.	12.5	243.8
Pascagoula-Moss Pt., Miss.	11.6	241.8
Key West, Fl.	11.6	15.2
Gloucester, Mass.	11.1	121.0

The same publication shows that the per capita consumption of fishery products, both edible and industrial, in 1974 was 46.5 pounds of which 23.2 pounds were domestic products and 23.2 pounds were imported. Some comparisons of the per capita consumption of edible products only in various countries are: United States 12 lb (1974), Canada 12.1 (1966-68), United Kingdom 19.3 (1970-71), Union of Soviet Socialist Republics 22.5 (1964-66), Norway 39.4 (1969-70), and Japan 70.8 (1970). The years within parentheses indicate the period represented by the preceding poundage.

California leads the other 49 States in number of licensed sportsmen, according to the U.S. Fish and Wildlife Service. In 1973 California licensed 2,199,190 anglers compared to 1,599,905 by second place Texas, 1,465,501 by Minnesota, 1,395,493 by Wisconsin, and 1,076,982 by Michigan. Wisconsin attracted the most out-of-state anglers (nearly 500,000 annually) followed by Minnesota and Montana. California re-

ported that it licensed approximately 2,300,000 anglers in 1974.

PMFC and Local Events

The Pacific Marine Fisheries Commission held its 27th Annual Meeting on October 9 and 10, 1974 in Anchorage, Alaska. At the first plenary session, Chairman James W. Brooks, Commissioner of the Alaska Department of Fish and Game, introduced the Honorable William A. Egan, Governor of the State of Alaska, who welcomed PMFC with the following address.

"Mr Chairman, Commissioners, Ladies and Gentlemen. It is a pleasure to welcome you to Anchorage for the second annual meeting of the Pacific Marine Fisheries Commission to be held in Alaska.

"Since 1969, when your Commission met at Sitka, many significant events have taken place in the 49th State, some of which have great importance not only for Alaska but for the rest of the Nation as well. These events are having their favorable effects both on the daily lives of Alaskans and on the overall progress of our State. Such changes will continue, and with proper planning and direction they can and will result in great improvements in our living conditions without significantly altering the high quality environment and scenic grandeur which now make Alaska such a great State.

"We are making good progress in building our State and there is also much progress still to be made. The fisheries, of course, are of utmost importance to the future of many, many Alaskans. In our urban centers such as'Anchorage, the necessities of life and most of the luxuries of modern living are readily available. However, many Alaskans live in the rural areas where climatic conditions are frequently harsh, transportation difficult, and where true subsistence uses of our fish and game resources are still very important in the daily lives of people., „

"During the past several "years, we have initiated an ambitious program of fisheries rehabilitation and enhancement for the benefit of commercial, sport and .subsistence fishermen alike. We still face financial limitations during this particular period. The revenues which will begin to flow into the State's treasury with the beginning of North Slope oil production about three years hence will enable us to further strengthen our fisheries programs, and others which improve people's lives.

"I am pleased that on the agenda of this meeting in Alaska you have panel discussions dealing with limited entry and extended jurisdiction for fisheries. It is my hope you will be able to learn and benefit from our commercial fisheries entry program that is now being implemented, as well as from the experiences of our Canadian neighbors in British Columbia. There, a limited entry program for the salmon fisheries has been in effect since 1969, and the practical results can now be assessed on a preliminary basis.

"With the combined approach of our limited entry program and the rehabilitation and enhancement programs referred to above, it is our goal to replenish and enlarge the fisheries so that they can accommodate all the people desiring to utilize them.

"We simply cannot wait upon the Law of the Sea proceedings to meet immediate needs. Many, if not most, of the pelagic and groundfish species presently being heavily exploited by Japanese, Russian and South Korean vessels off the Pacific Coast of North America are already exhibiting classic signs of overfishing. The once great halibut resource of the Bering Sea and North Pacific Ocean is in great danger of destruction, mainly as a result of immature fish being taken as incidental catches in large numbers in the foreign trawl fisheries in the Eastern Bering Sea and Gulf of Alaska.

"Additionally, there was the harvest by Japan in 1974 of at least 16 million tanner crab belonging to the United States from the Alaskan continental shelf in the Eastern Bering Sea. This cannot fail to have an extremely severe economic impact on the U.S. domestic crab fisheries during a period of worldwide surplus stocks of processed crabs. There is also the problem of falling prices resulting from consumer resistance to prices.

"The Japanese tanner crab fishery in the Eastern Bering Sea is permitted by the present bilateral treaty with Japan. We now have a strong case that Japan actually harvests far more than the allowable quota under the treaty and disguises the fact by means of deception, dishonesty and deceit on the part of the fishing fleets.

"Finally, statistics recently compiled by the National Marine Fisheries Service from U.S. observers on board Japanese* trawlers in the Eastern Bering Sea indicate that more than 100 million tanner crab are destroyed incidentally by the foreign trawl fisheries in the Bering Sea each year.

"Japan also continues to allow its 10 Almon motherships and ,300 catcher boats to operate irresponsibly in the North Pacific Ocean and Bering Sea. They operate in areas where concentrations of Bristol Bay sockeye salmon, both maturing and immature, are known to exist.

"U.S. scientists analyze catch data provided by Japan, and I stress by Japan, regarding the mothership operations. From this data, they prepare estimates of the catch of Bristol Bay sockeyes on the high seas. These U.S. scientists do the best they can with the scanty information they are given and deserve all due respect for their good work, but these estimates must be recognized as being unrealistically low with regard to the total Bristol Bay sockeye salmon harvest for the following reasons:

First, the number of dropouts from a gillnet fishery using monofilament gillnets from large vessels, in all weather conditions on the high seas, has to be extremely high. But this number has never been added to the reported catch figures.

Second, there is a growing body of evidence regarding the propensity of Japanese fishermen and fishing companies to misrepresent fishery catches and production statistics in other fisheries. This gives little reason to

place much faith in the accuracy of the statistics from the salmon mothership fishery.

Third, and perhaps most important, is the huge but virtually unregulated Japanese land-based salmon gillnet fleet comprising some 600 vessels. These ships are capable of independent catching and primary processing operations anywhere in the Bering Sea and North Pacific, including the Gulf of Alaska.

"This results in violations both of domestic Japanese regulations and provisions of the Japanese-Russian Salmon Treaty, as well as the International North Pacific Fisheries Commission Treaty. These vessels are supposed to confine their operations to an area south of the mothership area and west of the International North Pacific Fisheries Commission Abstention Line at 175 degrees west longitude. That they do not do so is a proven fact.

"Some of these vessels have been apprehended fishing for salmon as far east as Kodiak Island. And this year, 22 salmon vessels land-based from Japan were observed by the National Marine Fisheries Service operating in the prohibited mothership area at a time and place where 100 percent of the red salmon present are of Bristol Bay origin.

"The operation of the Japanese land-based gillnet fleet has been a matter of increasingly serious concern to Alaska in recent years. This fleet receives a minimum of regulation and surveillance by the Japanese Government, and catch statistics from that fleet have been very poor.

"Thus, we have both widespread and serious violations, by these vessels, of the International North Pacific Fisheries Commission abstention line and of domestic Japanese regulations. We have the clear knowledge of sockeye s'alYnon of Bristol Bay origin being in the gillnet area of the land-based Japanese fleet. We have the inescapable conclusion that the land-based gillnet fleet annually harvests a very large number of maturing and immature Bristol Bay sockeyes. In addition, the dropout factor previously discussed for the mothership fishery must also be applied to the land-based fishing operations.

"To summerize the Japanese high-seas salmon fishery problem, we have the following factors:

First, the catch of Bristol Bay Cockeyes by the mothership fleets as calculated by U.S. scientists on the basis of Japanese data;

Second, the growing awareness on the part of the United States that Japanese catch and production statistics are not reliable;

Third, the catch of Bristol Bay sockeyes by the land-based fleet, which has not been added to the Japanese catch; and

Fourth, the dropout factors for both the mothership and land-based fleets, which have not been added to the Japanese catch.

"The conclusion must be that over the years we have been seriously underestimating the actual Bristol Bay sockeye harvest by Japan. Also, while we will probably never know the true catch, its impact must be severe on the overall conservation and regulatory programs of the State of Alaska for the Bristol Bay sockeye salmon runs.

"The State of Alaska will continue to be hindered, or even thwarted, in its efforts to rehabilitate the once-great Bristol Bay runs as long as Japan continues its present damaging fishery operations. The Japanese decimate large numbers of fish each year before the fish mature and segregate into spawning runs in Alaskan coastal waters.

"We know that effective management and perpetuation of these salmon runs can only take place within coastal water. It cannot be accomplished as long as this high seas pillage of the runs takes place.

"A real plight exists for American fishermen in being forced to compete with the large and modern foreign fishing vessels which operate illegally up to and within the 3-mile territorial sea.

"In some cases our fishermen are competing directly with these foreign fleets for the same stocks of fish. And in other cases their gear and the species they are seeking are damaged incidentally to the operations of the foreign vessels.

"The situation regarding the Bristol Bay sockeye salmon resource is unique. It involves the impact of the unmanageable high-seas fishery on the resource. And it involves the impact of the destruction of Bristol Bay sockeye salmon on Alaskan residents of Bristol Bay and surrounding areas who are almost entirely dependent on the inshore fishery for their economic well-being.

"Lest it be thought that Alaska's concern with Japanese high-seas salmon fishing relates only to Bristol Bay sockeye salmon, I must also briefly point out that there is possibly an even more serious conservation problem involving Western Alaska Chinook salmon.

"For years Alaskan scientists have expressed concern during International North Pacific Fisheries Commission Meetings that a large proportion of the Japanese high-seas catch of chinook salmon in the Bering Sea has been on stocks of fish of Western Alaska origin. The build-up of evidence to support our case has at times been frustratingly slow, as the interest of the INPFC has been slow in studying the problem. But in the last two years dramatic breakthroughs have been made by U.S. scientists which tend to confirm our beliefs.

"Salmon scale analysis studies now indicate that in some years as high as 85 percent of the total Japanese catch of chinook salmon in the Bering Sea and North Pacific would be classed as being of Western Alaskan origin. While recognizing the preliminary nature of these findings, the disastrous implications for Alaska's inshore conservation and regulatory programs for these fish are all too clear.

"It has been difficult for Alaskans to understand the reluctance of the United States regarding the assumption of a leadership role in the development of world fishing policy. For years the United States disavowed an extension of the protect-

ive features of the 3-mile territorial sea to the fishery resources lying outside 3 miles. It was only after a significant number of other coastal nations had extended fishery jurisdiction to 12-miles that the United States, by Congressional action and without significant Executive support, extended our fishery jurisdiction to 12 miles.

"We in Alaska believe this can only be done by means of Congressional adoption of Senate Bill 1988, a bill which provides for the interim extension of U.S. fishery jurisdiction to 200 miles. It was greatly distressing to read of the National Administration's intense effort against this bill, which may well kill the legislation.

"We are well aware of the fact that Congressional approval of Senate Bill 1988 will not alone automatically resolve our problems with foreign fishing nations, We realize that unilateral extension of U.S. fishery jurisdiction for the interim, between now and final Law of the Sea action, will only be the beginning and that time-consuming and difficult negotiations will still have to take place.

"Nevertheless, there is a growing world consensus for coastal state fishery jurisdiction as the most effective means of providing workable conservation and regulatory regimes. The very fact of enactment by the United States of a domestic law regarding extension to 200 miles (even on an interim basis) will provide great leverage in securing the needed concessions from foreign fishing nations. This can accomplish more than the International Convention of the Northwest Atlantic Fisheries, the International North Pacific Fisheries Commission, and bilateral negotiations can.

"Some people might commend Japan for its token pullback in fishing for Bristol Bay sockeye salmon in 1974. But why should Japan be commended when 'the best available evidence at that particular time indicated that none of the 1974 run should be taken? That is similar to commending a person for embezzling only one-half as much money this month as he did last month.

"This is a time when one coastal nation after another is taking unilateral action to protect coastal fishery resources»by further extension of their jurisdiction to 200 miles. At the same time, it seems that the United States has been meekly waiting in the background for Lord knows what justification to protect our dwindling fishery resources and hard-pressed fishermen.

"This is a time when bilateral and multilateral fishery agreements have been shown to be largely ineffective in halting the further depletion of our Atlantic, Gulf of Mexico, Pacific Coast and Bering Sea fishery resources. I think it is high time for the United States to shrug off its shroud of indifference regarding fishery matters.

"U.S. fishermen cannot wait for the years of delay entailed first in Law of the Sea action, then in subsequent ratification and, finally, in endless rounds of bilateral negotiations. The United States should and must act now to exert its rightful responsibility to conserve for future use our truly great fishery resources.

"We in Alaska would like to see the U.S. Government act more firmly to protect our fishery resources and fishermen from foreign depredations. We would like to see the same firmness with which other U.S. interests are protected.

"Why, for example, was Japan allowed in 1973 and 1974 to harvest 16 million tanner crabs and 700,000 king crabs each year from the United States Continental Shelf in the Eastern Bering Sea? This is 10 years after the Geneva Convention on the Continental Shelf has been ratified by 22 nations. And the United States accordingly has declared that these crabs, as creatures of the Continental Shelf, belong to the United States.

"We have been phasing Japan out of the Eastern Bering Sea crab fisheries for 10 years. But despite our legal position of U.S. ownership of the resource, the phase-out has been based largely on the current capability of our fishermen to harvest the resource. Economic considerations and the long-range welfare of our fishermen must also be taken into account.

"The International North Pacific Fisheries Commission was established 21 years ago with one of the primary objectives of prohibiting the harvest of U.S. salmon on the high seas by Japan. Yet 21 years later Japan is still busily harvesting our salmon despite an increasing awareness on the part of the United States of the real effect of these high-seas fisheries on various Western Alaskan stocks of fish.

"Even the United States, despite all its reluctance to assume the mantle of leadership on this issue, acknowledges there will be extended jurisdiction sooner or later. Therefore, let us expeditiously demonstrate that we can and will do what is necessary to enhance and perpetuate our fishery resources. I can assure you the State of Alaska will back such an effort wholeheartedly and will muster all the resources possible to join such an effort.

"Thank you"

Dr. Robert W. Hiatt, President of the University of Alaska followed Governor Egan with a second keynote address "Alaska Stands at the Crossroads in Fisheries Development". The text of the address, excluding the formal introduction, follows.

"No one in this audience needs to be told of the immensity and variety of Alaska's marine renewable resources, and everyone is aware of the problems we face in arresting the decline and in enhancing the supply of our once fantastically abundant anadromous fish stocks, and the necessity to effect immediate solutions to sustain the shellfisheries as well as to restore such economically important species as the halibut. The issues involved in the overall process are complex-some domestic, some international-but in virtually all cases they impact directly on the concerns of the member States of this Commission. The Alaska Department of Fish and Game and the National Marine Fisheries Service in Alaska are devoting major financial and manpower resources to these problems;

and, to a far lesser extent, the University of Alaska is involved. A new effort to increase the University's involvement and to coordinate and thus focus more precisely the activities of each of these agencies on highest priority items is on the track, and I wish to touch upon this before I conclude my presentation.

"For the purposes of this Annual Meeting, however, I should like to steer away from academic matters and, instead, try to place Alaskan marine resource issues in a national and international context. Hopefully, my remarks will complement those of Governor Egan who has long carried the torch for state regulatory power beyond the 3-mile limit, and has made valiant but scarcely fruitful attempts to generate active Congressional and Executive Office action toward more aggressive leadership during international negotiations for the protection of Alaska's fishery stocks which range well outside the 12-rnile limit of national jurisdiction. My thesis today relates to the forces impacting Alaskan fisheries which I shall illustrate by a brief analysis of some of the relevant issues.

"This Commission, in service for over a quarter century now, has as its principle purpose the promotion of better utilization of fisheries-marine, shell and anadromous-which are of mutual concern to the member States, and the development of a joint program of protection and prevention of physical waste of such fisheries. Its annual meetings provide an open forum for fishery administrators, members of the industry, sport fishermen, fishery scientists and interested public. It is for this reason that I stress some of the Alaskan issues in the hope that our sister States to the south will work with us to achieve what this Commission was organized to do. I would not be misunderstood, many of our problems result from our own ineptness, often even our stupidity, but other very significant ones are external in origin, the solution to which resides in mutual support and e'ffbrt.

"The forces impacting Alaska's fisheries may be generally categorized as economic, political and cultural. Time will permit me to touch on only the first two, but for our purposes today these are the most important. Among the economic forces, we can segregate readily those relating to our resources, our production, and'our developmental financing. *

"From the standpoint of resources, the Alaskan fishing industry, like all American fishing industry, suffers from a lack of diversification. On the one hand, we harvest fishery resources selectively by species and, on the other, we have not practiced total utilization of the catches we do harvest until environmental regulations forced us to do so in the very recent past. Natural outcomes of such practices are overfishing of some species, overlooking other considerable supplies of fish protein, and a substantial waste of the food and other values in catches we do make.

"By way of illustration, let me cite a few examples. Except for halibut, bottom fish in Alaska are virtually ignored. Yet,foreign fleets outside the 12-mile zone fish these domestically unused resources intensively. Soviet, Japanese and South Korean trawl and long-line fleets take over 4 billion pounds a year from offshore Alaskan waters. Inside the 12-mile zone this fishery is for all intent and purposes totally undeveloped. Pollock, flatfish (i.e., turbot; yellowfin, flathead and rock soles; and others), Pacific ocean perch, Pacific cod and sablefish (black cod) are taken in approximately this order of magnitude of catch.

"Examining the outlook for the bottom fishery, we find that outside the 12-mile zone these species are being fished at or over their level of maximum yield. The yellowfin sole were overfished in the Bering Sea in the late 1950's and are only now showing some signs of recovery. The pollock in the Bering Sea are believed to be overfished presently. Thus, a decline in total harvest is forecast.

"Now, what do we find when we evaluate these resources inside the 12-mile zone. First, we note that processing facilities are generally not available in Alaska for fillets or frozen fish blocks. Second, few vessels are large enough to profitably fish the resource which requires a large harvest volume because of low profit margin. Third, we have no estimates of the size of various stocks of fish, and little or no experience in management regimes for a multi-species fishery. Admittedly, expertise to deal with these problems will be exceedingly difficult to develop. How, for example, can an optimum fishery be sustained in a mixture of species which associate differently by season of the year and by age group, and conduct little understood seasonal movements along and over the Continental Shelf and Slope?

"Only one species-halibut-has an extensive body of information and resultant management expertise. And to complicate matters even further, the halibut fishery itself is perhaps the greatest deterrent to the development of a general bottom fishery which inevitably would cause conflict through the incidental harvest of small halibut. Moreover, food-chain relationships are complex and some bottom fish may compose the diet of the more valuable selectively-fished species such as halibut. We do not yet understand the dynamics involved in these matters, not to mention our ignorance of the general biology of these species. There is no end of scientific work to jpe done here before management regimes can be properly formulated. This calls for increased funding and trained scientists. Neither are available presently.

"Slightly different circumstances and history characterize the Pacific cod which was widely harvested by American fishmen during the 1800's. The stocks declined and we stopped fishing the species. Now the population has returned to fishable levels, yet our fishery has not revived. Instead, Pacific cod are being harvested by the Soviets and Japanese.

"The tanner crab is a reverse situation. The species was really not fished by anyone until the 1960's, yet today it is a major element in Alaska's shellfish catch and has sustained the industry coincident to the considerable decline in the king crab population.

"Alaskan fishery processors are discovering that wastes, formerly discarded into waters adjacent to processing plants until it became a prohibited practice under environmental protection agency regulations, can be converted to company profits. A "bio-dry" plant at Kodiak has proved successful in processing shellfish waste into protein meal, and is readying equipment to handle fish waste as well. A new and improved

waste processing plant is now in successful operation at the Petersburg Fisheries plant. Combined economic incentives and environmental control regulations thus promise a turn to total use of the catch.

"In the area of production, a less than optimum effort has been made to develop quality control, and attractive marketing and promotion of fishery products. Alaska is not any worse-off than other American maritime States, all are negligent in this respect. Very few U.S. fishery products have caught the consumer's eye as a dietary staple. The per capita consumption of fish products in the United States is now only about one-fourth of total U.S. protein consumption, whereas in many countries fish comprises up to 80 percent of the protein intake. Thus, there is plenty of room for expanding the fish consumption of the American people. But it requires far greater creativity and expertise in quality control and marketing efforts than now practiced. I need only recall to those who have traveled in Japan that packaging and promoting of marine products are highly developed arts. Special sections in food stores are devoted to a great variety of fishery products usually packaged as attractively as are confections in the United States.

"The King Crab Marketing and Quality Control Board has been able to do great things for this species in terms of attractive marketing, as has the tuna industry for that resource. With our technological development and the world's finest refrigerated transportation system, it can only be gross neglect on the part of the fishing industry that Americans have not made fish products a greater part of their protein intake.

"Viewing our economic issues from the standpoint of distribution, we find that the United States in 1972 imported two-thirds of its fishery products for a'balance of payments deficit of one billion dollars. It has always been an enigma that the U.S. Government has never institutionalized national marine renewable resource development the way it has agricultural resource development through the U.S. Department of Agriculture. Our balance of payments crisis based on seafood "products alone would argue for an intensive increase in support for not only the National Marine Fisheries* Service, but for some institutionalized federal financial support of state efforts as well. It has worked successfully for agriculture; it can be equally effective for our marine sea food resources. The Sea Grant Program, while a step in the right direction, is a totally subminimal effort. As a result of this long standing neglect, we have built up proportionately little expertise in support of our fishing industry and, to complicate matters, what industry we do have is heavily investment controlled by the Japanese, other foreign involvements or by international corporations. This circumstance brings up a more important issue, who will really control the fisheries of the North Pacific given the miracle of eventual achievement of offshore economic zones? Japan, in the corporate sense, for example, probably controls at least two-thirds of the present so-called U.S. fishery off Alaska, and the trend towards foreign investment domination is increasing.

