34th Annual Report of the

PACIFIC MARINE FISHERIES COMMISSION

FOR THE YEAR 1981

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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1st Vice Chairman	E. Charles Fullerton, Director, California Dept. Fish & Game
2nd Vice Chairman	Jerry M. Conley, Director, Idaho Dept. Fish & Game
3rd Vice Chairman	Dr. Ronald O. Skoog, Commissioner, Alaska Dept. Fish & Game
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ANNUAL MEETING EVENTS

Summary

The Pacific Marine Fisheries Commission's 34th Annual Meeting was held November 9-11, 1981 at the Cosmopolitan Hotel, Portland, Oregon and presided over by Chairman John R. Donaldson, Director, Oregon Department of Fish and Wildlife. Annual Meeting highlights included a conference telephone call between PMFC participants and Oregon's Congressman Les AuCoin; a symposium on fishery management innovations and concerns; and extensive discussion of 19 proposals, 13 of which were adopted by the Commission as Resolutions. Commission elections were held also.

Mr. AuCoin's comments, and contributions of the symposium panelists are presented below in their entirety except for occasional editorial license. Full texts of adopted Resolutions and supporting actions taken in their behalf begin on p. 14. The results of the elections are included in the Personnel section under Administrative Reports and Actions (p. 22).

Telephone Conference Call with Congressman Les AuCoin

Congressman Les AuCoin, First Congressional District of Oregon and member of the House Appropriations Committee, consented to participate in PMFC's Annual Meeting via a telephone conference call to provide his views on Congressional budget developments of particular importance to Pacific Coast fishery interests. A public address system connected to the telephone circuit permitted PMFC conferees to hear and participate in the discussion. PMFC's 1981 Chairman Jack Donaldson introduced Representative AuCoin.

Les AuCoin

Thank you Jack, for inviting me to speak with you and your group in regards to strategies I feel are necessary to protect critical Pacific Northwest natural resource programs from the budget ax.

Let me begin by saying I just took a seat on the Appropriations Committee at the beginning of this Congress. I made this move with some reluctance as it was not easy to relinquish six years of seniority on the Merchant Marine and Fisheries Committee, a Committee that has been effective and one that has brought me in contact with the John Harville's, the Jack Donaldson's, and so many others of you in the fisheries field. I did so in the belief that, more than ever before, policy will be translated into budget levels in this Congress, and in many future Congresses. For this reason, it is crucial that people who care about fisheries strategy and development be on the Appropriations Committee. I am one of three members on the House Appropriations Committee who share fisheries concerns. Congressman Norm Dicks of Washington and Congressman Daniel Akaka of Hawaii are the others. That adds up to three votes on a very large committee, and had I not taken the Appropriations seat, there would have only been two.

In my opinion it is imperative to be in the center of the action and that is the House Appropriations and Budget Committees at this point. Looking at the balance of this and subsequent fiscal years, my sense of the situation is not happy. Quite bluntly, those of us who care about committing treasury resources to fisheries programs are going to have an uphill fight.

I would like to share with you some of the budget realities that made my last comment self-evident. I am told by the House Budget Committee Chairman that over the next three years we are facing a federal deficit of nearly $300 billion. This is well beyond that which the Administration forecast at the beginning of this Congress. It is much greater than the assumptions developed by the Office of Management and Budget when the tax cut was voted on. As a result of these earlier economic assumptions, budget resolutions were passed which call for one of the largest military arms buildups since World War II at a 5-year cost of $1.5 trillion. Most of this will be borrowed money. At the same time the tax cut just enacted is history's largest and, in my judgement, it goes well beyond what is needed for economic stimulation and a break for individuals. It went so far as to relinquish a major part of the federal government's revenue base. The prognosis of the size of the federal deficit stemmed from these things. Even this year's debt has raised interest rates to the point where employment is falling off, profits are declining, businesses are closing, and by virtue of the tax cut, revenues are declining as well. Added together, this leads us to the situation where in the next three years the Appropriations Committee will be looking for ways to eliminate nearly $300 billion in government debts. There is no way of putting a sugar coating on this reality!

Given that comment, I must say it will be easy for members of Congress to pick on federal programs in less populated regions, such as the Pacific Northwest. I feel it is extremely important to try to hold off temptations on the part of members of Congress who may wish to inflict the budget ax on us to a disproportionate degree. It will not be easy to fend off what could be crippling blows to areas of the budget on which we now depend. You must understand, however, the magnitude of the budget cutting task we are faced with is so great, that it will be extremely difficult for those members of Congress on whom I may have depended in the past to stand up and be counted with us on some of these budget issues. It's going to require all of us to work doubly hard to see that continued funding of Columbia River hatcheries, Sea Grant, Commercial Fisheries Research and Development — programs of this kind — count as high priority.

I don't want to pretend that it's going to be easy or that it's business as usual. It is not business as usual and never have I seen the budget situation so polarized, politicized, and confusing. Never has the budget situation been so radicalized as this one but this is the case. I share this with you so you will better understand, as you join with the rest of us in lobbying for increases in funds or against severe budget cuts, that typical appeals for and in behalf of good programs may well fall on deaf ears. This is all the

more reason to have members concerned with fisheries matters on the Appropriations Committee where they can exert leverage as needed.

As most of you know, the House version of the Appropriations Bill, containing funding for Columbia River hatcheries, Sea Grant, Saltonstall-Kennedy, Commercial Fisheries Research and Development, Anadromous Fish Conservation Act, among other fishery programs, was passed in the House in September.