"On reflection, I would surmise that foreign investment dollars in Alaska's fisheries have been more beneficial than detrimental in sustaining our fishing industry even at the present level. Such investments have provided ready-made markets; have made developmental capital available in the void left by the absence of American investment; have encouraged multi-species fishery efforts which have lengthened working seasons and more fully utilized fish stocks; have put more fishermen and processors to work. All these aspects are pluses for Alaska. Taking the long view, however, we might anticipate that American capital might once again be forthcoming when leading world currencies become properly aligned in value, when the costs of production in other advanced countries rise inevitably with the increased standard of living there, and when the rising cost of protein on the world market makes investment in marine fisheries attractive. Whether American rather than foreign investment will more directly benefit Alaska's fishing industry remains to be seen, but it surely will focus greater consideration on the preservation and enhancement of our fisheries if American money is significantly involved.

"Within the political realm, the most significant issue for Alaska is the development of some semblance of order in control and regulation beyond the 3-mile limit. The question is not "who does it?", but rather, "does anyone do it?" There is indeed a vacuum in management nationally between the 3-mile and 12-mile limits.

"I predict that the small confrontation which occurred this year with respect to the king crab fishery in Bering Sea, when the State of Alaska attempted to fill this void in management and regulation, will continue to expand towards chaos unless we can soon reach a workable solution. The simple point is that our highly mobile biological resources do not recognize mileage parameters, and to protect these resources they must be managed and regulated at the very minimum out to the limit of national jurisdiction. Since the Federal Government seems unable to exert such management effort, there is very strong justification for turning over such regulation to the State which has hitherto proved that it can do a superior job.

"Alaskans, in my view, have placed too much faith in the [1] outcomes of that international political football, the Law of the Sea, for the good of their own welfare. This is not to say that we should relax our pressure to establish at least economic control up to 200 miles, or even better-species control using only biological limits, but we cannot expect to influence international views to our way of thinking when we are so hopelessly divided within our own nation. Our principal fishery industries are diametrically opposed on the issue, and our navy demands free transit of straits. How can we possibly expect to solve the economic zone problem under such conditions? It would appear to me that bilateral or multi-nation agreements between countries having common area fishery interests represent the most feasible approach to the protection of fish stocks on the high seas. While such agreements are also difficult to achieve, we do have precedent established in the crab fishery of the Eastern Bering Sea, imperfect as it is. The system can be improved with our additional negotiations based on up-to-date information on problem areas uncovered. These agreements between two countries can, I am convinced, better conserve our fisheries than the Law of the Sea will ever be able to accomplish in a time frame which will offer any reasonable protection to our threatened species.

"Neither should we be misled in the expectation that the

Law of the Sea will protect for the United States fish stocks off our shores which we do not now fully utilize. It is distinctly within the realm of possibility that an international agreement concerning high seas fisheries might confine certain zones to nationals of countries which have established prior fisheries rights, so to speak. The U.S. fishing industry might well be foreclosed, or nearly so, from resources to which we now lay legitimate claim but have neglected to utilize. This is a further reason to push forward aggressively on country-to-country agreements, rather than to be lulled into inactivity by political posturing and vain hopes that a generalized national policy could somehow protect Alaska's marine resources.

"Among the political forces affecting our fisheries, none is more important in Alaska than judicious resolution of present conflicts over developmental priorities, e.g., the confrontation between land use and energy resource development with fisheries. Fundamentally at fault is our dismal store of environmental knowledge which knowledge is required for decisions aimed at making rational allocations of land, water and resources to development.

"There are four major geographic foci affected by this problem in Alaska at the present time: Prince William Sound and the Gulf of Alaska, Kachemak Bay and Lower Cook Inlet, the Eastern Bering Sea including Bristol Bay, and the Arctic from Bering Strait to Demarcation Point. In each of these areas some aspect of energy resource development—exploration, operations or transportation—is being scrutinized for environmental impact, or is pending, awaiting the resolution of the question. For example, we know that the area of the Eastern Gulf of Alaska subject to oil and gas leases is also an area for the spawning of halibut and Pacific ocean perch. But who knows what other important species are involved? And the Kachemak Bay oil leases are precisely in one of the most important nursery areas itTA-iaska for shellfish and perhaps many important fish species as well. We need not only an adequate environmental description and biological inventory of these areas, but an elucidation of the dynamic processes there which regulate the interaction between the living and non-living environment.

"In southeast Alaska we are now experiencing a classjc confrontation of competing land uses wherein forestry operations are severely encroaching upon and altering natural anadromous fish spawning and nursery areas.in the rivers and streams. Joint state and federal research is being undertaken to understand better the impact of logging of watershed areas on the quality of streams on which anadromous species are dependent. Yet, incongruous as it may seem, logging contractors on federal forest lands are violating state regulations concerning protection of the spawning and nursery streams. Justice will not be served until these governmental jurisdictional disputes over land use and resource management are solved. But once again, should not state regulatory forces prevail if federal control is lacking or unlikely to occur?

"I cannot leave the subject of justice without alluding to the fiasco arising in Alaska from the Marine Mammal Protection Act, and the regulations adopted for its enforcement which completely pre-empted state control. First, there is presently a totally confused State as regards the management and research role of the Federal Government, State Government and institutions such as the University of Alaska. Second, regulations promulgated by NOAA and the Department of the Interior, rather than the law, *per se,* are directly responsible for extensive waste and lost income in marine mammal product utilization. Neither hides nor ivory can be sold by the natives who, alone, are permitted to take any species of marine mammals and in unregulated number. Third, marine mammal competition with fishery stocks in southeast, south-central and southwestern Alaska goes on completely uncontrolled. University scientists, for example, have computed, albeit roughly, that the statistical full-time marine mammal residents of the Bering Sea alone number about 1.5 million having a biomass of about 450,000 metric tons. They consume 9 to 10 million tons of nekton and benthos annually (4 times the commercial fish catches in the same area). If the State were responsible for managing such populations a much better balance could be struck between these marine mammal populations and the fishery resources upon which many Alaskans are dependent.

"And a constant source of irritation to Alaskans is the lack of attention to the spread of misinformation at the national level concerning the abundance and condition of the various species of the sea mammals about Alaska's shores. Such misinformation is frequently badly used by those who are ardent preservationists, and who willingly or unknowingly have totally removed the element of management from these populations. Here again, the State is far more able than the Federal Government to manage the resource.

"Now, if, in conclusion, I may digress from the issues and turn to the academic, I should like to bring you up-to-date on University of Alaska involvements in Alaskan fisheries. I am pleased to inform you that the University has entered into a far more active, and hopefully a more effective, program of fishery education and training, together with a much needed addition to our oceanographic program-that of fishery oceanography. The University's statewide system of several campuses is being used for deployment of our efforts, rather than to concentrate all fishery programs in a single monolithic institute. By so distributing our programs we can take advantage of industry activities, concentrations of fishery scientists in cooperating agencies, and existing University programs in support of this new or revitalized fishery effort.

"For example, Kodiak Community College will take advantage of the large fishing fleet home-ported there and the concentration there of processing plants by promoting a 2-year degree program with options in fishery technology and fish processing. Our 4-year and graduate campus at Auke Lake, Juneau, will take advantage of the many fishery scientists and fine shoreside facilities and library of the National Marine Fisheries Service at Auke Bay, together with the Senior Fisheries Staff of the Alaska Department of Fish and Game headquarters in Juneau, and establish a baccalaureate and graduate level program for the development of fishery scientists. At the Fairbanks Campus the already established baccalaureate and graduate programs in fisheries will be altered to concentrate on educating freshwater fishery scientists who can work closely with those in the wildlife management program for the improvement of fisheries in lakes, rivers and streams of interior Alaska. And at Seward we plan to develop home-port facilities for oceanographic vessels together with supporting

oceanographic laboratories. A staff and program in fishery oceanography will augment the present operations of our institute of marine science.

"And last, but certain to have a significant long-range impact on Alaska's fisheries, is a recently formed Interagency Fisheries Committee which brings together the heads and chief policy makers of the National Marine Fisheries Service in Alaska, the Alaska Department of Fish and Game and the University of Alaska, in addition to a representative of the Office of the Governor and a leading resource-minded Legislator, to coordinate and plan our fisheries efforts so as to bring the maximum talent and funds in Alaska to bear on our most pressing fishery problems.

"Thank you for your indulgence this morning in letting me present some of the issues facing our fisheries. Most are not unique, for you face them in other western maritime States. Hopefully, your deliberations will be measured in progress toward our common goals in support of our fisheries, for our northeastern Pacific marine renewable resources are truly at the crossroads."

Two members of PMFC's Advisory Committee, David B. Charlton and William G. Saletic were the recipients of awards or appointments in 1974. Dr. Charlton was presented the Oregon CUP Award by Governor Tom McCall at a December meeting of the Governor's Committee for a Livable Oregon, of which Dr. Charlton is an original member and former chairman. The CUP, "Cleaning Up Pollution," award is given by the Department of Environmental Quality to further the progress of the environmental movement. Dr. Charlton, a retired microbiologist-chemist of MEI-Charlton, Inc., performed the tests on the first survey of pollution in the* Willamette River in 1926 and 1927 and has been active for over 50 years in environmental and other community matters. Effective January 1, 1975 he resigned from PMFC's Advisory Committee on which he had served since 1963.

William G. Saletic, Executive Manager of the Seiners Association with headquarters in Seattle, was appointed as»one of the three U.S. commissioners of the International Pacific Salmon Fisheries Commission. He is also an industry advisor to the International North Pacific Fisheries Commission, me University of Washington, and the State Department's Task Force Committee on the Law of the Sea. He is a member of Governor Dan Evans' Fishery Advisory Commission and is Secretary of the Commercial Fishermen's Inter-Insurance Exchange.

The following are comments of the editor of *ALASKA Seas and Coasts* (vol. 2, no. 5, December 15, 1974, University of Alaska Sea Grant Program) to an article, "Oil in Kachemak Bay," by Nancy Munro:

> "Kachemak Bay is possibly one of the most productive bays in the world, and certainly one of the most beautiful. Last year when the State of Alaska leased portions of the bay for oil and gas exploration it unleashed a controversy which is still raging. Fishermen feel their livelihood would be seriously threatened by oil development, biologists fear the effects of chronic low-level pollution or a possible spill, and many citizens and visitors to Homer dislike the idea of oil platforms in Kachemak Bay or an increased population in the surrounding communities. On the other hand, the Nation requires energy resources and the State desires the revenues derived from oil and gas.
>
> "If oil is found under Kachemak Bay, it will be the first example of offshore development in a major fishing area of Alaska. That possibility raises many questions about conflicts, compatibility, and alternatives. With leasing of the outer continental shelf around Alaska already tentatively scheduled, the problems and conflicts raised by the Kachemak Bay affair seem to foreshadow the future. With this in mind Seas & Coasts decided to trace the events of Kachemak Bay sale, listen to all sides, and present the facts of what has happened, what is happening, and how it might pertain to the future."

Albacore and other tuna: Two albacore that were tagged in the central Pacific, northwest of Midway Island, by Japanese biologists on June 5, 1974, were recovered off Astoria, Oregon four months later (September 30 and October 3). These are the first recoveries off the west coast of the United States of Japanese tagged albacore. However, several recoveries have occurred off Japan of albacore tagged off the west coast of the United States. (NMFS, *Fishery Market News Rept.* S-179, Nov. 20, 1974, Seattle.)

The "Status of the 1974 Pacific Coast Albacore Fishery" is presented in Appendix 1 of this report. The catch of other tunas by surface gear in the eastern Pacific Ocean in 1974 totalled about 310,000 short tons, the highest total ever recorded from that area. Vessels registered in 13 countries (Bermuda, Canada, Columbia, Costa Rica, Ecuador, France, Japan, Mexico, Netherlands, Panama, Peru, Spain, and the United States) participated in the fishery. About 26 vessels of this eastern Pacific fleet after completion of their last unrestricted yellowfin trips also fished in the eastern Atlantic where they caught an additional 28,000 tons of tunas. The combined 338,000 short tons would have an approximate U.S. dockside value of $192 million. The price per ton to fishermen following a January 15 settlement was $575 for yellowfin and $545 for skipjack.

According to Dr. James Joseph, Director of Investigations for the 8-nation Inter-American Tropical Tuna Commission, the 1974 season for yellowfin in the Commission's regulatory area opened on January 1 and closed to unrestricted fishing on March 18. (At that time it appeared the 1974-quota for the area would be caught. The final total catch of yellowfin from the area was slightly over 175,000 tons in 1974.--Editor) By mid-May most vessels had completed their last unrestricted trips with full loads. There are no restrictions on skipjack and other tunas.

The continuing entry of additional vessels into the fishery and the large proportion of 1-year-old yellowfin in the 1973 and 1974 catches are matters of concern. In summary, "the international fleet is continuing to grow, average vessel production is declining and substantial increases in catch are needed to avert an economic crisis. The probability of such substantial increases in catch does not appear to be high over the short term." *{The Fishermen's News,* "Pacific Fisheries Review,"

February 1975, p. 35, 39-40.)

The injury or death of some porpoises that are entraped incidentally while purse-seining for yellowfin in the eastern Pacific is a severe problem for American tunamen because federal law requires them to minimize such occurrences. As the result of modifications in seining methods and seine construction the number of porpoises killed per ton of yellowfin caught has been materially reduced since 1972. Fishermen regard porpoises as friends whom they do not wish to injure, for porpoises are a frequent indication of the presence of unseen yellowfin. However, seine fishermen of other countries fishing in the same area are not legally encumbered by the necessity to protect porpoises.

The NMFS chartered tuna seiner, *South Pacific,* with Richard McNeely of the Northwest Fisheries Center and David Holts of the Southwest Fisheries Center aboard, departed Balboa, Canal Zone, October 28, for a cruise in the Inter-American Tropical Tuna Commission regulatory area off Mexico and Central America to test methods for further reducing incidental mortalities to porpoise during commercial seining. On this cruise, the effectiveness of a "porpoise apron" insert of small mesh webbing will be tested to see if porpoise can be freed without losing the tuna. NMFS also has chartered a second tuna seiner, the *Martinac,* to test porpoise-savings fishing gear and techniques.

The *SEA TREASURE,* a 203-ft. tuna seiner, left San Diego, California on October 16, 1974 on a 60-day cruise to the western Pacific to determine how to develop what since World War II has been believed to be a large yet relatively unexploited skipjack tuna resource. A secondary purpose is to test new fishing gear. The cruise is the first in a program sponsored jointly by NMFS, the tuna industry'Tn "California, and the Pacific Island Development Commission (PIDC). Will Van Campen has been named by NMFS as coordinator with headquarters at its La Jolla laboratory and Frank Alverson of Living Marine Resources (LMR) has been named project manager. LMR, a San Diego-based research and consulting firm, is management contractor for the program.

The people of the central and western Pacific Islands have been urging for many years the establishment of such a program. The PIDC which includes Hawaii, Guam and American Samoa was formed for that purpose. The U.S. Trust Territory of the Pacific Islands which includes three major archipelagoes, the Caroline, Marshall and Mariana islands is also a supporter of the program. Senator Fong following production of a plan by the island people for exploratory fishing authored a bill to appropriate S3 million to finance the plan. Congress passed the bill, but funds were not appropriated. Therefore NMFS and the tuna industry as major contributors and PIDC as a minor contributor agreed to finance the program by providing $755,000 for the first fiscal year. The Pacific Tuna Development Foundation was formed as a nonprofit organization to administer the program. Government direction will be by Gerald V. Howard, NMFS Southwest Region Director, at Terminal Island, California. NMFS is supporting the program as one of the first big government-industry efforts for finding new fishery resources, with the use of commercial instead of government research vessels. The program's duration and total cost are 3 years and $2.5 to $3.0 million. It envisions exploring the area from Hawaii to the Philippines. Much will depend on how well things go in the first year.

The first cruise will include about 40 days of exploratory fishing around the 492-sq. mi. Marquesas Island group in French Polynesia. Paul Patterson, a LMR observer will be aboard the *SEA TREASURER* and will be joined by a French scientist as a second observer. The vessel will be equipped with a new NMFS-designed net, 17 strips deep instead of the vessel's conventional 12-strip net. .The area is one in which enough fish should be found to give the new net a good test. The real problem is not where to look for fish, but how to catch them. The skipjack in the central and western Pacific have been found in small, fast, and elusive schools that tended to dive under the purse line or to escape the net before it was pursed up. The water is very clear and the thermocline beyond which tuna hesitate to dive is deep. Deep nets may also help save porpoise *(National Fisherman,* Jan. 1975, p. 15-A and 31-A).

Anchovy: Commercial landings of anchovies in California for reduction purposes totalled a record 121,579 tons of raw fish at the close of the 1973-74 anchovy seasons. The season for the northern area closed May 15, 1974 with a catch of 11,276 tons from a 15,000-ton quota. The season for the southern area closed April 30 with a catch of 110,303 tons from a 120,000-ton quota. Meal from reduced anchovies is used for the production of poultry and other animal foods; oil and other reduction by-products are used in various other commercial products.

Halibut: In recent years the abundance of halibut off the Pacific Coast of North America has been declining at an alarming rate. A major cause of the decline is the large incidental catch of halibut, including many juvenilies, by foreign trawlers. American and Canadian fishermen are not permitted to catch Pacific halibut except by hook and line during prescribed seassons. For further details on the halibut resource see "Status on the Pacific Halibut Fishery" in Appendix 1 of this report.

Late in 1974 Canada and the United States, working through the International North Pacific Fisheries Commission secured Japan's agreement to keep its trawl fishermen off an expanded halibut nursery ground area in" the southeast Bering Sea for $5^1/2$ months in 1975 instead of only 3 months agreed to in 1973. Japan also consented to stop trawling in specific areas of the Gulf of Alaska for 2 to 3 months in 1975.

Canada and the United States have asked the Union of Soviet Socialist Republics to agree to trawl restrictions similar to those agreed to by Japan. Negotiations between the U.S. and the U.S.S.R. are scheduled for February 1975.

Salmon and steelhead: A task force, appointed by the Director of the U.S. Fish and Wildlife Service to survey public fish culture facilities during fiscal year July 1, 1972-June 30, 1973, reported there were in the 5 Pacific Slope States 102 hatcheries plus 31 large, detached rearing ponds operated by 7 state agencies and the U.S. Fish and Wildlife Service (/?epcvT *of National Task Force for Public Hatchery Policy,* 1974). The combined production from these facilities during the year exceeded 300 million juvenile Pacific salmon and steelhead trout

weighing nearly 10 million pounds. About 80% of the facilities were in Oregon and Washington, mostly along the Columbia River, and about 80% of the production was from state facilities. However, some state facilities are operated with federal funds provided primarily through the National Marine Fisheries Service in connection with federal dams. The principal species produced were chinook and coho salmon and steelhead trout.

The Washington Department of Fisheries during 1974 released over 154 million hatchery produced juvenile salmon weighing a total of over 4 million pounds. This is the largest salmon plant in Washington history and was produced by 26 state hatcheries, 6 state rearing facilities, and 12 cooperative pen-rearing projects operated by Indian tribes, sportsmen groups, commercial concerns and school groups. The release figures do not include salmon produced at federally funded hatcheries and rearing facilities in the State *(The Fishermen's News,* March 1975, second issue).

The 1974 pack of canned salmon in Alaska, British Columbia, Oregon and Washington was about 3.3 million cases (48-lb. cases), which was slightly better than the 1973 pack of 3.0 million cases. This was not the total catch, for many salmon were sold fresh, frozen, or smoked. But 1974 was the third year of a downward trend that may portend the eventual diminution of the Pacific salmon as a major commercial fishery.

Alaska's canned salmon pack was up only slightly in 1974 from its 1973 pack, which was one of the worst in Alaskan history. The 1974 run of about 11 million red or sockeye salmon to Bristol Bay was only fair but was much better than the predicted 5 million fish, most of which were reserved for escapement. As it turned out the canneries were unprepared and only about 1.4 million reds were harvested while the remainder of the run escaped to the spawning grounds. The last big Bristol Bay run of red salmon totalled 39.6 million fish in 1970. The overall catch in 1974 of all species of salmon in the rest of Alaska was poor.

The impact of Japanese high seas salmon fishing is having a much greater effect, on king (chinook) salmon of Wejtern Alaska origin than was once believed. It appears that the impact on kings exceeds that on Bristol Bay sockeye. In some years the Japanese have taken as rrjany as 685,000 kings. Their Western Alaska origin has been substantiated by 8 recoveries in the continental United States from about 500 kings tagged throughout the high-seas area fished by Japanese mothership fleets. One king salmon tagged in 1972 approximately 75 miles off Kamchatka was recovered in the Yukon River in June 1974 by a commercial fisherman. The other 7 recoveries occured in the Yukon, Nushagak, Togiak, Kuskokwim and Columbia rivers; all had been tagged in Bering Sea.

Studies of scales also indicate that the majority of king salmon caught by the mothership fleets are of Western Alaska area origin. Approximately 473,000 kings or 85% of the 553,892 caught in 1969 by the mothership fleets originated from that area. In comparison the inshore harvests in Western Alaska were 387,000 in 1970 and 359,000 in 1971; most kings (70%-90%) in the high-seas catch were 4-year-olds, averaging 6 pounds in weight while those in the commercial fisheries of Western Alaska were 5- to 6-year-olds, ranging in weight from 20 to 23 pounds. In general the king salmon runs to Western Alaska have declined since 1971.

Alaska now permits nonprofit organizations to build, own and operate aqua- or mari-culture facilities. Prince William Sound is now the site of at least two proposed salmon farming ventures. As 1974 ended, Alaska's Commercial Fisheries Entry Commission was proceeding with implementation of 1972 "Limited Entry" legislation. The legislation applies to other fisheries in addition to salmon fisheries.

In Canada's British Columbia commercial salmon fisheries, the Fraser River sockeye run was the one bright spot in an otherwise dismal 1974. The total sockeye run to the Fraser yielded 2.4 million fish to British Columbia fishermen, 2.4 million to Washington fishermen, and about 8.4 million for the spawning escapement. This was the year of the big quadrennial run to the Adams River area of the Fraser system and the usual "Salute to the Sockeye" celebration attracted thousands of people to the banks of Little River and the lower Adams River to see the sockeye in their crimson spawning colors. Pink salmon runs to the Fraser River, other southern British Columbia streams, and streams tributary to Washington's Puget Sound were insignificant as is normal in even-numbered years.

Canada's new hatchery on the Capilano River near Vancouver, B.C., contributed coho salmon to both commercial and sport fishermen in excess of expectations. In addition the numbers of coho returning to spawn at the hatchery were in excess of spawn-taking requirements in 1974. This created a problem of where to transplant and/or how to utilize some of the surplus fish.

Many white fishermen in the State of Washington's salmon fisheries were badly hurt financially and throughly exasperated by fishing restrictions which followed a decision in February 1974 by Federal Judge George Boldt that members of 14 western Washington "treaty" Indian tribes must be allowed 50% of the harvestable salmon and steelhead returning to certain state waters, mainly Puget Sound proper and contiguous waters to the north. The Boldt decision worsened a long standing mess which may eventually require Congressional action for cleanup. On October 10, PMFC at its Annual Meeting adopted unanimously Resolution No. 9, "Renogotiate Indian Treaties," urging Congress "to initiate a study of the hunting and fishing rights conveyed by Indian treaties, their impact upon state and national fish and wildlife management goals, and methods by which equitable distribution of fish and wildlife can be achieved," (see page 32 for complete text).

Washington's Governor Dan Evans on October 25 told a crowd of some 800 angry white fishermen on the State Capitol's steps that he would ask President Ford to declare the Puget Sound commercial salmon fishery to be "a disaster area." Indian fishermen, around whom the problem revolves, countered that Indians have been a disaster area for more than a century and that no one has shown much concern. It appears that the salmon fishery cannot qualify as a disaster under federal disaster relief laws because the difficulty is not due to "an act of nature."

In spite of the highly controversial decision which resulted

in limiting white commercial fishermen to 4 days of fishing in October in the major area for the fall fishery, and in numerous court actions against the state fishery management agencies, the Indians by the end of the salmon season had taken nowhere near their court-mandated share of the harvest. The Indians fished pretty much as they pleased, both on and off their reservations, but they did not enter the summer sockeye fishery (in more than their usual numbers) which provided about 90% of approximately 6 million salmon caught by white fishermen in Washington's northern waters. Contravention of the International Pacific Salmon Fisheries Commission's (a joint Canada-United States entity) management of the sockeye fishery would have posed a complicated international law problem.

Five members of Washington's Congressional Delegation, including Senators Henry M.Jackson and Warren G. Magnuson, on November 3 via telegram asked U.S. Attorney General William Saxbe to urge the Ninth Circuit Court of Appeals to act quickly on the State's appeal of the Boldt decision. The group recognized that the Attorney General could not tell the Court what to do but they argued, "the environment of extreme tension and sporadic violence that has grown up around the case argues for the earliest possible court decision." Indian spokesmen responded with cries of "Foul." Ramona Bennett, one of the most eloquent said, "The Federal government took no action for 80 years in recognition of the oppressed, depressed conditions that Indians were forced into by illegal fishing laws passed by the State of Washington. But the crisis of non-Indians is being quickly acted on." *(National Fishermen,* Jan. 1975, p. 16-A and 31-A).

The Appeals Court's decision and then probably the Supreme Court's eventual definition of the status of treaties that were written some 125 years ago may not be forthcoming for a long time. Hopefully, a final decision .on Indian fishing rights would lay to rest a problem that has over more than a generation wasted much time, money, and "good will" without benefit to the salmon and steelhead resources.

The struggle between non-Indian and Indian fishermen and between ^commercial and sport fishermen for the last salmon and steelhead trout continues as dams, other water usage projects, and other acts of civilization in general continue to deplete the stocks of those valuable fish in Oregon and Washington. At the November 1974 elections$_{fc}$Oregonians passed a law prohibiting the sale of steelhead by non-Indian fishermen. In Washington the sale of steelhead has been prohibited since 1932. While non-Indian sport and commercial fishermen alike smarted under the Boldt decision, sport fishermen in Washington were circulating an initiative petition to prohibit in time all net fishing for salmon in Puget Sound, including the U.S. side of the Strait of Juan de Fuca and other inside marine waters. The petition failed to receive enough signatures to get the initiative on the general election ballot, but the sponsors promised that the initiative would be back.

The Northwest Indian Fisheries Commission, which was formed to implement the Boldt decision, became operative in August after it was ratified by 18 Washington tribes and bands and 5 Commissioners were named at a meeting in Seattle to represent each of the 5 treaty areas covered in the Boldt decision. Forrest Kinley (Lummi), Charles Peterson (Makah), Pete Peterson (Point No Point), Richard Pearl (Medicine Creek), and Guy McMinds (Quinault). The latter three were to serve in an interim capacity until permanent Commissioners were named at the next meeting. The Commission will have the power to formulate a broad general fisheries program and to coordinate conservation practices of the member groups.

Judge Boldt has advised that his decision does not apply to the Columbia River, but Indian spokesmen and attorneys have served notice that they are taking actions to apply its principles to that river and areas to the southward. Thus, this problem could expand geographically to encompass Oregon and even northern California. In any event, the drastically curtailed commercial fishing seasons in Washington could force more than normal transfer of fishing effort to other areas. Alaska has indicated its concern for the potential impact of such transfers on its "Limited Entry" program.

The runs of salmon and steelhead entering the Columbia River in 1974 were poorer than in 1973, except that the coho run was better than the poor 1972 and 1973 runs. The below Bonneville Dam commercial gillnet catch was poor in all seasons: only one day of fishing was permitted for spring chinook; gillnetting for summer chinook was prohibited entirely as it has been beginning in 1965; and gillnetting for sockeye was prohibited. The summer steelhead run was the second poorest in history. The incidental catch of steelhead while fishing for salmon was minimized by the commercial fishing closures and the large-size mesh required in chinook salmon gillnets. The sport fishery for spring and summer chinook in the main stem of the Columbia River was closed from about mid-May through July.

The fishery agencies of the Pacific Northwest in late 1974 established a working team of scientists to study Columbia River fishery problems and potentials and to make recommendations for action. Specifically, this group was charged with planning an evaluation study for consideration by the Governors of Idaho, Oregon and Washington through their newly-formed Pacific Northwest Regional Commission. Dr. L.E. Parry, who retired in 1974 as Assistant Regional Director of the U.S. Bureau of Sport Fisheries and Wildlife, has been retained by the new Commission as Program Leader. See page 32 for the text of PMFC's Resolution No. 10, "Management of Columbia River Fisheries."

Meanwhile the U.S. Army Corps of Engineers is continuing to install flow deflectors, referred to as fliplips, and to test traveling fish screens at its dams on the Columbia and Snake Rivers. The purpose of the fliplips is to reduce the supersaturation of the river's water with nitrogen which occurs as water plunges over the spillways of the dams during periods of high river flows. The nitrogen supersaturation results in injury and death to juvenile and adult fishes. The purpose of the traveling screens is to divert downstream migrating juvenile salmon-ids from turbine intakes to fish bypasses or collection systems. Significant percentages of the downstream migrating fish are killed or injured as they pass through the turbines. Each new dam that is added to the series that already exists from Bonneville to Chief Joseph or the Hells Canyon dams compounds these problems further.

During 1974, 3 fliplips were installed on spillways at Bon-

neville Dam and 9 more were nearing completion in early 1975. All 8 spillways at Lower Granite Dam were equipped with fliplips when that dam was built; these will be functioning in 1975. Lower Monumental Dam had 5 of its 8 spillways equipped with fliplips in 1974 and a 6th is to be installed in 1975. Installation of fliplips at McNary and Little Goose dams is scheduled to begin in July 1975.

Nine traveling screens will be tested at Little Goose and Lower Granite dams in 1975. In 1974, a portion of the downstream migrants at these dams were trapped, then transported by tank truck and released below Bonneville Dam; this will be continued in 1975. The rate at which additional fliplips and traveling screens are installed will depend on the results obtained with those already in use. Unless the nitrogen supersaturation and turbine mortality problems can be alleviated the future for Columbia River salmon and steelhead runs upstream from Bonneville Dam is dismal, especially for those runs produced in the upper tributaries of the Columbia and Snake rivers.

During the fall of 1974 and the winter of 1974-75, about 93.4 million salmon and steelhead eggs were taken at hatcheries of the Fish Commission of Oregon. Included in the egg take were 14 million spring Chinook, 52 million fall chinook, 25 million coho, and 2.4 million steelhead. In the spring of 1975, the Fish Commission will be releasing millions of salmon and steelhead smolts that it has reared from eggs taken 1 to 2 years earlier. The Willamette River will receive 3.5 million spring chinook, 11.5 million fall chinook, and 250,000 summer and winter steelhead. The Columbia River will receive 20.5 million fall chinook and 7 million coho. Oregon's coastal rivers will receive 4.3 million coho and the lower Columbia and coastal rivers will receive 50,000 steelhead smolts.

The numbers of fall chinook salmon counted each year as they ascend the fishway at the falls on the Willamette River at Oregon City are increasing. In 1974, the count was 34,000. In addition many redds (nests) were observed subsequently in the upper river and its tributaries, indicating that the fall chinooks were spawning naturally. It is still too early to conclude that the transplantation of juvenile fall chinook to the upger Willamette River has established a population of these late-run chinook above the falls. Therefore, the massive releases of juvenile fall chinook (13.4 million in ^972, 13.1 million in 1973, 14.5 million in 1974) will be continued. Many of these juveniles are artificially reared in ponds adjacent to the river.

The Fish Commission of Oregon just prior to Oregon's June 15 season opening for coho salmon trolling in 1974 initiated an inspection or vessel certification program. All vessels of 26-foot or greater length were required to have certificates of inspection until June 28 in order to land fresh coho. All vessels, regardless of length, that froze coho were required to have certification throughout the season. The purpose of the certification was to prevent fishermen from catching and stockpiling fresh or frozen coho prior to June 15 and landing them subsequently. This program will not be continued in 1975.

In 1974, chinook landings by California's troll fishery totalled only 3.8 million pounds dressed weight, which when 15% is added for weight loss in dressing converts to 4.37 million pounds round weight. This is one of the lowest totals on record and the second iowest in 20 years. For a report on the "Status of the Pacific Coast Troll Salmon Fishery" see Appendix 1.

Crab and Shrimp: Alaskan crab fisheries were plagued by a delayed opening for king crab in Bering Sea, by poor markets for king and tanner crabs, and by a scarcity of Dungeness crab.

The tanner or snow crab was Kodiak's fastest growing fishery until the world economic slump and enormous inventories of processed crab and shrimp dealt it a severe blow. When the 1975 tanner crab season opened on November 1, 1974, no one went fishing and no processors planned to handle tanner crab before at least January or February 1975. The fishery had grown from 118,000 pounds (processed) in 1967 to 31 million pounds in 1973 and the total for 1974 is estimated to be greater by 10 to 15 million pounds. Dungeness crab were scarce along the entire Pacific Coast. In 1974, for the third consecutive year, Alaska led the nation in volume but not in value of shrimp landed in an individual State. Alaska's 1974 total was 108.7 million pounds, down slightly from its 1973 record of 119.9 million pounds. For status reports on Pacific Coast Dungeness crab and shrimp fisheries see Appendix 1.

Underutilized: Biologists of the H.B. Bigelow Laboratory for Ocean Science at Boothbay Harbor, Maine, have found a way to accelerate the rate at which clams detoxicify themselves from engestation of the red tide organism, *Gonyaulus tamarensis.* The toxic clams are placed in a closed water system and fed only nontoxic foods. The toxin level in clams has been reduced within a week to safe levels for human consumption. Whether the method is economically practical is still unknown, but if shown to be practical it could increase utilization of clam resources.

Squid are thought to be an underutilized resource in U.S. Atlantic and Pacific Coast fisheries, even though the largest squid fishery in the United States today was begun in California's Monterey Bay in the mid-nineteenth century. World demand for squid is souring; extreme exploitation within 5 years is predicted. Present knowledge regarding the size of the population or the population dynamics of the market squid, *Loligo opalescens,* which occurs along the Pacific Coast from California to Alaska is inadequate.

A 3-year research program to acquire knowledge to scientifically manage an expanded fishery for the market squid was initiated in California in July 1974. The research is by laboratories of the California Moss Landing educational consortium and the Department of Fish and Game. Initial funding was by the State of California Marine Research Committee, a California Cooperative Fisheries Investigations subsidiary, with additional funding beginning in September from NOAA's Office of Sea Grant and matching by the California Resources Agency Sea Grant Advisory Committee and the Department of Fish and Game.

Fish protein concentrate (FPC), or marine protein concentrate if one wishes to be more inclusive, has been a topic of interest and hope for feeding a hungry world. But the production of FPC does not appear to have gotten underway, at least not in the United States, despite much controversy, research and expenditure of public money, and despite such moving editorials as the following by David R. Getchell in the

National Fisherman, January 1975, p. 6-A.

Despite hard times, American fishermen throw back thousands of tons of fish every year.

Despite its proven food value, fish protein concentrate (FPC), which can be made from such discarded fish, is not manufactured to any extent in this country.

Despite the fact that Americans are among the world's best fed people, some 10 million of us go to bed at night hungry.

And despite everything, some 400 million people on this earth face disablement and death from outright starvation.

It just doesn't figure.

The federal government and private manufacturers have spent millions developing edible fish flour (FPC) and the former even built a pilot plant on the West Coast which was supposed to pave the way for a whole new FPC industry. The plan failed and the plant failed. . . mainly a matter of "economics."

Because it is rich in minerals and protein, FPC in quantities of only a few ounces a day per person can supply much of the nourishment needed to bridge the gap between starvation and health. But its promise goes unheeded. Some starving people won't eat fish, say the experts; FPC is too high in flourides, says the FDA; its production is basically uneconomic, say businessmen. None of these arguments holds water when weighed against the need of starving millions; technology and education should be able to overcome such problems.

Some 30% (among groundfishermen) to 50% or more (among shrimpers) of the catch of U.S. boats goes back over the side, an inefficiency of effort that is appalling in its waste. But U.S. fishermen have no alternative. . Not only are most of their boats not equipped to handle the big catches of so-called trash fish which might be made in the course of landing more valuable species, but there is no market for the trash if brought ashore. This is the present system. . .andit's mainly one based on economics.

But. . .the raw product is there to make FPC; the technology is there to produce it; the need is there to consume it.

While our reasoning may seem somewhat simplistic in its conclusion, it would appear that when everyone gets through telling us how it can't be done, one glaring fact remains:

A starving man cannot afford to buy life-giving FPC for himself and his family. The "economics" of the situation rule against him.

This should not be.

However, the Japanese and Russians are still persevering and their target species is the krill or "whale feed" of the Antarctic. Actually there are some 80 types of this shrimp-like organism which are found throughout the world's cold marine waters, but the largest and most profuse type occurs in the Antarctic. The *National Fisherman* (February 1975, p. 17-C) reports that a Japanese vessel captured 60 (metric) tons in 1973 and 600 tons of Antarctic krill in 1974, and expects to double that catch in 1975. The krill can be easily harvested with fine-mesh tow nets fished near the surface. Scientists estimate that annual catches of 50 to 100 million (metric) tons are possible within a few years. "This would be the equivalent of the present worldwide fish catch," according to a Nippon Suisan Company bulletin.

The Soviets have supposedly developed a processing machine to convert krill into a high-protein paste. Ten kilograms of krill yield three kilograms of paste. The paste has been introduced with favorable results into recipes for dishes familiar to the Soviet populace.

A U.S. source has said, "There is not enough of a concenration of krill here for us to take that much of an interest in it." "It's way down the line of fisheries we are seeking to develop." Antarctic weather would preclude operation of vessels with specialized gear for more than six months of each year. Such vessels would have to be easily adaptable to other fisheries for the remainder of each year.

ADMINISTRATION

Personnel

The following served as Commissioners during 1974:

Alaska

Edward G. Barber, Anchorage James W. Brooks, Juneau, Chairman T.E. Thompson, Petersburg

California

G. Ray Arnett, Sacramento, First Vice-Chairman Harold F. Cary, San Diego Vincent Thomas, San Pedro

Idaho

H. Jack Alvord, Pocatello
Joseph C. Greenley, Boise, Secretary
Paul C. Keeton, Lewiston

Oregon

Thomas E, Kruse, Portland, Third Vice-Chairman
John W. McKean, Portland Jack F. Shields, Tigard

Washington

Harold E. Lokken, Seattle
Ted G. Peterson, Seattle
Thor C. Tollefson, Olympia, Second Vice-Chairman

The Advisory Committee functioned under the "ADVISORY COMMITTEE RULES AND PROCEDURE" of November 1971. Its members in keeping with Article X of

PMFC's Rules and Regulations had been reappointed for 2-year terms beginning January 1, 1973 or had been appointed subsequently for the unexpired remainders of 2-year terms as vacancies occurred. The membership during 1974 was as follows:

Alaska*
Jack B. Cotant, Ketchikan, Overall Chairman
Richard I. Eliason, Sitka
Ben Engdal, Wrangell
Lewis Hasbrouck, Cordova
Andy Mathieson, Petersburg
Charles A. Powell, Kodiak, Deputy Chairman
Bill Ray, Juneau

California
Earl Carpenter, Bodega Bay
Peter T. Fletcher, Rancho Santa Fe
John P. Gilchrist, San Francisco
Robert Hetzler, Terminal Island, Section Chairman
Paul McKeehan, Santa Clara
John P. Mulligan, Terminal Island
Oliver A. Schulz, San Francisco

Idaho
John Eaton, Cascade Jack Hemingway, Sun Valley E. G. Thompson, Sand Point, Section Chairman (successor to Robert G. Thomas)

Oregon
David B. Charlton, Portland, Section Chairman
Charles S. Collins, Roseburg
John Y. Lansing, Jr., Astoria (successor to J.F. Hoagland)
Ross F. Lindstrom, Astoria
Arthur Paquet, Astoria Thomas
A. Peterson, Charleston Phillip
W. Schneider, Portland

Washington
Earl E. Engman, Tacoma
Michael E. Luft, Port Angeles *
Bjarne Nilsen, Westport, Section Chairman
Jesse M. Orme, Seattle John N. Plancich,
Anacortes William G. Saletic, Seattle
Ted A. Smits, Seattle (successor to Warren H. Johnson)

The permanent staff comprised:
John P. Harville, Executive Director
Gerald L. Fisher, Treasurer Beverly A.
Shinn, Office Secretary

They were assisted for short periods by:
Alphonse Kemmerich, Consultant
Leon A. Verhoeven Consultant

Temporary clerical employees were utilized as needed.

"The Advisors from the host State elect an overall Chairman and Deputy for the Advisory Committee.

Conferences and Meetings

The Executive Director represented the Pacific Marine Fisheries Commission at the following meetings and conferences in 1974:

International Affairs

International Pacific Halibut Commission, 50th annual meeting, Seattle, January 22;

Technical Subcommittee of International Groundfish Committee, annual meeting, San Francisco, June 19-21;

Informal Committee on Chinook and Coho, discussion of Canada-United States salmon problems of mutual concern, Vancouver, B.C., August 8;

International Groundfish Committee, annual meeting, Seward, Alaska, October 11.

National Affairs

Joint meetings of representatives of the three interstate marine fisheries commissions (Atlantic, Gulf and Pacfic) with personnel of NOAA and NMFS in Washington, D.C.:

At the first series of meetings on January 28 to February 1 representatives of some coastal state fishery agencies were also in attendance. The State-Federal Fisheries Management Program (SFFMP) and proposed development of a National Fisheries Plan (NFP) were discussed and a review of NOAA-NMFS fishery programs was presented. Some of the attendants also met with Senator Eastland's staff to discuss Senate Concurrent Resolution No. 11 to establish a national fisheries policy.

At the second series of meetings on July 17-18 the representatives of the three interstate marine fisheries commissions were joined by the Deputy Director of the Great Lakes Fisheries Commission. The discussions concerned NMFS' long range plans, grant-in-aid programs, SFFMP, nationwide fishery statistics, NFP, federal legislation, and model (state) fishery legislation project.

Senate Commerce Committee hearing on S. 1988 to extend on an interim basis U.S. fishery jurisdiction to 200 miles offshore, Aberdeen, Washington, February 14; (The Executive Director verbally summarized and presented a written statement reviewing PMFC's positions on fishery issues of national and international significance.)

American Fisheries Society, annual meeting concurrent with annual meeting of International Association of Game, Fish and Conservation Commissioners, Honolulu, Hawaii, September 8-14; (Executive Director participated in the Symposium on Optimum Sustainable Yield by presentation of a paper, "Multidisciplinary Aspects of Optimum Sustainable Yield". See AFS Special Publication No. 9 for the proceedings of the symposium.)

Gulf States Marine Fisheries Commission, 25th annual meeting, Biloxi, Mississippi, October 16-18; (The Exec-

utive Directors of the three interstate marine fisheries commissions met with representatives from Senator Eastland's and NMFS' staffs to coordinate efforts to produce a national fisheries policy and a national fisheries plan in which Congress and the Executive Branch will move together productively.)

NOAA-NMFS *ad hoc* steering committee meeting for preparation of agenda for scheduled meeting in 1975 of state fishery agency directors with federal staff for review of NOAA-NMFS fishery plans and programs, Washington, D.C., December 10.

Regional, Relative to State-Federal Fisheries Management Program (SFFMP) and National Fisheries Plan (NFP)

Meetings with NMFS staff regarding SFFMP, Washington, D.C., January 9-11;

Meetings on Dungeness Crab Project of SFFMP: Policy and Scientific Committees and Study Team, Portland, April 2-3; Scientific Committee and Study Team, Portland, August 12-13 and September 19-20; Policy and Scientific Committees, Study Team and Advisors, Portland, October 2-3;

Meetings with NOAA-NMFS staff regarding NFP, Sea Grant coordinated albacore project, and SFFMP, Washington, D.C., May 20-23;

NFP conferences and workshops: Procedure and planning conference, Portland, July 9-11; Southeast Alaska review conference, Juneau, November 6-8; Eugene, Oregon workshop, November 11; Portland workshop, November 12; Pacific Northwest review conference, Bellevue, Washington, December 2-4; and Scientists' review conference, December 16-17.

Other Regional and Local Meetings

NMFS *ad hoc* Committee on Surveillance (of foreign fishing), Seattle, January 3 and July 16;

NMFS Northwest' Regional Director's meeting with*fisheries representatives, Seattle, January 17;

Joint Meeting of Oregon ChapteVs of American Fisheries Society and Wildlife Society, Gleneden Beach, Oregon, January 25-26;

Pacific Fishery Biologists' Annual Meeting, Lakeport, California, March 20-22;

Pacific Northwest River Basins Commission, 44thmeetings, Portland, March 27; (Executive Director participated on panel of Water Supply and Water Pollution Control Committee.)

Meetings on albacore in San Diego: Sea Grant Task Group, April 25-26; and Albacore Coordinating Committee April 29-30;

Annual joint meeting of Northwest Washington and Oregon-Southwest Washington districts of the American Institute of Fishery Research Biologists, Tumwater, Washington, June 4; (The Executive Director spoke on NFP, distributed background material, and urged fishery biologists to participate indevelopment of the plan.)

University of Washington, first meeting of Marine Council of the Institute for Marine Studies, Seattle, September 27-28.

Administrative and Service Activities

Executive Committee Actions: The Committee met on June 13 in Portland and took the following significant actions:

1. Approved the Groundfish Committee's request for increased priority within state agencies to expedite processing of catch data in time to meet commitments regarding negotiations with foreign countries;

2. Approved continuation of PMFC's participation in the State-Federal Fisheries Management Program and a strong regional input to the National Fisheries Plan;

3. Instructed the staff to continue its comprehensive analysis of revenues and expenditures of state fish or fish and game agencies;

4. Reviewed PMFC's current budget and approved increasing certain salaries, increasing per diem travel allowance to $30.00 and personal car mileage allowance to 12* per mile; and

5. Recommended for Commission approval the proposed budget for the 1975-77 biennium.

The Executive Committee met a second time in 1974 at Anchorage on October 8 in conjunction with the Annual Meeting and took the following actions:

1. Agreed, in the event the United States extends its fishery jurisdiction beyond the present 3- to 12-mile contiguous fishing zone, that the States should be prepared to participate vigorously in management of fishery resources beyond present state jurisdictional limits;

2. Recommended for confirmation by the Commission new Advisors John Y. Lansing, Jr., from Oregon and Ted A. Smits from Washington; and alternate Advisors Anthony Nizetich from California and Forrest Kinley from Washington for this Annual Meeting only;

3. Reviewed and recommended for Commission approval: Treasurer's report; budget modifications for fiscal year 1975; and proposed budget for the 1975-77 biennium;

4. Received and accepted a report by Executive Committee Member Dr. Kruse regarding "Comparative Salaries and Benefits - Fisheries Commissions"; (This compared the Great Lakes, Atlantic States Marine, Gulf States Marine, and Pacific Marine fisheries commissions.)

5. Reviewed and requested revision of two reports by Robert J. Williams, PMFC Project Investigator; (The first report,

"Comparative Analysis of Fishery Support Base and Expenditures by Major Category" revised September 30, 1974, had been submitted to the Executive Committee at its request for information. The second report, "Comparison of License Fees and Fish Taxes by PMFC States," had been distributed to all Commissioners, Advisors and Scientists of PMFC as background when considering proposals nos. 11 and 12, which were subsequently combined and adopted as Resolution No. 12, "Non-Discriminatory Fees for Resident and Non-Resident Commercial Fishermen.)

6. Received verbal report from Dr. Kruse regarding efforts to get legislation introduced in Congress to reimburse U.S. commercial fishermen for gear losses due to foreign fishing, and asked Dr. Harville to join with Dr. Kruse in these efforts; and

7. Reviewed the Executive Director's verbal report prior to its presentation at the third plenary session of the Annual Meeting and approved the following:

   Inclusion, in PMFC Annual Reports, of International Pacific Halibut Commission status reports on the halibut fishery; and

   Initiation of action to designate PMFC as contracting agent for the States for joint projects, approved by the Executive Committee, for funding under sections 4b or 4c of the Anadromous Fish Conservation Act.

PMFC's Standing Committees: The Research Director and/or PMFC Coordinator from each PMFC member state agency assigns scientists from his staff to serve on one of the four standing committees: albacore, groundfish, salmon-steelhead, and shellfish. The purpose of these committees and the Research Directors and Coordinators Group is to assist PMFC in the wise management, development and utilization of fisheries of concern to two or more states. PMFC'sExecutive Director assists the committees and Group and provides liaison between the scientists and the Commission.

Research Directors and Coordinators Group: This Group, in addition to frequent intra-group correspondence, met -iwjee in 1974: in Portland on July 2 under the Chairmanship of John Radovich, California Department of FisTi and game; and in Anchorage on October 8-9 under the Chairmanship of Steven Pennoyer, Alaska Department of Fish and Game. The Scientific Staff attended the latter meeting. At these meetings the Group reviewed the actions and recommendations of the standing committees and appointed scientists to serve on the Working Teams of the Advisory Committee at the annual PMFC meeting.

Albacore Committee: This committee under the Chairmanship of Charles W. Hooker, California Department of Fish and Game, coordinated its activities with those of the Albacore Coordinating Committee (which is composed of private, state and federal fishery representatives) and the Sea Grant Data System Task Group (which is composed of state and federal fishery scientists and economists,and PMFC's Project Investigator). PMFC's Committee met in San Diego with the Data System Task Group on April 25-26 and with the Albacore Coordinating Committee on April 29-30.

Rich Lincoln, Washington Department of Fisheries, at PMFC's annual meeting reported on the progress of the albacore logbook project and summarized the "Status of the 1974 Pacific Coast Albacore Fishery" (see Appendix 1 for updated status report). The fishery agencies are making a concerted effort to provide fishermen with information derived from ongoing research and the logbooks. The number of logbooks distributed in 1974 to fishermen was 1,142; this was a 14% increase over 1973. Additional Sea Grant Program support in 1973 and 1974 made the increase possible. Distribution of logbooks to Washington's fishermen increased from nearly zero to almost 40%, making that State's coverage comparable to California's and Oregon's.

Frederick Walgenbach, California Department of Fish and Game, at PMFC's annual meeting reported verbally on a "Coastwide Vessel, Fisherman, and Landing Data System". This system was initially proposed for the albacore fishery but was subsequently expanded to include all data now collected by the individual Pacific Coast States on fishermen, vessels and fish landings. The expansion is desirable for effectively monitoring and managing fisheries because many fishermen during a year participate in more than one fishery and fish off more than one State. Computer firms are being asked to submit contract proposals for design of the system's specifics and for compilation of data. A transcription of Mr. Walgenback's report was included as Attachment M of the minutes of the Annual Meeting.

Groundfish Committee: This committee under the Chairmanship of Tom Jow, California Department of Fish and Game, continued to monitor the groundfisheries, except the halibut fishery; and to serve on the U.S. section of the Technical Subcommittee of the International Groundfish Committee, a Canada-United States entity. At PMFC's annual meeting, Tom Jow verbally summarized the "Status of the 1974 Pacific Coast Groundfishery" (see Appendix 1 for updated status report); and Gene DiDonato, Washington Department of Fisheries and 1975 Chairman of the Technical Subcommittee of the International Groundfish Committee, reported on the Subcommittee's activities.

Highlights of the activities of the Technical Subcommittee and the International Groundfish Committee during 1974

1. A report updating the status through 1972 of the Pacific ocean perch stocks off British Columbia, Washington, and Oregon was prepared and submitted to the International North Pacific Fisheries Commission (INPFC) as a document. Its conclusions are: Pacific ocean perch stocks remain in depleted condition off Oregon, Washington and British Columbia, except that stocks remain in good condition in Queen Charlotte Sound, B.C.; annual catch quotas for do mestic and foreign fisheries of 1,500 metric tons off Wash ington and Oregon and 2,000 metric tons off Vancouver Island, B.C., are recommended.

2. A report on the importance and species composition of (continental) shelf-rockfish landed by California, Oregon and Washington trawlers was submitted as an INPFC doc ument. It focused attention on the importance of this species group which comprises about 20% of the total U.S. Pacific Coast trawl catch.

3. A report on possible overfishing by trawlers from British Columbia and Washington of Pacific cod spawning popu lations off the lower west coast of Vancouver Island was reviewed by the Technical Subcommittee at its June meet ing. The Subcommittee concluded that regulatory action was unnecessary at this time but that fishery management personnel from British Columbia and Washington should monitor closely the condition of the stocks and the fishing effort on the spawning stocks.
4. Much effort was expended in developing a consensus on re search needs and priorities pertaining to groundfish species off California, Oregon, Washington and British Columbia. The titles and objectives of two proposals that have been accepted by the International Groundfish Committee are: (1) Pacific Cod, Lingcod and Shelf-Rockfish Studies, to assess resource condition and regulations needed to optim ize allowable catch; (2) Washington Coast Groundfish Biomass Survey, to combine bottom trawling survey meth ods of the Fish Commission of Oregon with hydro-accoust- ic survey techniques of the National Marine Fisheries Ser vice in the estimation of standing stock size and potential yields of all groundfish species off the coast of Washington. Potential sources for funding these proposals are being sought.

Salmon-Steel head Committee: This Committee under the Chairmanship of Alan Davis, Alaska Department of Fish and Game, presented the following at the annual PMFC meeting.

Paul T. Jensen, California Fish and Game Department, summerized verbally a report, "Preliminary Evaluation of the Effects of California's New Silver Salmon Troll Regulation on the 1973 and 1974 Troll Seasons," by Patrick O'Brien and Ernest W. Lesh. Copies of the written report were distributed at the Annual Meeting and the report has been updated and included in Appendix 2 of this report.

Chairman Davis presented to PMFC "Recommendations of the Salmon-Steelhead Committee on Mark and Recovery." The commission agreed to consider implementation of the recommendations.

David W. Ortmatin, Idaho Fish and Game Department, verbally presented "Status of the 1974 Pacific Coast Troll Salmon Fishery" and "Status of 1973 Salmon and Steelhead Sport Catches in the Pacific Coast States." Written versions of these reports were distributed at the Annual Meeting and updated versions are included in Appendix 1 of this report.

The committee members were active in 1974 as participants in deliberations of the Informal Committee on Chinook and Coho, a Canada-United States entity, and its Technical Working Group. The Working Group met in Vancouver, B.C., on July 10-11 as a preliminary to a meeting with the Informal Committee on August 8, also in Vancouver.

Shellfish Committee: C. Dale Snow, Fish Commission of Oregon, and Jerry A. McCrary, Alaska Department of Fish and Game, in the absence of Chairman Herb Tegelberg, Washington Department of Fisheries, respectively, summarized verbally at PMFC's annual meeting the "Status of the 1973-74 Pacific Coast Dungeness Crab Fishery" and the "Status of the 1974 Pacific Coast Shrimp Fishery." Copies of the written reports covered by these summaries were distributed at the meeting and the reports have been updated and included in Appendix 1.

James D. Messersmith, California Department of Fish and Game, and Project Manager of the State-Federal Fisheries Management Program's Dungeness Crab Project, reported on the progress of the project. He and Dale Snow replied to questions from the audience at the Annual Meeting about the probable reasons for the scarcity of Dungeness crabs that has existed along the entire Pacific Coast since about the 1971-72 season. Declines in abundance have occurred before and appear to be cyclic except in the San Francisco area where a sustained decline began in the late 1950's from which there has been no recovery. The fluctuations in abundance off California, Oregon and Washington occur in unison and appear to be a little more severe in the southern range of the species than they are in the northern range. The previous low occured during the 1963-64 season and the 1973-74 season's abundance as measured in pounds of crabs landed is only a hundred thousand or so pounds less than the previous record low.

A number of causes have been postulated for the fluctuations, such as: they are related to annual fluctuations in ocean upwellings or they are related to the amount of rainfall in February; etc. Biologists feel that conditions during the larval stage determine the abundance of each year class and that no one factor but rather a combination of factors determines the abundance of Dungeness crabs.

Special Committee Responsibilities and Service Activities: PMFC's Executive Director and members of its standing committees are frequently required to serve on additional committees and task groups.

The International Groundfish Committee of the Conference on Coordination of Fishery Regulations between Canada and the United States held its 16th annual meeting at Seward, Alaska on October 11, 1973, the day after the annual PMFC meeting in Anchorage. PMFC's Executive Director, Dr. John *P. Harville, was the United States member and 1974 Chairman. Mr. Clif R. Forrester, Fisheries and Marine Service of the Department of Environment, because of Mr. R.G. Mclndoe's absence due to illness, served as the Canadian member. The Committee's Technical Subcommittee held its annual meeting at Millbrae, California from June 19 through 21, 1974. Clif R. Forrester was Subcommittee Chairman. Highlights of the activities of the International Groundfish Committee and its Technical Subcommittee were mentioned previously in a preceding section on PMFC's Groundfish Committee.

Members of PMFC's Salmon-Steelhead Committee served with federal scientists on the Technical Working Group of the Informal Committee on Chinook and Coho. A June meeting of the Working Group and an August meeting of the Informal Committee were mentioned in a preceding section on the Salmon-Steelhead Committee. Mr. W.R. Hourston, Pacific Regional Director Environment Canada, Fisheries and Marine Service, was Chairman of the Informal Committee in 1974 and Dr. W.E. Johnson, Pacific Biological Station Director (Environment Canada) was the second Canadian member. Mr. Donald R. Johnson, Northwest Regional Director, National Marine Fisheries Service, and Dr. John P. Harville, Executive

Director, PMFC, were the two U.S. members. Mr. H. Godfrey, Pacific Biological Station, was 1974 Chairman of the Working Group and was its Canadian member. Dr. K.A. Henry, NMFS, was the U.S. member of the Working Group. Both Godfrey and Henry were assisted by other Canadian and U.S. scientists as observers on the Technical Working Group.

Publications in 1974: The 26th Annual Report for the year 1973 was published in April. Newsletters Nos. 21 and 22 were issued in September and December, respectively. An 86-page 1974 Mark List, of fin marks which were assigned at an annual meeting on February 12 for use on salmon and steelhead, was distributed in April. Revised and supplementary pages containing 1973 catch statistics for the Dungeness Crab and Shrimp Section and for the Groundfish Section of PMFC's Data Series were distributed in October to holders of those Sections.

COMMISSION ACTIONS

Action on 1973 Resolutions

PMFC by vote of its five Compact States adopted 10 resolutions at its November 1973 annual meeting. The complete texts of the resolutions were published in the December 1973 Newsletter No. 20, and subsequently in PMFC's 26th Annual Report. The Commission's office forwarded each resolution by individual cover letter to appropriate addressees with requests for supportive action. The addressees included the President, certain Cabinet Officers, appropriate Congressional Committees, Congressional Delegates from PMFC States, appropriate individual members of the U.S. House of Representatives and of the U.S. Senate, the Governors of all coastal States, national and regional office* of^federal agencies, and of non-government organizations concerned with marine affairs (including PMFC's sister agencies, the Atlantic States and Gulf States marine fisheries commissions). The progress in implementing the 1973 resolutions will be summarized under three headings: Foreign Fishing and International Relations; Anadromous Fisheries Issues, and Other Domestic Issues.

I. FOREIGN FISHING AND INTERNATIONAL RELATIONS

Resolution 1, Support for trie United States Position at the Law of the Sea Conference for Management of Ocean Fisheries, and Other Fisheries Protection Measures: This resolution reaffirmed a similar 1972 resolution which made three essential points: endorsement of the official U.S. "species approach" position for the Law of the Sea (LOS) Conference; recommendation for continued close coordination with the fishing industry with respect to the Conference; and recommendation that the United States government "take on an urgency basis whatever steps are necessary, pending conclusion of the Law of the Sea Conference, to protect U.S. coastal fishery resources now being seriously damaged due to uncontrolled overfishing by foreign fleets, such steps should include but not be limited to, full utilization of the 1958 Geneva Fisheries Convention, other conventions, bilateral agreements, and multilateral agreements."

Acknowledgement and expressions of appreciation were received from most recipients of the resolution. The Governors of Alabama, Maine and New York inserted provisos of commitment to interim extended fisheries jurisdiction in their replies.

PMFC's Executive Director in response to an invitation from Senator Magnuson, Chairman, Senate Commerce Committee, testified before the Committee at its hearing on February 4, 1974 in Aberdeen, Washington on Senate Bill S. 1988, to extend U.S. fisheries jurisdiction to 200 miles on an interim basis. Dr. Harville in his testimony explained that PMFC at its 1973 annual meeting had been unable to reach a consensus for adoption of a proposed resolution supporting S. 1988. Accordingly PMFC voted to take no action on the proposal, the intent being to neither favor nor reject the proposal, thus leaving the issue in the hands of the individual States without prejudice. Proponents of the proposal generally emphasized the urgency for interim action to protect endangered coastal fisheries. Opponents stressed concern particularly for possible impacts of extended national jurisdictions upon tuna and salmon fisheries; and also for potential erosion of the U.S. negotiating position at the LOS Conference. Dr. Harville in his testimony also reviewed recent PMFC positions on fisheries issues of national and international significance (support for U.S. LOS position and for inclusion of fishing industry representatives on the U.S. delegation; opposition to loss of territorial-sea areas by redefinition of territorial boundaries off Alaska; support for High Seas Fisheries Conservation legislation; etc.).

Senator Magnuson appeared to understand PMFC's dilemma in view of the wide range of fisheries interests it represents. However, he urged PMFC to seek a rationalization of its differences. In his view, interim establishment of a 200-mile fisheries limit would strengthen the position of U.S. negotiators for bargaining at the LOS Conference.

During the 93rd Congress more than 150 Representatives and Senators sponsored some kind of jurisdictional extension legislation but none of the legislation was passed. (The second session of the LOS Conference ended in Geneva on May 10, 1975 without a treaty on ocean law, however a draft treaty was produced. Meanwhile legislation to extend U.S. fisheries jurisdiction has been reintroduced in the 94th Congress. As of this writing passage of a major bill to extend U.S. jurisdiction over fish stocks to 200 miles offshore seems likely in 1975.-Editor) For further information on extended jurisdiction and the status of legislation to establish a management regime (utilizing federal and state agency management capabilities and industry representation jointly) for fisheries within and beyond the extended area, see PMFC Newsletter No. 21, September 1974, pages 3-7, also see "PMFC Committee on Preparedness for Shared Fisheries Jurisdiction Beyond the 3-Mile Limit" on page 33 of this report.

Resolution 3, Ownership of U.S. Flag Fishing Vessels: PMFC by transmittal letter forwarded its recommendations and copies of the resolution to the Maritime Administration, the National Oceanic and Atmospheric Administration, and the latter's National Marine Fisheries Service; and asked for an early declaration of intent of those agencies regarding majority alien ownership of U.S. flag vessels, and additionally urged that any policy adopted be applied on a uniform rather than

on a case-by-case or *ad hoc* basis.

NMFS Director Robert Schoning replied on January 15, 1974:

> Our proposed policy was enunciated in the statement published in the Federal Register insofar as it affects those companies in the fishing industry. Our intent is to control or oversee foreign investment in domestic companies operating fishing vessels so that it will not adversely affect the domestic fishing industry. We would expect to recommend action with respect to each application which, based on the available facts, appears to be in the best interest of the industry, the consumer, the resource, and the Nation. As we stated, if firms other than those involved in the purchase and sale are adversely affected, this of course, will have an important bearing on our determination. However, since the PMFC resolution indicates a need for amplification, we will attempt to spell out our intent in greater detail when we publish our final policy after the period of comments has expired and our interim policy is reevaluated as a result of all comments received.

Subsequent information indicates that federal policy was still in formulative stages in late 1974. On November 21, a subcommittee of the House of Representatives Committee on Merchant Marine and Fisheries held hearings on H.R. 17048, a bill designed to prevent encroachment of foreign control on U.S. fisheries operations. PMFC's Executive Director sent Subcommittee Chairman Frank N. Clark, a copy of Resolution No. 3, and stated PMFC's support for H.R. 17048. However, that legislation was not acted on and it died when the 93rd Congress adjourned.

Resolution 13, Concerning Necessity for Maintaining Position of Special Assistant for Fisheries and Wildlife to the Secretary of State: Concurrent with PMFC's distribution of its Resolution, seven Senators of the Commerce Committee expressed similar concerns to the State Department. The Atlantic States Marine Fisheries Commission addressed Secretary Kissinger in support of PMFC's position.

The State Department acknowledged the importance of the concerns and indicated they would be considered fully in the reorganization process. Maintenance of the rank of Ambassador was confirmed in testimony by the Honorable Kenneth Rusk before the Senate Commerce Committee on May 3, 1974, as follows:

> In the Department of State. . .we are establishing a new Bureau of Oceans and International Environmental and Scientific Affairs headed by an Assistant Secretary of State. Within this new bureau we plan to designate one Deputy Assistant Secretary to concentrate exclusively on fisheries and oceans matters. Furthermore, Mr. Chairman, as you and many of your Congressional colleagues have urged, it is our intention, with the concurrence of the appropriate Senate authorities, to grant this official the personal rank of Ambassador because of the significance of U.S. interests in oceans and fisheries, as well as his international negotiating responsibilities. We believe that these efforts will considerably strengthen the Department's ability to coordinate policy in this field, and to give the area of fisheries the attention it must have.

II. ANADROMOUS FISHERIES ISSUES

Resolution 4, Protection of Anadromous Fish Resources in International Waters: This Resolution urges a ban on net fishing for salmon in international waters and has universal support from all governmental agencies. The NMFS replied,. . . "we fully support the position taken by PMFC with respect to Resolution No. 4. A ban on fishing for anadromous species with nets in international waters is an important aspect of the U.S. Law of the Sea position."

Senator Magnuson on June 27, 1974 introduced Senate Concurrent Resolution 97 emphasizing the sense of the Congress that high seas netting of salmon is a destructive and wasteful method of fishing, and urging the Secretary of State to use means at his disposal to secure a worldwide ban on such fishing. See PMFC Newsletter No. 21, September 1974, pages 9-10, for the text of the Concurrent Resolution.

Resolution 12, Objectives for Management of Chinook and Coho Salmon Resources: This Resolution except for the normal promulgation accorded resolutions (published in PMFC Newsletter and Annual Report; distributed via minutes of the 1973 annual meeting to all attendants) was not distributed widely. It is being used by PMFC and its Salmon-Steelhead Committee as a guidline in the scientific planning for management of Chinook and coho resources.

III. OTHER DOMESTIC ISSUES

Resolution 8, Recommend Establishment of Coastwide Uniform Commercial Fishing Fees: In response to a request from PMFC's Executive Committee at its 1973 spring meeting and in response to this Resolution, PMFC's secretariat undertook a comparative study of fishery related tax and license fees of the Pacific Coast States. A 14-page report, "Comparison of License Fees and Fish Taxes by PMFC States," was presented to Commissioners, Advisors, Coordinators, and Scientific Staff at the 1974 annual meeting. At the Executive Committee's request, the report was refined further and an October 16, 1974 revision was distributed as Attachment T to the minutes of the Annual Meeting.

Resolution 10, Development of Fish Culture Facility Effluent Standards: Because of the urgency of the issue, this Resolution was forwarded in early December 1973 to the offices of the Governors, state directors of environmental agencies, and federal regional directors of the Environmental Protection Agency (EPA) within PMFC's area of concern; and to the Director of EPA.

Arguments, essentially parallel to those in PMFC's transmittal letter and the Resolution, were presented by the National Water Commission in its final report to the President and the Congress: *New Directions in U.S. Water Policy-Summary, Conclusions, and Recommendations* (U.S. Govt., Printing Office, 197 p., 1973). The following are from that influencial report:

The Commission feels compelled. . .to go beyond procedures for decision-making into a substantive discussion of what national policy should be in one aspect of environmental protection- -water pollution control. . .

The Commission believes that for the next decade the primary national water resource priority should shift from water development to the achievement of high standards of water quality. The Nation can and should achieve standards of quality for all of its waters which assure that these waters are suitable for the highest uses society wishes to make of them now or in the future.

A successful strategy to achieve clean waters and reduce the production of unnecessary waste requires an understanding of the costs and benefits of alternative programs for water quality management and a recognition that these programs will have environmental and social impact beyond the particular body of water and its users. . .

Water is only one element in a total environment. It is generally recognized that improved water quality will enhance the immediate environment, augment the useful supply of water and reduce costs stemming from the use of polluted water. It is also necessary to recognize that matter can be altered but not destroyed and some processes which abate the pollution of water can pollute the air and land. The construction and operation of waste treatment systems consume scarce minerals and energy. The chemicals used in waste treatment are themselves products of a process which also creates waste. These chain effects mean that a large expenditure of resources to produce a small improvement in water quality may turn out to be counterproductive when total environmental consequences are considered.

Water quality is only one of many goals for a whole society. Public expenditures for water pollution abatement must compete for limited tax moneys with social demands for housing, education, medical care, slum clearance, full employment, and price stability. . .

(Water qdality) regulations should prohibit the discharge of toxic material and of substances damaging to downstream users or to the natural biota of the stream. The regulations should recognize that streams have self-purifying capacity which allows them to absorb some kinds of discharges in reasonable quantity without harm. The Federal Water Pollution Control Act Amendment of 1972, while making landmark improvements in the Nation's attack on water pollution, have made a fundamental error in establishing as a national goal the elimination of all pollutant discharges into national bodies of water by 1985. This "zero-discharge" policy has strong emotional appeal, but in the Commission's judgment is an impractical and unattainable goal. Striving to achieve it will involve exorbitant costs, confusion in planning, misallocation of resources, and will risk public disillusionment with the entire national effort to protect the environment.

. . .These costs of achieving the no-discharje goal must be viewed in terms of the sacrifices society will be compelled to make in other social demands and in terms of the large amounts of scarce energy and natural resources which will be consumed. . .

Making use of the natural capacity of running water to purify itself of some kinds of waste in limited quantities does not preclude simultaneous or sequential use of the water for other purposes, except where the preferred use is to preserve a water body in its natural condition, as in the case of a wild or scenic river. . .In the Commission's view a water quality control program should endeavor to ascertain the economically desirable and the socially preferred uses of specific water bodies and set quality standards in relation to the preferred uses. To adopt a "zero-discharge" policy for the return of all waters to their natural state precludes the use of waters for waste disposal purposes in circumstances where that use is environmentally and economically sound, socially acceptable, and utterly rational.

. . .Discharge limitations should be based on local receiving water standards, taking into account the self-purifying capacity of natural water bodies. Such capacity should be allocated, with appropriate safety factors, to existing discharges, conservation and recreation reserves, and a reserve for future discharges in accordance with applicable land use and comprehensive water quality plans.

Late in 1973 representativies of State and Federal fisheries agencies began a series of meetings with EPA officials which culminated in establishment of guidelines for fish cultural facility effluents. The agencies believe these guidelines are realistic and operable. The following summary of these constructive discussions was provided by Ernest Jeffries, Director of Fish Culture, Fish Commission of Oregon:

On November 8, 1973 the first meeting was held in Portland with Denver and Portland EPA personnel and personnel from the northwest fishery agencies and the Corps of Engineers. A good atmosphere was generated for input frqm the agencies. We were requested to have comments to Denver by November 26, 1973. Another meeting was held on December 11, 1973 with EPA personnel from Denver and Portland to review their replies on the comments from the fishery agencies. This meeting was expanded to include private hatchery operators. During this same period there were several agency meetings in the Portland area to consolidate positions and recommendations.

In early April a revised 237-page draft document was produced by the National Field Investigations Center, Denver. It was titled, "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Fish Hatcheries and Farms."

Mr. Ladd S. Gordon, President of the Western Association of State Game and Fish Commissioners selected Mr. Don Andriano, Chief of Fisheries for Utah, to act as chairman of an Ad Hoc Committee to review the draft development document. As a result of input from state, federal, private hatchery operators and others, the guidelines in the EPA draft document had been changed substantially from those in the earlier documents. The committee met in Salt Lake City and prepared a reply requesting further modifications

to the draft document in line with reasonable program to safeguard state waters and continue hatchery operation. Basically, the reply recommended removal of only the cleaning wastes as a suitable cleanup procedure, reduced monitoring and the 1977 standards applicable to the 1983 standards. As far as we know, EPA accepted these comments and further changed the guidelines. We are now awaiting publishing of the revised draft document in the Federal Register scheduled for August, 1974. There will be another review period of 30 to 60 days, final promulgation by October 11 and the rules become law by October 25, 1974.

Through formal statements to EPA, PMFC supported the efforts of the conference group as reported above, and endorsed the recommendations of the Western Association of State Game and Fish Commissioners'atf *hoc* committee.

Resolution 11, Support Concept of Compensation for Fish Production Potential of Habitat: This Resolution sets forth the premise that compensation for fisheries lost due to water development projects should be based upon the original fish-producing capabilities of the affected habitat. Note was made that past compensation often was based upon existing production of a river system already degraded by earlier water projects—often without just compensation—and that there was need for compensation based on the potential productivity that had been eradicated by earlier projects or that would be eradicated by proposed projects. Although this Resolution was circulated widely and was acknowledged, there has been no funded compensation for previously diminished habitat potential.

Resolution 14, Support for the Siate$_j$ of Idaho Position on Reclassification and Enlargement of Idaho Primitive Area and Salmon River Breaks Primitive Area: Much of the Salmon River drainage, particularly the Middle Fork, and portions of the Big Creek drainage lie within the areas referred to by this Resolution. The change from Primitive to Wilderness Classification and enlargement of the areas would give additional protection to those important salmon and steelhead streams.

The State of Idaho's position strongly disagreed with a report by the U.S. Regional Forester in Ogden, Utah. A review of the matter by the Chief Forester in Washington, D.C., resulted in a report by the Department of Agriculture to the President recommending reduction in the original size of the areas together with a change in classification from Primitive to Wilderness. The Executive Branch has asked Congress for legislation authorizing execution of the recommendations. Idaho opposes the reduction in size and Congressional hearings on the requested legislation are anticipated.

Resolution 15, Request for Maintenance of Fuel Supply to the United States Fishing Industry: This Resolution was prompted by concern that fuel allocation brought about by the Middle East oil embargo might result in curtailment of fishing and processing. However, the Federal Energy Office moved expediously to grant top priority to agriculture including commercial fishing (see *Federal Register,* vol. 39, no. 10, part III). This plus the subsequent lifting of the embargo allayed the immediate concern.

General Actions at the 1974 Annual Meeting

The Commission convened in Anchorage, Alaska for an informal dinner meeting on October 8, prior to holding its 27th annual meeting on October 9 and 10, also in Anchorage. At the dinner, the Commissioners heard talks by Walter Kirkness, NMFS, Washington, D.C., on "Marine Mammal Permit Procedures," and by W. Mason Lawrence, Council of State Governments, Delmar, N.Y., on "Uniform State Fisheries Legislation Project."

At the Annual Meeting the Commission took the following actions:

1. Confirmed appointments of the Advisory Committee of E.G. Thompson of Idaho, John Y. Lansing, Jr., of Oregon, and Ted A. Smits of Washington;

2. Participated in "Symposium on Extended Jurisdiction: Impacts on Fisheries Plans and Policies"; Transcriptions of the presentations by the panelists and rapporteur are not included in this report, however, they are available upon request. Ask for the following from the minutes of the Annual Meeting:

   Attachment C, "Law of the Sea Conference, Caracas, Venezuela, June 20 to August 29, 1974," William G. Saletic, Seiners Association, Seattle;

   Attachment D, "Preparation for Extended Jurisdiction," Jack W. Gehringer, National Marine Fisheries Service, Washington, D.C. ;

   Attachment E, "Comments on Extended Jurisdiction and Proposal for Management Regime," Harold E. Lokken, Fishing Vessel Owners Association, Seattle;

   Attachment F, "Extended Jurisdiction from a State's Point of View," Edward C. Greenhood, California Department of Fish and Game, Sacramento;

   Attachment G, "Rapporteur's Summary and Comments at Symposium on Extended Jurisdiction. . .," Harry L. Rietze, National Marine Fisheries Service, Juneau.

3. Participated in "Symposium on Limited Entry as a Fisheries Management Tool"; Transcriptions of the contributions by the panelists and of the discussion are not included in this report, however, they are available upon request. Ask for the following from the minutes of the Annual Meeting:

   Attachment N, "Limited Entry as a Management Tool in the State of Washington," Charles E. Woelke, Washington Department of Fisheries, Olympia;

   Attachment O, "Canada's Experience with Limited Entry in the Salmon and Herring Fisheries of British Columbia," C.H.B. Newton, Fisheries and Marine Service, Department of the Environment, Vancouver, B.C.;

   Attachment P, "Alaska's Limited Entry Program for Commercial Fisheries," Roy A. Rickey, State of Alaska Commercial Fisheries Entry Commission, Juneau;

Attachment Q, "Discussion, Questions and Answers at Symposium on Limited Entry as a Fisheries Management Tool."

4. Received verbal reports from members of PMFC's standing committees regarding the status of fisheries; See Appendix 1 for updated reports on albacore, Dungeness crab, groundfish, shrimp, commercial troll salmon, and sport salmon and steelhead fisheries.

5. Received a verbal presentation by Jack W. Gehringer of a report, "NOAA's Role in Marine Recreation," by Philip M. Roedel, Coordinator, NOAA Recreation Programs;

6. Approved the Treasurer's report and budget for the 1975-77 biennium; See page 34 "Financial and Audit Reports."

7. Accepted the Executive Director's report; and

8. Confirmed actions of the Executive Committee since the 1973 annual meeting.

1974 Resolutions

The Advisory Committee and Scientific Staff at the annual meeting conducted final reviews and made recommendations to the Commission on each of 14 proposals before it for adoption as resolutions. Actually the Advisors and Scientists reviewed more than 14 proposals since there were 5 different proposals dealing with "Extended Fisheries Jurisdiction" that had been numbered 1a, 1b, 1c, 1d, and 1e. The Commission eliminated those 5 proposals by acceptance of a substitute proposal no.1, thus leaving only 14 numbered proposals to be voted on. The Commission adopted 9 of.the proposals as resolutions. Proposals nos. 2 and 11 were incorporated, respectively, into resolutions nos. 3 and 12. Proposals nos. 6 and 7 were tabled and no. 14 was rejected. The following are the original proposal numbers, the text of, and the voting record on each resolution:

1. In Support of Legislation Implementing the U.S. Fisheries Position on Law of the §ea *

WHEREAS, the United States on August 8, 1974 presented to the Law of the Sea Conference at Caracas proposed draft articles on the economic zone and continental shelf; and

WHEREAS, the Conference failed to agree on the United States proposal; and

WHEREAS, another Conference is scheduled to be hold at Geneva in March and April of 1975; and

WHEREAS, in the meantime our coastal fishery resources are continuing to decline and our anadromous fishery resources are vulnerable to exploitation by countries not signatory to the North Pacific Fishery Treaty; and

WHEREAS, it is essential that the United States lead the way in demonstrating to the world its willingness to make effective a fair management regime for coastal, anadromous and oceanic species of fish;

NOW BE IT THEREFORE RESOLVED, that the Pacific Marine Fisheries Commission endorses the position outlined in the U.S. proposal presented to the Law of the Sea Conference on August 8, 1974; and

BE IT FURTHER RESOLVED, that the Pacific Marine Fisheries Commission recommends that the United States implement the August 8, 1974 proposal in the form of appropriate domestic legislation, such legislation to take effect on January 1, 1976 or at the time a high seas regime satisfactory to the United States is approved by the Law of the Sea Conference and becomes effective, whichever occurs first: and

BE IT FURTHER RESOLVED, that in the event domestic legislation becomes effective on January 1, 1976 such legislation shall cease to be of any legal force on the date any Law of the Sea Treaty based upon the issues covered by the August 8 proposal which the United States has signed shall come into force or is provisionally applied; and

BE IT LASTLY RESOLVED, that copies of this resolution be sent to all interested governmental authorities.

Adopted: the States of Alaska, Idaho, and Washington voting for, and California voting against, and Oregon abstaining

3. Recommend Federal Cooperation with and Support of State Fisheries Research and Management Beyond Limits of the Territorial Sea and Inclusion within the National Fisheries Plan

WHEREAS, various federal legislative proposals are being considered for management of marine resources in waters be yond territorial waters of the States; and

WHEREAS, resources in those waters beyond the contiguous fisheries zone are subject to exploitation by foreign fleets in addition to exploitation by U.S. fleets; and

WHEREAS, management of the marine resources in the 12-mile fishery zone and beyond is for the purpose of conservation; and

WHEREAS, the numbers of species found in these waters and their ecological relationship require diverse expertise to develop research and management programs; and

WHEREAS, Pacific Coast States have the expertise and have historically managed the offshore fisheries through regulations governing the activities of their licensed fishermen; and

WHEREAS, the problems of research and management in the offshore area are large and numerous, making it essential that state and federal agencies act in partnership in the management of these resources;

NOW BE IT THEREFORE RESOLVED, that the Federal Government recognize and support existing research and management by the States in the contiguous fishery zone and beyond, and secure the concurrence of the States in the development of research and management plans preparatory to international agreement; and

BE IT FURTHER RESOLVED, that the Federal Government financially support on-going marine research and management programs on species occurring beyond the territorial sea that are subject to international exploitation to maximize the effectiveness of both state and federal programs; and

BE IT LASTLY RESOLVED, that the Pacific Marine Fisheries Commission fully support the concept of a National Fishery Plan which recognizes the dominant roles of the state fish and wildlife agencies in resource management.

Adopted unanimously by the five Compact States, Alaska, California, Idaho, Oregon, and Washington

4. Support H.R. 16043 to Extend Incidental Take of Marine Mammals for Two Years

WHEREAS, the commercial fish harvest of the States of Alaska, Washington, Oregon, and California is annually valued in excess of 750 million dollars; and

WHEREAS, in the course of commercial fishing operations, marine mammals may be taken incidentally; and

WHEREAS, marine mammals frequently destroy fishing gear and take fish from the fishermen's gear to the detriment of the fishermen's income; and

WHEREAS, the- Marine Mammal Protection Act of 1972 jeopardizes the future of segments of the United States commercial fishing industry and the Endangered Species Act of 1974 eliminates the need for this Marine Mammal Protection Act; and

WHEREAS, members of the Pacific Marine Fisheries Commission believe that the commercial fishing industry should not be penalized as a result of the incidental taking of marine mammals in the course of fishing; and

WHEREAS, H.R. 16043 was introduced on July 22, 1974 in the House of Representatives calling for an additional 2-year extension of the moratorium;

WOW BE IT THEREFORE RESOLVED, that the^ Pacific Marine Fisheries Commission support and encourage the passage of H.R. 16043; and

BE IT FURTHER RESOLVED*, that the Pacific Marine Fisheries Commission urges the Congress to repeal the Marine Mammal Protection Act and encourage the Secretaries of Interior and Commerce to cooperate with coastal states in protecting endangered marine mammals through the provisions of the Endangered Species Act of 1973.

Adopted unanimously by the five Compact States

5. Opposition to Proposed Federal Regulations under the Lacey Act Concerning Importation of Injurious Wildlife

WHEREAS, we concur with the need to control and regulate the importation of wildlife, including fish and other marine life, the proposed regulations are both contrary and inadequate to the fishery needs of the West Coast; and

WHEREAS, these proposed regulations would still allow introduction of species known to be hazardous to the Fisheries Resources of the West Coast; and

WHEREAS, these proposed regulations do not provide for the flexibility to consider beneficial importation, with suitable controls, based upon careful scientific evaluation; and

WHEREAS, there was little if any consultation with concerned State agencies in development of these proposed regulations;

NOW BE IT THEREFORE RESOLVED, that Pacific Marine Fisheries Commission urges the Government of the United States to delay action on these proposed regulations until adequate contact is made with concerned State agencies so that suitable revisions can be made to correct these serious deficiencies; and

BE IT FURTHER RESOLVED, that copies of this resolution and requests for its support be directed to the U.S. Secretaries of Interior and Commerce, to PMFC Congressional Delegates, and to Governors of all coastal States.

Adopted unanimously by the five Compact States

8. Expedite Lower Snake River Compensation Plan

WHEREAS, the United States Army, Corps of Engineers, has constructed three dams on the lower Snake River and is completing a fourth dam; and

WHEREAS, existing lower Snake River dams are causing severe losses to salmon and steelhead populations which originate above said dams; and

WHEREAS, the affected runs of fish have great value economically, recreationally, and socially, the benefits of which accrue to Washington, Oregon, Idaho, and the Pacific coast area; and «

WHEREAS, a plan for hatchery production to compensate for such losses has been devised by federal and state fishery agencies in conjunction with the Corps of Engineers; and

WHEREAS, authorization and funding through the Corps of Engineers for hatchery design and construction are not possible until 1976; and

WHEREAS, the survival of Snake River summer and fall run chinook salmon and summer steelhead trout is. in jeopardy and production of spring chinook is declining, such plan is urgently needed for perpetuation of all Snake River salmon and steelhead runs;

NOW BE IT THEREFORE RESOLVED, that the Pacific Marine Fisheries Commission urges Congress to pass legislation to immediately authorize and fund the lower Snake River fisheries compensation plan; futher, that this resolution be provided to appropriate members of the United States Congress.

Adopted with Alaska, Idaho, Oregon, and Washington voting for, and California abstaining

9. Renegotiate Indian Treaties

WHEREAS, recent Federal Court decisions relating to Indian Treaties and fishing and hunting rights have provided superior hunting and fishing rights to Treaty Indian people; and

WHEREAS, one of the continuing goals of these United States of America has been to create equality among all of its citizens; and

WHEREAS, these superior hunting and fishing rights are creating serious adverse problems relating to the management of fish and wildlife resources; and

WHEREAS, unless these superior hunting and fishing rights are modified by the Congress of the United States, the management of the fish and wildlife resource will be in serious jeopardy;

NOW BE IT THEREFORE RESOLVED, that the Pacific Marine Fisheries Commission urge Congress of the United States to initiate a study of the hunting and fishing rights conveyed by Indian Treaties, their impact upon state and national fishery and wildlife management goals and methods by which equitable distribution of fish and wildlife can be achieved; and

BE IT FURTHER RESOLVED, that this vital problem be considered further for renegotiation of treaty rights or other legislative action.

Adopted unanimously by the five Compact States

10. Management of Columbia River Fisheries

VJ/H^REAS, the Columbia River Compact was established in 1918 and primarily represents the commercial fishing interests of Oregon and Washington; and

WHEREAS, the three Governors of Oregon, Washington and Idaho suggested a Columbia River Fishery Compact in 1968 that would represent the citizen interests of all three States; and

WHEREAS, the recent Federal Court decisions relating to Indian Treaty rights add another substantial user group of the fishery resource; and

WHEREAS, the Governors of Washington, Idaho and Oregon through the Pacific Northwest Regional Commission are considering a thorough study of Columbia River problems and potentials including better management systems;

NOW BE IT THEREFORE RESOLVED, that the Pacific Marine Fisheries Commission endorses the evaluation study and urges the Governors of the three States to initiate the proposed study; and

BE IT LASTLY RESOLVED, that copies of this resolution be sent to the Governors of Oregon, Washington and Idaho, the Legislatures of the three States and to the principal user groups of the Columbia River fishery resources.

Adopted with Alaska, Idaho, Oregon, and Washington voting for, and California abstaining

12. Non-Discriminatory Fees for Resident and Non-Resident Commercial Fishermen

WHEREAS, commercial fishermen from all four Pacific coast states commonly fish on mixed stocks of fish originating in waters of two or more different states; and

WHEREAS, a 1974 coastwide license survey made by the PMFC staff demonstrated significant differences in commercial license fees;

NOW BE IT THEREFORE RESOLVED, that fishermen of any Pacific coast state should be allowed to land fish at convenient ports without having to pay higher fees than resident commercial fishermen; and

BE IT FURTHER RESOLVED, that the Pacific Marine Fisheries Commission urge the respective state legislative bodies concerned to develop the appropriate legislation required to attain this goal.

Adopted with Alaska, California, Oregon, and Washington voting for, and Idaho abstaining

13. Supportive Landing Laws Between West Coast States

WHEREAS, modern vessels are technically capable of fishing and processing in the areas beyond the effective enforcement capability of the immediately adjacent West Coast State, and thereafter landing the fish and fishery products into the ports of another State; and

*

WHEREAS, this capability of vessels represents a potential threat to the ability of the respective States to implement management and conservation policies governing their adjacent fisheries and resources; and

WHEREAS, the implementation of conservation and management policies governing fishery resources in offshore waters can be most effectively accomplished through laws governing landing of fish and fishery products within a State; and

WHEREAS, any State may control the activities of its resident fishermen;

NOW BE IT THEREFORE RESOLVED, that the Pacific Marine Fisheries Commission encourages the States of Wash ington, Oregon, California, and Alaska to adopt supportive rules and regulations for the purpose of implementing conservation and- management policies of each State governing its adjacent fisheries resources.

Adopted with Alaska, California, Oregon, and Washington voting for, and Idaho abstaining

Committee on Preparedness for Shared Fisheries Jurisdiction

After adoption of the preceding numbered resolutions the Commission unanimously adopted the following unnumbered proposal:

PMFC Committee on Preparedness for Shared Fisheries Jurisdiction Beyond the 3-mile Limit

Proposal for designation of a working committee representative of the Compact States to collect information and eval uate alternatives for shared fisheries jurisdiction over marine fisheries resources of the Pacific Coast.

Need:

1. Prudent planning demands the assumption that jurisdic tion over fisheries resources will be extended in the near future, probably in the form of an economic zone as de fined in the U.S. position at the Law of the Sea Con ference in Caracas.

2. Existing problems of separate jurisdiction over shared fisheries resources will continue, and will be augmented by responsibilities attendant upon extended jurisdic tion.

3. The States already are cooperating effectively with each other and with the Federal Government toward coord inated management of shared resources via the State/ Federal Fisheries Management Program.

4. However, patterns of these cooperative efforts differ along the Pacific Coast, and thsr-ais, merit in facilitating effective communication among these separate efforts in order to explore ways of coordinating all efforts into a coherent coastwide approach.

5. The Federal Government presently is exploring alterna tives for fisheries management under extended jurisdic-
** '"flon which appear to delegate a subsidiary status to the States under the assumption that the Federal Govern- ment will have total jurisdiction beyond three miles.

6. The States favor a sharing arrangement which would considerably increase the States' initiatives and prerog atives beyond three miles, and prompt unified action is required in order to assure that these views receive adequate support as a coastwide position, and therefore adequate review at the national level.

7. The dialog developed at the 1974 Annual Meeting in Anchorage should be continued, and converted into an operational analysis of alternative plans for shared juris diction over fisheries resources.

Procedure:

PMFC designates a working committee comprised of one key representative from each concerned State, that Committee on Preparedness for Shared Fisheries Jurisdiction to work actively with the Executive Director of the Pacific Marine Fisheries Commission to:

a. Collect and organize available information on possible alternatives for shared fisheries jurisdiction over fisheries resources with particular attention to problems relating to extended fisheries jurisdiction;

b; Organize these materials into a series of alternative plans for achieving rational management which will adequately support state and regional prerogatives and at the same time be consistent with national needs and international problems;

c. Present these alternatives for review by the States at the earliest possible opportunity.

Support:

Staffing support from PMFC can be integrated with present and projected responsibilities under the National Fisheries Plan and the Eastland Resolution. State support would consist for the moment of designation of a key staff member to participate in this Committee effort and to coordinate that effort with other relevant state and regional activities such as the State/Federal Fisheries Management Plan.

Election of Officers; 1975 Meeting Location

The following were elected officers for 1975:
Chairman — G. Ray Arnett, Director,
California Department of Fish and Game
1st Vice-Chairman — Thor C. Tollefson, Director,
, Washington Department of Fisheries
2nd Vice-Chairman — Thomas E. Kruse, Director,
Fish Commission of Oregon 3rd Vice-Chairman —
Joseph C. Greenley, Director,
Idaho Department of Fish and Game
Secretary — James W. Brooks, Commissioner,
Alaska Department of Fish and Game

Steering Group of Advisory Committee:
Overall Chairman — Robert Hetzler, California
Deputy Chairman — Paul McKeehan, California
Sectional Chairman — Bjarne Nilsen, Washington
Sectional Chairman — David B. Charlton, Oregon
Sectional Chairman — Jack Hemingway, Idaho
Sectional Chairman — Andy Mathisen, Alaska

Mr. Charles E. Fullerton, California Department of Fish and Game, accepted the gavel in the absence of Mr. Arnett and announced that the 1975 annual meeting would be held in San Diego, California, November 11-13 at the Bahia Motor Hotel on Mission Bay. Before adjourning the 1974 meeting the Commissioners instructed the Executive Director to prepare a resolution commending and thanking the State of Alaska for its hospitality.

Financial and Audit Reports

Financial Support, 1974

The Commission receives its financial support from legislative appropriations made in accordance with Article X of the interstate Compact in which the signatory States have agreed to make available annual funds for the support of the Commission as follows: eighty percent (80%) of the annual budget is shared equally by thoses member States having as a boundary the Pacific Ocean; and five per cent (5%) of the annual budget is contributed by each other member State; the balance of the annual budget is shared by those member States, having as a boundary the Pacific Ocean, in proportion to the primary market value of the products of their commercial fisheries on the basis of the latest 5-year catch records.

TREASURER'S REPORT OF RECEIPTS AND DISBURSEMENTS
November 1, 1973 to September 1, 1974

CASH BALANCE, October 31, 1973			$87,662.29
(November 1973 Treasurer's Report)			
RECEIPTS:			
Contributions by Member States:			
Alaska FY 1974 Balance	$4,400.00		
California FY 1974 Balance 5,800 and FY 1975–15,100	20,900.00		
Idaho FY 1975	3,000.00		
Oregon FY 1975	12,900.00		
Washington FY 1975	13,200.00		54,400.00
Refunds:			
National Marine Fisheries Service	148,978.00		
Washington Dept., Fisheries	17,271.83		
Miscellaneous	150.01		166,399.84
Interest on Saving Certificates			3,211.84
DISBURSEMENTS:			
Annual Meeting, Nov. 1973, Boise:			
Commissioners	2,399.52		
Advisory Committee	4,797.66		
Admin. & Research Staffs	3,943.23		
Tape Recording & Room Rental	333.56	$11,473.97	
Research & Management Meetings		2,722.18	
Salaries & Wages		27,611.56	
Retirement & Social Security		1,243.53	
Medical Insurance		322.40	
Travel Expenses, unclassified		817.47	
Office Supplies & Maintenance		2,695.70	
Telephone & Telegraph		1,364.38	
Postage, Freight, Express		1,223.53	
Rent, headquarters space		2,129.60	
Printing & Publications		2,102.47	
Bonds & Accident Insurance Premiums		148.12	
Library Supplies		22.75	
Capital Outlay		568.15	
Prepaid Insurance Premiums		1,496.00	
Cooperative Research:			
Coho Season Evaluation	4,422.10		
Otolith Reader Project	1,806.47	6,228.57	
Reimburseable Expenditures:			
Washington Coast and Puget Sound sampling	25,271.90		
State–Federal Relations Contracts	13,536.43		
Sea Grant Albacore Tuna Contract	58,751.76		
Federal Share of Otolith Reader	5,404.08		
Federal Share of Coho Season Evaluation	10,318.19		
NMFS Dungeness Crab Contracts	50,506.12		
NMFS National Fisheries Plan	6,610.17	170,398.65	
Other		187.80	
Total Disbursements		232,756.83	
CASH BALANCE August 31, 1974		78,917.14	
		$311,673.97	$311,673.97

Biennial Budget, 1975-77

The Commission on recommendation from its Executive Committee approved the 1975-77 biennial budget. The budget, which is shown below, increased the biennial contributions by the member States as follows; Alaska $7,000; California $7,700; Washington $6,400; Oregon $6,100; and Idaho $1,600.

PACIFIC MARINE FISHERIES COMMISSION
Biennial Budget, July 1, 1975 to June 30, 1977

ALASKA, CALIFORNIA, IDAHO, OREGON & WASHINGTON

Salaries and Wages	$ 93,304
Fringe Benefits:	
Industrial Accident Insurance	460
Social Security	3,434
Retirement Pension Annuity	5,890
Physicians and Hospital Insurance	1,840
General Operations and Maintenance:	
Office Supplies	5,520
Telephone and Telegraph	2,300
Postage, Freight, Express	2,800
Rent, Office	7,570
Treasurer's Bond	400
Audit Fees	1,500
Private Car Mileage	800
Fares: Plane, R.R., Bus, Other	4,600
Meals and Lodging	2,600
Library Supplies	230
Miscellaneous	400
Annual Commission and Staff Meetings:	
Advisory Committee, Travel, etc.	18,969
Commissioners, Travel, etc.	8,758
Research & Management, Travel, etc.	13,705
Administrative Staff, Travel expense	3,024
Meeting Rooms, Steno, Sound & Record	900
Preparatory (in state) Meetings	2,250
Spring and Special Meetings:	
Executive Committee, Travel, etc.	1,500
Research Directors and Special Meetings	9,000
Publications:	
Annual Reports Nos. 28 and 29	5,000
Bulletins	3,400
Data Series	900
Cooperative Research & Management:	
Otolith Reader, 25% Matching Share	4,600
Interstate Management Related Research	7,000
Capital Outlay:	
Office Furniture & Equipment	1,000
Total Estimate	$213,654
Source of Financing:	
Savings from Previous Biennium	23,543
Interest Income	6,000
Returned Pension Plan Contribution	2,105
External Contract Income	17,000
State Contributions	170,000
Reserve for 1977-79 Biennium	(4,994)
	$213,654

PROPORTIONATE CONTRIBUTIONS BASED ON TOTAL BIENNIAL CONTRIBUTIONS OF $170,000

Member	5-Year Average*	% of Contribution	Biennial Contribution
Alaska	$85,271,466	26	$ 44,200
California	77,355,345	25	43,200
Washington	30,718,913	22	37,600
Oregon	19,898,000	22	36,400
Idaho	Insignificant	5	8,600
		100	$170,000

*Annual value of catch, 1968-1972 inclusive.

Audit Report

ALLEN H. ADAMS & CO.
Certified Public Accountants
Portland, Oregon

September 25, 1974

The Board of Commissioners
Pacific Marine Fisheries Commission
State Office Building
Portland, Oregon 97201

Gentlemen:

We have examined the balance sheet of Pacific Marine Fisheries Commission as of June 30, 1974, and the related statements of revenues and expenditures, fund balances, and changes in cash position for the year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly induced such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned financial statements present fairly the financial position of the Pacific Marine Fisheries Commission at June 30, 1974, and the results of its operations and the changes in its cash position for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Yours truly,
ALLEN H. ADAMS & CO.

Balance Sheet, June 30, 1974

ASSETS:	General Fund	Property Fund
Cash on Hand and in Bank	$ 2,599.68	
Certificate of Deposit	52,000.00	
Due from Washington Dept., Fisheries--Otolith Project	1,672.99	
Due from U.S. Dept., Commerce, National Marine Fisheries Service --		
#03-4-208-157	3,125.55	
#03-4-208-264	1,615.05	
#04-4-208-64	3,189.68	
#03-4-208-293	626.77	
Due from Washington Dept., Fisheries--Ocean Salmon	4,311.52	
Office Furniture and Equipment		$7,547.57
Total Assets	$69,141.24	$7,547.57
LIABILITIES:		
Accounts Payable	$ 7,265.83	
Unexpended Grant Funds-- Sea Grant-Albacore Research	3,729.78	
National Marine Fisheries Service--Dungeness Crab	11,127.15	
Total Liabilities	$22,122.76	—
FUND BALANCES:		
Unappropriated Surplus	47,018.48	
Investment in Fixed Assets		$7,547.57
Total Liabilities & Fund Balances	$69,141.24	$7,547.57

Appendix 1 — Status Reports

Status of the 1974 Pacific Coast Albacore Fishery

Pacific albacore make annual trans-Pacific migrations which subject them to 3 major fisheries on both sides of the north Pacific. It is generally accepted that all 3 fisheries are exploiting a single stock composed of 6 or 7 year-class groups having extremely complex and not well-understood migration patterns. The total harvest from the 3 fisheries approximates 160,000,000 pounds annually and represents more than 35% of the world albacore catch. Typically the American albacore catch averages 45,600,000 pounds annually, and the preliminary American catch total for 1974 is 52,500,000 pounds (Table 1).

Development of the summer and fall fishery off the Pacific Coast of the United States and Canada varies each year according to fluctuations in the northerly migrations of the fish. During years of restricted northerly migrations the fishery occurs mainly off Baja and southern California. In years of more extensive migrations commercially significant catches are made as far north as British Columbia, with resultant shortened seasons and small total catches in the southern extent of the fishery.

Albacore movement northward along the Pacific Coast correlates well with shifting of the 58°-66°F isotherms. Forecasting the duration and stability of these "optimum" water conditions in the eastern and southern portions of the range is used to predict the nature of the upcoming season. However, short and long-term meterological and oceanographic phenomena may produce situations counter to established trends, thereby causing the less well understood annual fluctuations in the range and character of the fishery.

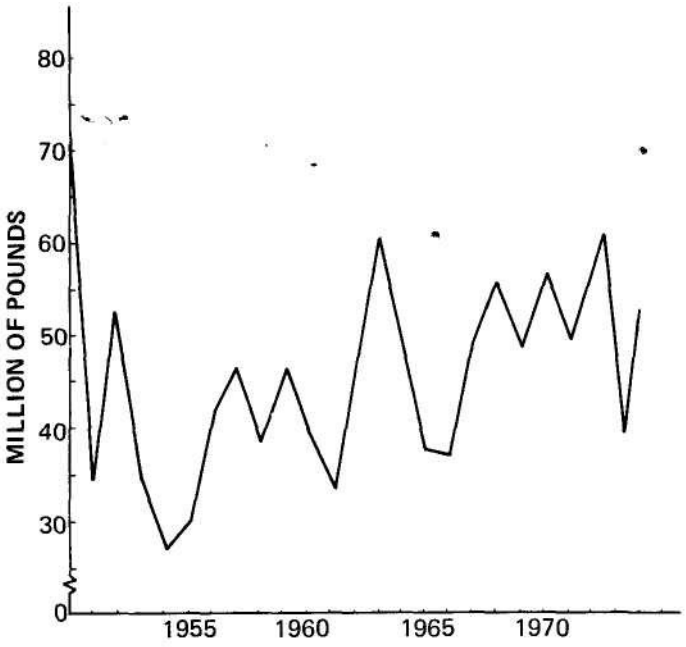

FIGURE 1. Combined annual landings of albacore in California, Oregon and Washington, 1950-1974.

California

The first albacore in 1974 were caught off California in June, over 500 miles west of Morro Bay and over 150 miles southwest of Point Conception. One boat caught over 1,000 fish during a dawn to dark bite. Sportsmen did well on the Sixty Mile Bank during the last weekend of June. Landings for June exceeded 58,000 pounds with no price settlement.

Fishing in July was well dispersed from south of San Diego, California to Cape Flattery, Washington. Best fishing in California was in the Point Arena and Eureka areas on small fish. Sportsmen found small albacore around the Channel Islands and close inshore. The fish were mainly jig fish and partyboat fishermen were unable to chum them with bait. Because of this, partyboat scores were not indicative of the abundance of albacore during July, when commercial landings in California totalled nearly 1,565,000 pounds with no price settlement.

August followed a normal pattern of bad weather for fishermen north of Point Conception. Warm water drove the albacore out of reach of southern California fishermen and good scores were made off Avila and Fort Bragg between storms. Many boats moved southward to central California during the last week of August. Total landings for August exceeded 1,640,000 pounds, and the prices paid the fishermen were between $700 and $750 per ton.

During September, fishing occurred from Point Conception to San Francisco, and landings exceeded 2,577,000 pounds. October landings approached 5,654,000 pounds, as bait boats returning to California waters landed catches from more northerly waters. A final landing total for November may approach 500,000 pounds. The preliminary total for landings in California during 1974 is 12,000,000 pounds.

Oregon

The first significant commercial catches off Oregon were taken from the Jackson Seamount area during the second week of July when one boat caught 168 fish and another nearly 100. This was the same area where the Fish Commission of Oregon's chartered vessel *"Defiant"* caught 50 fish several days earlier. Good fishing spread rapidly northward during July with the best fishing occurring from the Columbia River dumping grounds to Cape Flattery. Scattered good catches were made all along the Oregon coast during the last half of July with catches by individual boats of over 600 fish/day reported. Most boats averaged 50 to 200 fish/day in water temperatures of 59° to 62°. July landings amounted to 2,759,245 pounds.

The first half of August saw continued good fishing from the "fingers" off Westport, Washington to Coos Bay, Oregon with high-boat catches of 200 to 500 fish/day and averages running 60 to 200 fish/day. At the same time good fishing

was reported off Vancouver Island and Queen Charlotte Sound, and many boats moved north. During the second half of August fishing success off Oregon dropped and became scattered, with averages of 40 to 70 fish/day. Most boats went north to the Queen Charlotte Sound area where fishing remained good until the end of the month, when success dropped from previous levels. August landings in Oregon amounted to 12,433,103 pounds.

A storm moved through the Pacific Northwest on September 7-8 which sent most boats into port. Bait fishing was good off the Columbia River and Willapa "fingers" during the first 10 days of September on big fish weighing 20-30 pounds, and with catches up to 11 ton/day for some boats. Jig fishing was poor as is usual when the bait boats have their best fishing. September landings were 8,881,669 pounds.

October landings were mainly from bait boats and totalled 1,126,150 pounds. November albacore landings were 24,553 pounds. The season total for landings in Oregon was 25,224,720 pounds.

Washington

The first landings were made in late July from boats which were following the fish north to a position off Cape Flattery and Vancouver Island. This area and off Queen Charlotte Sound remained the central area of fishing activity until an early September storm and poor fishing drove most boats south. Through September most effort was centered off Grays Harbor and the Columbia River with bait boats making the significant landings. Total Washington albacore landings were 15.273,565 pounds in 1974.

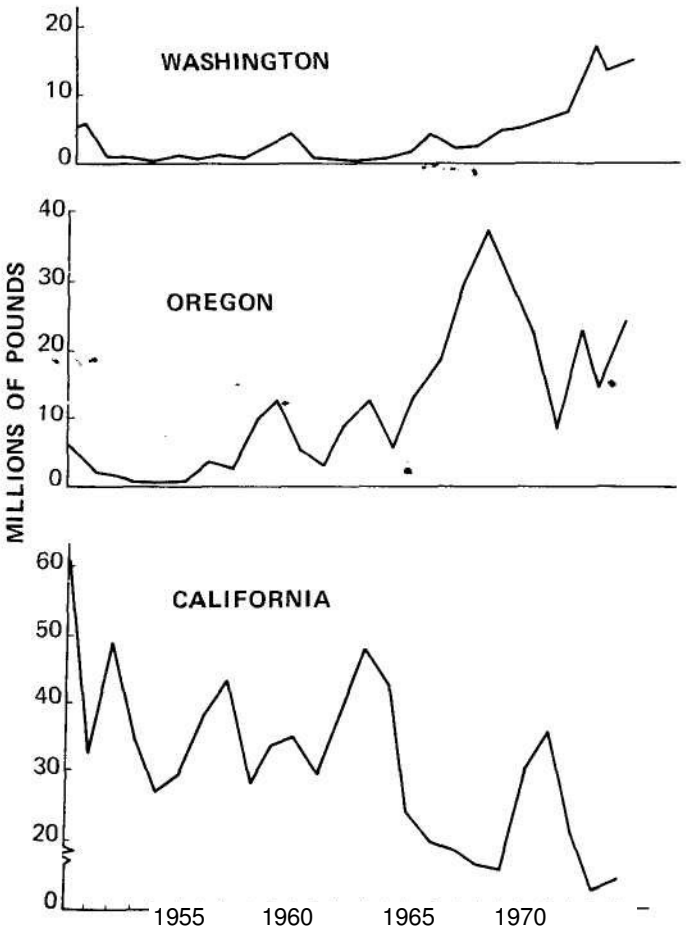

FIGURE 2. Annual albacore landings by State, 1950-1974.

Coastwide Albacore Logbook Program

For the 1974 season, logbook format changes were made based on constructive criticism from fishermen and field samplers who used logs in 1973. A total of 1,142 logbooks were distributed in 1974 which was a 14% increase over the number distributed in 1973. Acceptance of the program remains high with active industry interest and participation.

Compiled by Mike Fraidenburg, Washington Department of Fisheries
Other Contributors:
Charles W. Hooker, California Department of Fish and Game Larry H. Hreha, Fish Commission of Oregon

TABLE 1. Albacore landings in California, Oregon and Washington (in 1,000's of lbs.)

Year	California	Oregon	Washington	Total
1949	44,006	6,457	4,434	54,897
1950	61,745	5,386	5,035	72,166
1951	30,915	2,917	625	34,457
1952	49,804	2,586	177	52,567
1953	33,836	776	89	34,701
1954	26,107	469	421	26,997
1955	29,002	503	233	29,738
1956	37,055	3,654	630	41,339
1957	43,525	2,702	433	46,660
1958	27,188	9,754	1,503	38,445
1959	32,740	10,582	2,961	46,283
1960	35,113	4,563	526	40,202
1961	29,123	3,251	456	32,830
1962	36,622	8,936	365	45,923
1963	48,860	11,413	527	60,800
1964	42,551	4,452	1,055	48,058
1965	23,218	12,122	2,048	37,388
1966	18,189	18,041	1,101	37,331
1967	17,858	29,243	1,240	48,341
1968	15,077	37,752	3,050	55,879
1969	14,722	29,828	3,561	48,111
1970	29,932	21,779	4,390	56,101
1971	36,082	8,420	5,250	49,752
1972	21,001	23,560	16,239	60,800
1973	8,637	16,350	14,446	39,433
Average	31,716	11,020	2,832	45,568
1974[1]	12,000	25,225	15,274	52,499

[1] Preliminary

Status of the 1974 Pacific Coast Shrimp Fishery

The 1974 pandalid shrimp landings for the West Coast of the United States and Canada were 143.4 million pounds, a decrease of 8.6 million pounds from the 1973 record catch of 152 million pounds. Alaska landings of 108.7 million pounds were down 11.2 million pounds from the 1973 record of 119.9 million pounds. Oregon landings of 20.3 million pounds were also down from the record 24.5 million pounds in 1973. Washington landings increased dramatically to 9.3 million pounds, nearly 4 million pounds more than in 1973. California landings reached 2.4 million pounds, up 1.2 million pounds over 1973. British Columbia landings totalled 2.6 million pounds, surpassing 1973 landings by 915,000 pounds.

California

Ocean shrimp, *Pandalus jordani,* landings in California tototalled 2.36 million pounds for the 1974 season ending October 31. This is an increase of 1.12 million pounds from last year's total of 1.24 million pounds.

Landings from Area A (Crescent City-Eureka; PMFC Area 92) reached 1.67 million pounds, an increase of about 700, 000 pounds over the 1973 season.

Record prices (as high as 27 cents per pound) and the lack of a strong southern Oregon fishery combined to keep Area A fishermen on the grounds despite an average catch per hour below 350 pounds from April through July. Catch per hour improved somewhat during August, but the grade of shrimp was generally so poor that many dealers stopped buying, claiming machine recovery rates as low as 12 percent. Prices subsequently dropped to 20 cents and-very little fishing took place in Area A during September and October. Average catch per hour for the season was 364 pounds.

During July and August, 1973-year-class shrimp comprised up to 80 percent of the catch, and a high percentage of this strong year class functioned as primary females in the fall.

Landings from Area -B-1 (Ft. Bragg; PMFC Area 94) totalled 510,000 pounds, the highest landings since the 1961 season when 790,000 pounds were landed. The area was closed on May 22 when the quota of 250,000 pounds was reached but was reopened by the Fish and Game Commission on June 5 with an additional quota of 500,000 pounds. Initially as many as 11 vessels participated in the fishery during April to June but just one fished in July. Another vessel made two trips in October. The shrimp were small and most dealers stopped buying because of low meat recovery. The catch per hour for the season was 485 pounds. Fishing took place off Westport and Usal in 60 to 76 fathoms.

Area B-2 (Bodega Bay; PMFC Area 96) landings totalled 160,000 pounds. From one to four vessels participated in the fishery which started September 26 and ended October 23. The fishermen were unable to attain the quota of 250,000 pounds because of weather and low catch rates until the latter part of September. The catch per hour for the season was 759 pounds. Fishing took place from Ft. Ross to Horseshoe Point in 42 to 68 fathoms.

Only 5,133 pounds were landed from Area C (Morrow Bay-Avila; PMFC Area 98). Catches were incidental to the trawl fishery for spot prawns off Santa Barbara.

With respect to stock status, although the relative strength of the 1974-year class in Area A is not yet known, the 1973-year class appears strong enough to carry the fishery as 2-year-olds in 1975. Strong recruitment from the 1974-year class and subsequent year classes is needed in the other areas to rebuild the resource to productive sustained yield levels.

Oregon

Ocean shrimp landings totalled 20.3 million pounds in 1974. This was down from the record catch of 24.5 million pounds in 1973 but nearly double the 10-year mean of 11.2 million pounds (1964-73). Prices started strong, but a weakening market by late summer drove prices down to 1973 levels. A strong 1973-year class (age 1) in catches off Oregon created the usual problems with markets and fishing. Very good production off Washington, especially in July,bolstered an anemic 1974 Oregon fishery. Six million pounds were caught off Washington, of which 2.5 million were from Destruction Island (PMFC Area 72), 2.9 million from Grays Harbor (PMFC Area 74) and a record 600,000 pounds from the Willapa Bay area (PMFC Area 75), all at good to excellent catches per hour. For the first time Oregon shrimp boats (primarily double-rigged vessels) fished off British Columbia. During August and September they landed 900,000 pounds of shrimp at very good to excellent catches per hour. Only 24,000 pounds from California waters were landed in Oregon.

All Oregon areas except Area 82 produced much less shrimp in 1974 than in 1973. Area 82 produced 700,000 pounds, much better than 1973 landings. Area 84 produced ,5.8 million pounds; Area 86, 5.5 million pounds; and Area 88, 1.3 million pounds.

Catch per hour at the beginning of the season was poor but improved as the season progressed with a peak during July and August.

Washington

Washington's 1974 fishery for ocean shrimp began with a few landings in early January. Inclement weather prevented extensive fishing until late March. Early fishing off Grays Harbor (PMFC Area 74) was spotty and subsequent exploration resulted in a substantial April-June fishery off Willapa Bay (PMFC Area 75). This area, seldom fished in previous years, yielded about 1.1 million pounds to Washington shrimpers, far surpassing any previous production. In late June, shrimp were found in good concentrations near Destruction Island (PMFC Area 72). This was the first fishery of any importance in this area since 1970. Areas 72 and 74 each yielded 3.8 million pounds for Washington vessels in 1974. Washington-based shrimpers spent little effort and landed only about 78,000 pounds from Oregon waters in 1974. In September and October several Washington boats

fished off Vancouver Island (PMFC Area 66), landing about 450,000 pounds. Washington landings in 1974 totalled 9.3 million pounds, surpassing the previous record of 6.5 million pounds in 1958.

The bulk of Washington's shrimp landings came from 17 boats, 14 of which were double rigged. A total of 38 boats (29 double rigged and 9 single rigged) made landings in Westport, South Bend, Ilwaco and Chinook in 1974. Overall catch-per-hour rates were about 600 pounds for single rigged vessels and about 1,000 pounds for double-rigged. The area utilized off Washington's coast increased from a maximum of 360 square miles in previous years to about 460 square miles in 1974.

Biological sampling during the winter showed the catch to be nearly all large, egg-bearing females of the 1970-year class with samples running as large as 75 whole shrimp per pound. Males from the 1972-year class comprised about 10 percent of the samples. Following egg hatch in March, the percentage of 4-year-olds steadily dropped and the catch of 2-year-old males and those transforming from male to female increased. In April a few 1973-year-class shrimp appeared and showed strongly throughout the summer in samples from Grays Harbor and Destruction Island areas. Two September samples from Vancouver Island were relatively weak in 1-year-olds compared to those from the Washington coast. Late summer and fall samples indicated that a substantial segment of the 1972-year-class functioned as males in 1974 and will not change sex until spring-summer of 1975.

British Columbia

Pandalid shrimp landings (all specfes oombined) in British Columbia during 1974 totalled 2.6 million pounds, an increase of 915,000 pounds over 1973. Trawl grounds off Tofino Inlet (PMFC Area 66) yielded 67 percent of the catch. All trawl vessels continue to use single-rigged gear. Pot fishing for spot prawns accounted for 2 percent of the total catch.__

Alaska

Alaska pandalid shrimp landings, primarily *P. borealis* reached 108.7 million pounds in 1974. This represents an 11.2 million-pound decrease from 1973, which is attributable to lower effort resulting from strikes and soft market conditions.

Landings from Chignik, Alaska Peninsula and Aleutian Islands (PMFC Area 55) totalled 53.0 million pounds. This was less than expected but was 9.1 million pounds more than in 1973. A fishery in the Unalaska region produced 5.7 million pounds from January through June and no further effort was expended. Alaska Peninsula landings reached 25.5 million pounds, up 7.0 million pounds from the record 18.5 million pounds in 1973. Chignik landings of 21.8 million pounds were about 3.1 million pounds less than in 1973. This decrease was due in part to a strike which idled nearly all Kodiak-based vessels during the period they normally utilize the Chignik grounds. The increased production from the Chignik-Alaska Peninsula shrimp fishery was due to increased effort and processing capability. Numbers of vessels fishing this area exclusively doubled from 12 in 1973 to 24 in 1974, 15 of which were double rigged. The number of processors increased from 3 to 4 and the number of shrimp peeling machines increased from 19 in 1973 to 44 in 1974. Catch per hour for the Chignik-Alaska Peninsula area, as compared with Kodiak, remained relatively high at 4,100 and 3,700 pounds per hour in 1973 and 1974, respectively. Price to the fishermen for shrimp averaged 7.5 cents per pound.

Kodiak landings of 48.3 million pounds were 21.7 million pounds less than 1973. However the seasonal catch (May through February) of 58.2 million pounds approximated the 55 million-pound guideline harvest level and the 1973 seasonal catch of 56.5 million pounds. The 55 million-pound guideline harvest level for Kodiak represents the approximate mid-point of a 45-71 million-pound harvest range within which the fishery has been managed since 1972. Stock abundance indicators remained favorable during 1974 and each major shrimp stock produced within its harvest range. The catch might have been higher but some minor stocks received little effort due to a prolonged strike. The .Kodiak otter trawl fleet increased to 58 vessels from 38 in 1973. About one-half of these were double rigged. In addition to the otter trawl fleet, 16 beam trawlers fished, contributing 3.1 million pounds. Catch per hour for otter trawlers declined somewhat from 4,000 pounds per hour in 1973 to 3,500 pounds per hour in 1974. Prices for shrimp averaged 9 cents per pound.

TABLE 1. Annual shrimp landings, 1964-1974, and previous 10-year means in pounds by region

Year	Alaska	British Columbia	Washington	Oregon	California	Total
1964	7,726,750	1,052,000	314,130	5,477,400	980,608	15,550,888
1965	16,818,941	1,755,000	23,468	1,748,000	1,425,875	21,771,284
1966	28,192,621	1,682,000	282,947	4,751,300	1,213,959	36,122,827
1967	41,812,552	1,696,000	1,028,744	10,373,956	1,404,821	56,316,073
1968	42,023,084	1,568,000	1,163,864	10,976,258	2,223,205	57,954,411
1969	47,850,560	2,118,700	1,425,286	10,477,945	2,951,800	64,824,291
1970	74,256,326	1,537,800	925,000	13,735,000	4,044,640	94,498,766
1971	94,891,304	735,000	678,000	9,291,000	3,074,000	108,669,304
1972	83,830,064	794,000	1,582,000	20,900,000	2,500,000	109,606,064
1973	119,963,729	1,729,000	5,271,000	24,500,000	1,239,000	152,702,729
Mean	55,443,421	1,463,850	1,272,344	11,493,085	2,101,890	71,774,592
1974	108,748,000	2,644,000	9,300,000	20,300,000	2,360,000	143,352,000

Stock status throughout Alaska appears to be generally good. Certain Southeastern Alaska stocks, which have been historically exploited, have shown some improvement over what may be natural lows in abundance during the last 4 or 5 years. Cook Inlet and Prince William Sound stocks are greatly underutilized except those within Kachemak Bay, which appear to be in excellent shape. Kodiak stock condition has improved considerably with good to moderately strong 1969-through 1972-year classes now supporting this fishery. Ugak Bay is the only major production area that has not recovered from overfishing that occurred between 1968 and 1972. During that period, production from Ugak Bay averaged 9 million pounds per fishing year. A slight improvement in stock abundance has occurred following a total closure during the last two years. The Chignik, Alaska Peninsula and Unalaska regions (PMFC Area 55) contain shrimp stocks from which near maximum yields may have been taken this year. Interim harvest levels, based in part on recent stock assessment work by state and federal agencies, are presently being considered for certain of these stocks.

Compiled by Jerry McCrary, Alaska Dept., Fish and Game
Other contributors:
Nancy Nelson and Walter A. Dahlstrom, California Dept., Fish and Game
Jerry Lukas, Fish Commission of Oregon Tom Northup, Washington State Dept., Fisheries A.N. Yates, Environment Canada, Fisheries and Marine Service

Status of the 1974 Pacific Coast Groundfishery

TRAWL LANDINGS

The 1974 Pacific coast groundfish landings by American and Canadian trawl fishermen were 161 million pounds (Figure 1). Landings were 4% above the past 10-year mean and were slightly above the 159 million-pound catch of 1973. American landings were 123 million pounds and Canadian landings were 39 million pounds; both were slight increases over 1973 landings (Table 1).

TABLE1. Trawl landings in 1000's of lbs., for all purposes by region: 1973 vs. 1974 and 10-year mean (1964-1973 incl.)

Region	1973	1974	% Change	10-year mean
Alaska	1,043	692	-34	—
Washington	40,564	43,595	+7	53,177
Oregon	19,284	19,660	+2	23,372
California*	61,064	59,000	- 3	39,804
Total U.S.	121,955	122,947	+1	116,353
British Columbia	38,581	38,503	-	38,864
Total (U.S. - Canada)	160,536	161,450	+1	155,217

"California landings for 1974 are preliminary.

The Alaska trawl fishery for groungfish remains undeveloped due to economic conditions. Washington trawl landings in 1974 of 44 million pounds were 7% above the 1973 catch of 41 million pounds but were 10 million pounds below the past 10-year mean. Oregon 1974 landings were 20 million pounds, a 2% increase over the 19 million pounds of 1973 and 4 million pounds less than the 10-year mean. Preliminary data for California in 1974 total 59 million pounds, a decline of 3% from 1973 but 19 million pounds above the 10-year mean. Demand in the United States for groundfish was high during the first half of 1974 but declined abruptly during the latter part of the year. The 39 million pounds landed by British Columbia trawlers were equal to 1973 landings and the 10-year mean (Table 1).

[1] Except halibut fishery which is under the jurisdiction of the International Pacific Halibut Commission. Beginning in 1972 this report was expanded to include groundfish catches by longlines and pots.

MAJOR TRAWL SPECIES

Rockfish, Pacific cod, and Dover sole have been the most important species by weight in recent years. Since 1956, English sole, petrale sole, and lingcod landings have been relatively stable while Pacific cod and Pacific ocean perch landings have fluctuated widely. Dover sole and other rockfish landings show an increasing trend (Figure 2). A species breakdown for Alaskan trawl landings is unavailable.

Petrale Sole *(Eopsetta jordanij*

Petrale sole landings in 1974 totalled 10.8 million pounds. They increased 30% over 1973 landings of 8.3 million pounds which also exceeded the 10-year mean. Increases occurred in in all areas. British Columbia and Washington petrale landings increased 44 and 36%, respectively. Oregon landings increased 23% and California landings increased 25% (Table 2).

English Sole *(Parophrys vetulus)*

Total 1974 English sole landings were 9.1 million pounds, , an 8% decline from 1973 landings of 9.9 million pounds which were also below the 10-year mean. Declines of 10 to 26% occurred in all areas except in California where there was a 9% increase (Table 2).

Dover Sole *(Microstomus pacificusj*

Landings of Dover sole in 1974 totalled 27 million pounds, well above the 10-year mean of 21 million pounds but a 10% decline from the 30 million pounds landed in 1973. Most of the decline can be attributed to the 4 million pound decline in California landings from 22.5 to 18.3 million pounds. Oregon landings increased slightly to 5.5 million pounds. A slight increase occurred in Washington landings. British Columbia landings were the same as those of 1973. Dover sole landings in British Columbia and Washington combined are minor and typically less than 2 million pounds (Table 2).

Rock Sole *(Lepidopsetta bilineataj*

Total 1974 landings of rock sole were 2.9 million pounds, an 11% increase over the 1973 catch of 2.6 million pounds but substantially less than the 10-year mean catch of 5.4 million pounds. Washington landings of 833,000 pounds were slight-

TABLE 2. Trawl landings for food by region, 1973-1974 and 10-year mean for 1964-1973 (1,000's of lbs.)

Species or group	Wash.	Ore.	Calif.	Total U.S.*	British Columbia	Total U.S. & Canada
Petrale sole						
1973	2,222	2,191	2,876	7,289	1,044	8,333
1974	3,011	2,691	3,600	9,302	1,508	10,810
% change '73–'74	+36	+23	+25	+28	+44	+30
10-year mean	1,830	1,961	3,043	6,834	992	7,826
English sole						
1973	2,682	2,371	3,209	8,262	1,630	9,892
1974	2,415	1,747	3,500	7,662	1,461	9,123
% change '73–'74	-10	-26	+9	-7	-10	-8
10-year mean	2,783	2,135	4,222	9,140	1,629	10,769
Dover sole						
1973	1,253	4,416	22,485	28,154	1,830	29,984
1974	1,311	5,531	18,300	25,142	1,813	26,955
% change '73–'74	+5	+25	-19	-11	-1	-10
10-year mean	1,459	4,753	13,294	19,506	1,307	20,813
Rock sole						
1973	884	1	8	853	1,789	2,642
1974	833	4	5	842	2,083	2,925
% change '73–'74	-1	+300	-38	-1	+16	+11
10-year mean	949	23	2	974	4,416	5,390
Pacific cod						
1973	7,741	453	–	8,194	16,453	24,647
1974	8,871	686	–	9,557	19,417	28,974
% change '73–'74	+15	+51	–	+17	+18	+18
10-year mean	6,860	397	–	7,257	15,869	23,126
Lingcod						
1973	1,737	1,999	3,111	6,847	2,655	9,502
1974	2,526	1,937	3,300	7,763	3,322	11,085
% change '73–'74	+45	-3	+6	+13	+25	+17
10-year mean	3,618	1,183	1,305	6,106	3,715	9,821
Pacific ocean perch						
1973	5,755	540	125	6,420	3,082	9,502
1974	5,318	833	95	6,246	3,370	9,616
% change '73–'74	-8	+54	-24	-3	+9	+1
10-year mean	11,638	3,639	60	15,337	3,123	18,460
Other rockfish						
1973	12,245	3,558	17,544	33,347	2,681	36,028
1974	8,447	2,544	17,000	27,991	2,016	30,007
% change '73–'74	-31	-28	-3	-16	-25	-17
10-year mean	10,120	4,129	9,501	23,750	1,351	25,101

*Landings in Alaska have been insignificant.

ly above 1973 landings. British Columbia 1974 landings of 2.1 million pounds were 16% above the 1.8 million pounds landed in 1973 (Table 2).

Pacific Cod *(Gadus macrocephalus)*

In 1974, Pacific cod landings totalled 29 million pounds, an 18% increase over 1973 landings and 25% above the 10-year mean of 23 million pounds. Washington landings of 8.9 million pounds increased 15% over its 1973 landings, and were well above the 10-year mean of 6.9 million pounds. Oregon landings of 686,000 pounds were above those of 1973 and the 10-year mean. Pacific cod is the most important species in British Columbia trawl landings. In 1974, 19.4 million pounds were landed in Canada. This was 18% above the 1973 landings of 16.5 million pounds and the 10-year mean landings of 15.9 million pounds (Table 2).

Lingcod *(Ophiodon elongatus)*

The 1974 lingcod catch by trawls totalled 11.1 million pounds, a 17% increase over the 1973 catch of 9.5 million pounds and also 13% above the 10-year mean of 9.8 million pounds. British Columbia landings of 3.3 million pounds increased 25% over 1973 but were still below the 10-year mean of 3.7 million pounds. Washington landings of 2.5 million pounds increased 45% over 1973 but remained below the 10-year mean. Oregon landings declined 3% to 1.9 million pounds but were above the 10-year mean. California landings of 3.3 million pounds were almost the same as those of 1973 but were nearly three times greater than the 10-year mean (Table 2).

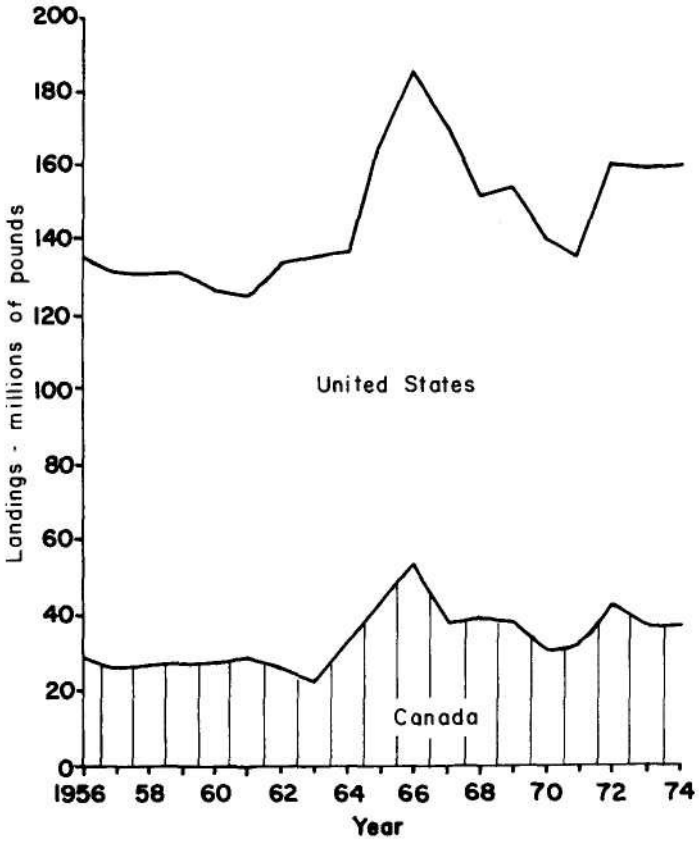

FIGURE 1. Pacific coast trawl landings of the United States and Canada.

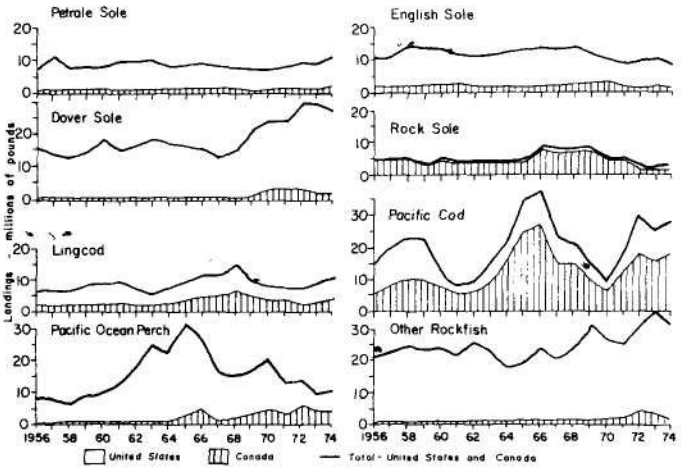

FIGURE 2. Pacific coast trawl landings by major species or group.

Pacific Ocean Perch *(Sebastes alutus)*

Little change in the downward catch trend of Pacific ocean perch occurred in 1974. The coastwide catch totalled 9.6 million pounds compared to 9.5 million pounds in 1973 and the 10-year mean of 18.5 million pounds. Washington 1974 landings of 5.3 million pounds declined 8% while Oregon landings increased 54% to 833,000 pounds. However, landings in both States were considerably below the 10-year means. British Columbia landings increased 9% to 3.4 million pounds and were above the 3.1 million-pound 10-year mean (Table 2).

Other Rockfish *(Sebastes and Sebastolobus* species)

Rockfish landings of species other than Pacific ocean perch totalled 30 million pounds in 1974. This total was 17% less than the 36 million-pound record in 1973 but was above the 10-year mean of 25.1 million pounds. Declines occurred in all areas, but in California landings were nearly similar to those of 1973.

LONGL1NE LANDINGS

Longline landings[2] of groundfish in 1973 (excluding Pacific halibut) were nearly 14 million pounds. Landings in the United States were 4.2 million pounds with 2.6 million pounds landed in California. Rockfish, lingcod, and sablefish were the major species in American landings. Canadian longline landings were 9.5 million pounds. Dogfish (6.6 million pounds) and lingcod (2 million pounds) were the leading Canadian species (Table 3).

TABLE 3. Longline landings by major species in 1973 (1,000's of lbs.)

Region	Sable-fish	Lingcod	Rock-fish	Other species	Total
Alaska	1,087	114	139	[1]133	1,473
Washington	113	31	23	1	168
Oregon	—	—	1	—	1
California[2]	475	316	1,811	—	2,602
Total U.S.	1,675	461	1,974	134	4,244
British Columbia[2]	300	2,034	455	[3]6,673	9,462
Total (U.S. & Canada)	1,975	2,495	2,429	6,807	13,706

[1] Includes 116,000 lbs. of Pacific cod.
[2] Landings include handline and troll.
[3] Includes 6,663,000 lbs. of dogfish.

TABLE 4. Pot landings by major species in 1973(1,000's of lbs.)

Region	Sable-fish	Lingcod	Rock-fish	Other species	Total
Alaska	789	2	2	6	799
Washington	371	1	1	10	383
Oregon	442	7	8	22	479
California	993	6	10	—	1,009
Total U.S.	2,595	16	21	38	2,670
British Columbia	1,644	2	—	8	1,654
Total (U.S. & Canada)	4,239	18	21	46	4,324

POT LANDINGS

Groundfish landings by pot gear[2] in 1973 increased fourfold over 1972 on the Pacific coast. Sablefish was the major species for both Canadian and American fishermen. In 1972

[2]The most current data available from agencies are for 1973.

Americans landed virtually the entire pot-fish total, but in 1973 Canadian pot-fishermen landed nearly 1.7 million pounds and Americans landed nearly 2.7 million pounds (Table 4).

Compiled by Tom Jow, California Department of Fish and Game

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Status of the Pacific Halibut Fishery

RICHARD J. MYHRE
International Pacific Halibut Commission*

Production of Pacific halibut *(Hippoglossus stenolepis)* by the Canadian and United States halibut fishery in 1974 was the lowest in over 60 years. Only 21 million pounds were landed, 54 million less then the 75 million peak production in 1962 and 10.6 million less than in 1973. The size and condition of the halibut stocks have declined in recent years, and catch limits have been reduced substantially to halt the decline. The large incidental catch of halibut by foreign trawlers has been an important cause of the stock decline and steps have been taken to reduce this loss.

Annual catches by the North American halibut fleet from 1955 to 1974 are shown by regulatory area in Figure 1. Area 2 (south of Cape Spencer, Alaska) produced a peak catch of 35.2 million pounds in 1956. Since then Area 2 catches have declined to 10.2 million in 1974. The catch from Area 3 (west of Cape Spencer) increased until 1962, when 38.8 million pounds were taken, then declined JQJO.2 million in 1974. Area 4 (Bering Sea) reached a peak catch of 8.1 million pounds in 1963, dropped sharply in 1964, and has remained at a low since then. The 1974 catch from Area 4 was only 400,000 pounds.

TABLE 1. Halibut landings by State and Province (thousands of pounds)

Year	Calif.	Ore.	Wash.	B.C.	Alaska	Total
1955	43	400	15,883	22,371	18,827	57,524
1956	86	449	16,562	25,786	23,761	66,644
1957	26	375	16,517	24,156	19,772	60,846
1958	30	561	17,608	24,281	22,052	64,532
1959	30	208	20,737	24,066	26,187	71,228
1960	30	328	19,850	27,986	23,437	71,631
1961	15	311	16,416	26,614	25,930	69,286
1962	15	337	16,442	25,412	32,668	74,874
1963	20	179	15,828	26,508	28,718	71,253
1964	20	83	11,893	26,225	21,581	59,802
1965	21	86	8,554	26,179	28,353	63,193
1966	20	89	8,063	25,007	28,857	62,036
1967	20	80	10,363	19,245	25,533	55,241
1968	20	85	12,585	22,436	13,490	48,616
1969	20	90	9,730	27,304	21,151	58,295
1970	–	76	7,291	21,484	26,087	54,938
1971	–	72	4,870	17,801	23,911	46,654
1972	–	68	2,658	16,752	23,540	43,018
1973	–	32	2,122	9,844	19,702	31,700
1974*	–	25	1,050	6,494	13,532	21,101

*Preliminary

The distribution of landings by State and Province from 1955 to 1974 is shown in Table 1. Most of the halibut catch is taken off British Columbia and Alaska where halibut are most abundant. In the early years and through the 1950's most vessels sold their catch in British Columbia and Washington ports. In recent years a greater percentage of the catch is landed in Alaska and this change accounts for the relatively steep decline of landings in Washington, Oregon, and California.

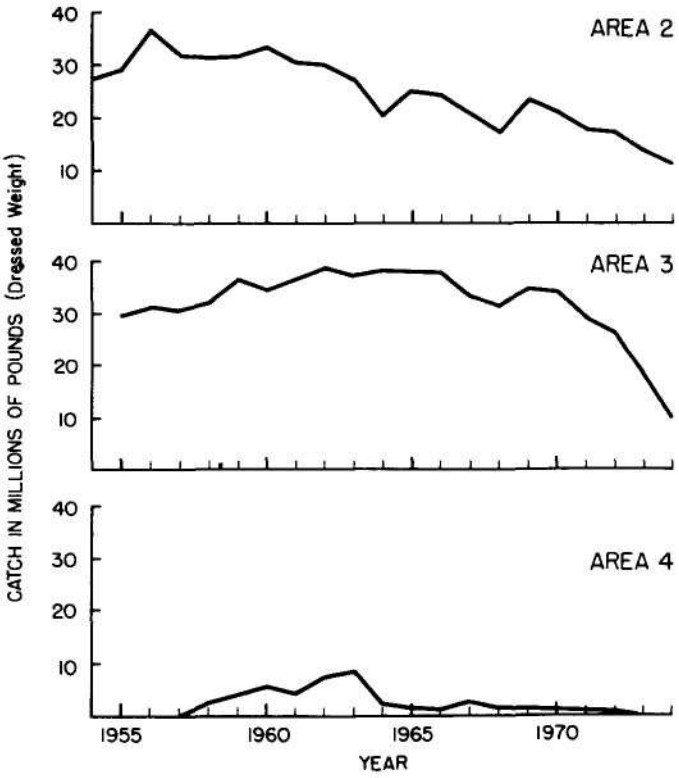


FIGURE 1. Halibut catch by regulatory area.

*This report by courtesy of the International Pacific Halibut Commission is a new addition to this appendix. It is anticipated that subsequent halibut reports will be included annually.

The 1973-74 season's Dungeness crab landings, excluding, Canada and Puget Sound, totalled 11.6 million pounds (Figure 1), the poorest ever reported for the 4 Pacific Coast States. This is 23.2 million pounds less than the 15-year mean of 34.8 million pounds and represents a 3.6 million-pound decrease from the 1972-73 season. Landings for Washington (excluding Puget Sound), Oregon, and California totalled 7.8 million pounds or 1.1 million pounds less than were landed during the 1972-73 season. The 1973-74 season is the poorest on record for the 3 contiguous States and is the third year of declining Dungeness crab production.

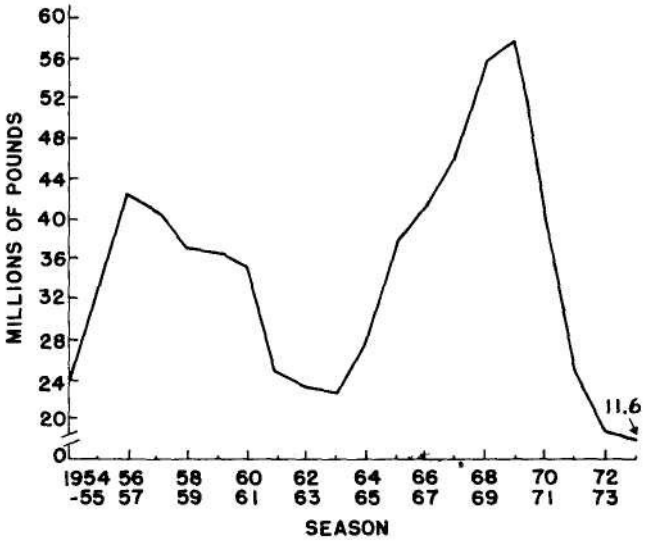


FIGURE 1. Pacific Coast Dungeness crab landings by season, except British Columbia and Puget Sound.

Alaska

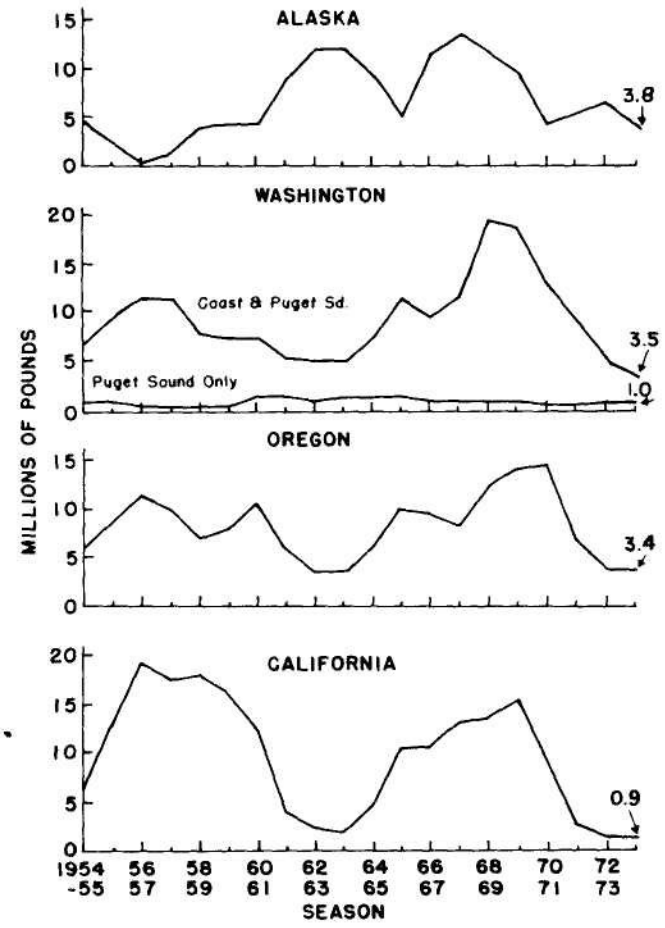
Landings in Alaska' totalled 3.8 million pounds or 2.6 million pounds less than in 1973 (Fiqure 2). Abundance of legal male crabs remains low; however, part of the 1974 Dungeness crab decline was caused by decreased effort when boats were switched to fishing for king and tanner crab.

British Columbia

Dungeness crab landings in British Columbia[1] were 2.5 million pounds or a decrease of 80,000 pounds from 1973.

Washington

Coastal landings of crab in Washington were 3.5 million pounds through the close of the 1973-74 season on September 15 compared to 4.3 million pounds landed in the 1972-73 season. The Washington season opened December 1, 1973 because good market quality crab were available at that time. The Puget Sound crab season opened October 1, 1973; landings totalled slightly less than 1.0 million pounds for an average season.



Oregon

Oregon crab landings totalled 3.4 million pounds (Figure 2). These landings exceeded the 1972-73 all time low by 300,000 pounds.

California

Statewide landings totalled 870,000 pounds. This is a decrease of 630,000 pounds from the 1972-73 season and is the

lowest Dungeness crab production reported since the 1920-21 season when only ring-nets were being fished.

Crab landings at San Francisco were 420,000 pounds an increase of 130,000 pounds above the 1972-73 season landings which were the poorest ever recorded for that area.

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Other Contributors:
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T.H. Butler, Environment Canada, Fisheries and Marine Service
Herb Tegelberg, Washington Department of Fisheries R. Warner and W. Dahlstrom, California Department of Fish and Game

Status of the 1974 Pacific Coast Troll Salmon Fishery

The troll catch of chinook and coho salmon for Alaska, British Columbia, Washington, Oregon, and California for 1974 totalled 66.9 million pounds compared to the 10-year average catch of 63.3 million pounds[1]. Catches of chinook and coho at 28.8 million pounds and 38.1 million pounds, respectively, were both above the 10-year average.

Troll Chinook Fishery

Alaska troll-caught chinook landings were about 4.5 million pounds in 1974. The 1974 total was greater than the 1972 catch of 3.6 million pounds but lower than the 1973 catch of 5.0 million pounds. The 10-year average is 4.5 million pounds.

The 1974 chinook landings by British^Columbia troll fishermen were 13.5 million pounds compared with 12.7 million pounds in 1973 and 11.8 million pounds for the 10-year average.

Washington 1974 troll chinook landings were 3.7 million pounds, the largest catch on record during the 10-year period and 1r4fTtillion pounds greater than the 10-year average.

Oregon troll chinook landings for 1974 were 2.6 million pounds which includes 30,301 pounds caught during a special season off the mouths of the Elk arfti Chetco Rivers during November and December. This was 1.4 million pounds below the 1973 landings and 1.1 million pounds larger than the 10-year average of 1.5 million pounds. Columbia River, Newport, and Coos Bay area landings were good all year. Brookings landings were poor.

The 1974 California troll chinook landings were 4.5 million pounds. This equalled the 10-year low of 1967, and was the second lowest in history. In 1973 trollers landed 8.7 million pounds of chinook, the second highest in the last 10 years. The 10-year average is 6.7 million pounds. San Francisc6 was the major port area producing 2.5 million pounds of chinook, followed by Eureka with 605,000 pounds.

'All figures of weight reported are round weight. The period from 1964 through 1973 was used to compute 10-year avarages.

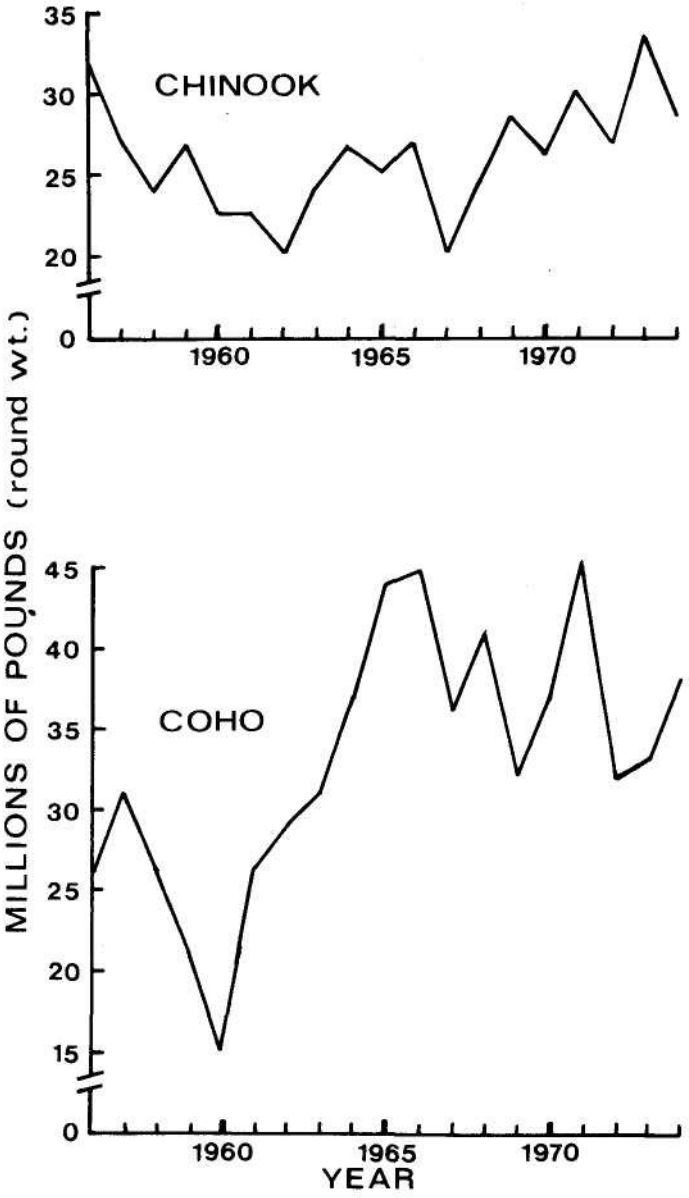

FIGURE 1. Pacific Coast annual landings of troll caught chinook. and coho salmon, 1956-1974.

TABLE 1. Estimated landings of troll-caught chinook and coho salmon, in 1974 and 10-year (1964-1973) averages (round weight in 1000's of lbs.)

	Chinook		Coho		Total	
Region	1974	10-year average	1974	10-year average	1974	10-year average
Alaska	4,500	4,500	4,200	4,100	8,700	8,600
British Columbia	13,500	11,800	15,600	18,400	29,100	30,200
Washington	3,700	2,300	5,600	5,400	9,300	7,700
Oregon	2,600	1,500	8,300	6,100	10,900	7,600
California	4,500	6,700	4,400	2,500	8,900	9,200
Total	28,800	26,800	38,100	36,500	66,900	63,300

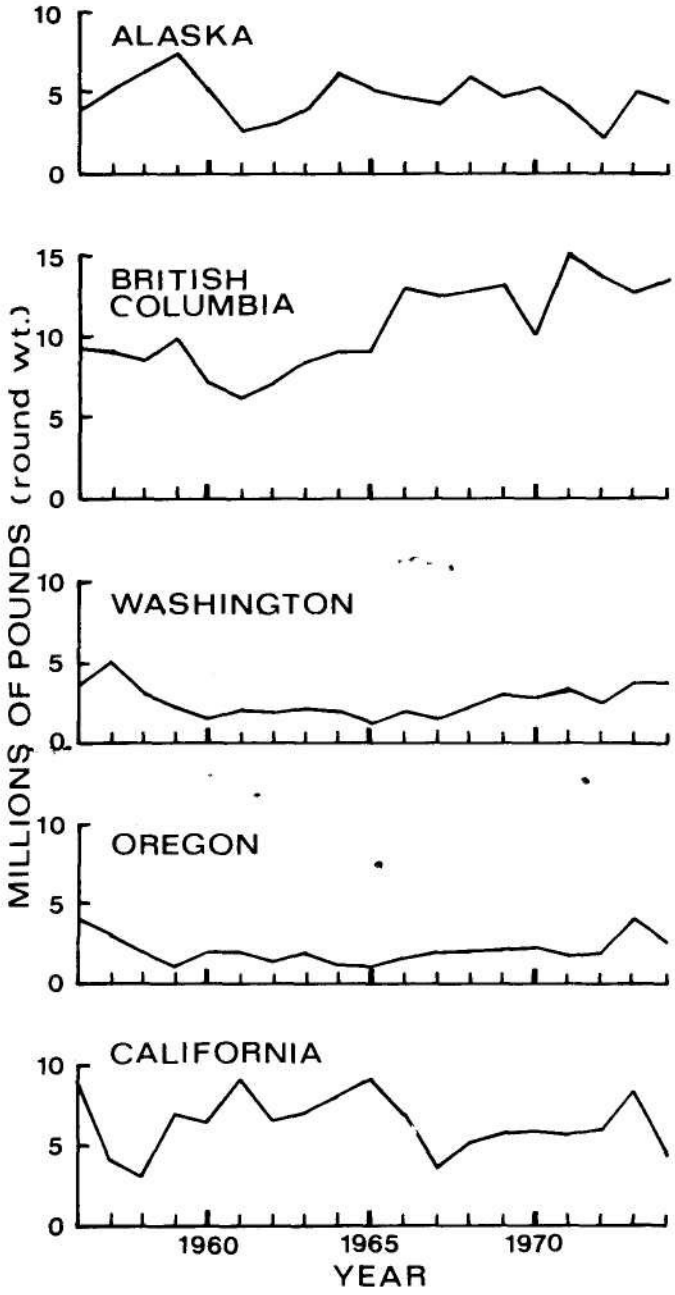

FIGURE 2. Annual troll chinook salmon landings by area, 1956-1974.

Troll Coho Fishery

Alaska 1974 troll coho landings were about 4.2 million pounds. The 1974 total was less than the 1972 and 1973 catches of 5.7 and 4.4 million pounds, respectively, and slightly more than the 10-year average of 4.1 million pounds.

British Columbia troll coho landings in 1974 were 15.6 million pounds compared to the 1973 figure of 16.2 million pounds. The 1974 total was 15% below the 10-year average of 18.4 million pounds.

Washington troll coho landings for 1974 totalled about 5.6 million pounds, approximately 200,000 pounds more than the 10-year average.

Oregon troll coho landings for 1974 were about 8.3 million pounds, an increase of 2.4 million pounds over the 5.9 million pounds landed in 1973 and almost 2.2 million pounds greater than the 10-year average. The Newport and Coos Bay area catches were very good all year. Columbia River area landings were only fair and Brookings landings were poor.

California troll coho landings were 4.4 million pounds, the best year[2] on record, and almost double the 1973 catch of 2.3 million pounds. The previous high was in 1966 when trollers landed 4.0 million pounds. The 10-year average is 2.5 'million pounds. Eureka was the leading port with 1.5 million pounds of coho, followed by the San Francisco area with 1.0 million pounds. The San Francisco area landings in 1973 were only 100,000 pounds. The main reason for the all-time record coho landings was exceptionally good catches during August. Usually, very few coho are landed after the middle of July. Port sampling showed that the vast majority of the fin-clipped coho salmon sampled in the landings originated from Oregon coastal streams and the Columbia River drainage.

Troll Pink Fishery

The Alaska troll fishery landed about 350,000 pounds of pink salmon in 1974. This was below the 1971 and 1972 catches of 470,000 and 587,000 pounds, respectively, and equalled the 1973 catch. Landings of pink salmon in British Columbia were 2.1 million pounds compared to 5.8 million

[2]1974 was the second year of a 4-year experiment to determine the best opening date for coho trolling off California where the season opened on May 15 with a 22-inch minimum size in 1973 and 1974 instead of the former April 15 opening and 25-inch minimum size.

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