The Senate only recently began work on its version of the bill and today (Tuesday, Nov. 9) it adjourned without finishing the NOAA aspect of the Department of Commerce. It is my understanding that on Thursday the Senate will resume its work. So far as I know there have been no amendments that would substantially reduce any program within NOAA but I cannot predict what will happen during the Senate's further consideration of the bill. I'm hopeful, however, that after the Senate acts on its bill that the House and Senate Appropriations Committees will allow funding levels for State, Justice, and Commerce to be at levels decided upon by the joint House/Senate Conference Committee in the continuing resolutions we expect. (A continuing resolution refers to a procedure for funding federal government operations in the interim between expiration of the fiscal year 1981 budget and adoption of the fiscal year 1982 budget—Editor)

On Thursday (Nov. 12) the full House Appropriations Committee will take up the continuing resolution to provide funding for the federal government beyond November 20. For how long past the 20th is uncertain — it could be 60 days, 90 days, or 6 months — we are not yet sure. That portion of the budget relating to State, Justice, and Commerce is in that resolution, and hopefully levels agreed upon by the Conference Committee will apply. Furthermore, it's my hope that the Conferees on the State, Justice, and Commerce bill will agree to many of the Senate numbers rather than the House numbers. To that end, I have written to Congressman Neal Smith, Chairman of the House Subcommittee and have urged him to accept the $777,000 add-on for the Oregon Department of Fish and Wildlife. I hope Congressman Smith will be receptive to this provision. I have also indicated to Mr. Smith that it is necessary to fund the vital Sea Grant program and that the $39 million in the Senate bill is infinitely superior to the $19 million in the House version.

I hope that the conferees will hold out for $2 million for Northwest Salmon and Steelhead Conservation as provided in the House bill rather than $0 funding in the Senate bill. On Anadromous Fish Conservation, the Senate bill provides $4.3 million, the House $2.3 million. My guess is that they might split the difference and agree to a figure somewhat above $3 million. On Commercial Fisheries Research and Development, the House version is about $3 million while the Senate version is $5 million. It wouldn't surprise me if it comes in around $4 million. (Subsequently, normal budget preparation procedures were set aside by the need to provide federal funding for FY82, since routine budget preparations were not completed by Oct. 1, the start of the new fiscal year. President Reagan vetoed the first continuing resolution budget—Editor)

I've indicated to Chairman Smith that in both these categories the higher Senate levels are better than the House, and I'm hoping that once in conference he will be able to negotiate upward from the House position. Finally, when Congressman Smith's Committee considered the Columbia River hatcheries program last June, I urged his Committee to incorporate into its bill the $8.4 million figure for that program. This was enacted and I am pleased that we were able to get funding at such high levels in both the Senate and House bills. What this means is there is almost no chance for drastically lower figures to be adopted now, and I was happy to be able to honor Congressman Smith for his work and approval of that particular budget item.

I feel the need to comment on the recent scare we all experienced when the Office of Management and Budget put out signals that, in the second wave of budget cuts, the Administration likely would eliminate funding for the Columbia River hatcheries program. I think this is evidence of the larger picture I described to you at the begining of my remarks. We have some extremely difficult days ahead of us when a federal budget agency, ultimately responsible for allocating treasury resources, suggests even half seriously to eliminate a program that provides up to 70% of the fish runs in the Columbia River. Fortunately, members of the Northwest delegation, including Senator Mark Hatfield who deserves a great deal of credit, protested loudly and effectively. Because of this, the budget office backed off and reinstated funds for this program in FY '82.

In view of federal commitments to help restore a resource that was declining because of federal actions in the courts and through dam construction, I find it difficult that the budget office even entertained the idea. The fact that the federal government seemed willing to break its commitment suggests to me that we have a very difficult task ahead of us. We won this year, my friends, but we have some major fights ahead and I would be doing no favors if I suggested anything to the contrary. Thank you.

Audience Participation

Several participants expressed their concern to Mr. AuCoin that should the federal government renege on its responsibility to fund federally-mandated programs, the States would be hard pressed to find stable funding sources to pickup the shortfall. Alternative ways to fund these commitments were discussed, including the possibility of imposing user fees on navigation and irrigation, among others, or of earmarking a percentage of the lease fees from Outer Continental Shelf development to be distributed to the States for renewable resource management.

Mr. AuCoin responded that fisheries are a national commitment and, in his view, the federal government is responsible for their development. In addition, he commented that Congress generally opposes attempts to earmark funds, particularly when revenues are scarce, even though such efforts would serve a good purpose.

In response to a question regarding under-recording of catches in the logs of foreign fishing vessels in the North Pacific, Mr. AuCoin indicated the "Breaux amendments" to the American Fisheries Promotion Act were enacted to increase observer coverage to 100% on foreign vessels. The Office of Management and Budget, however, has seen fit to downgrade this portion of the Act despite the fact funding for such coverage is not subsidized by the American tax payer. Mr. AuCoin indicated that he and his Congressional colleagues will make every effort to restore funding for the observer program.

Symposium: Fishery Management Innovations and New Directions for the 1980's

Six panelists contributed to the discussion of management innovations with Dr. Donald Bevan, Member, North Pacific Management Council, as moderator. Panel members were: Lawrence Six, Pacific Fishery Management Council staff officer; Dr. Ronald O. Skoog, Commissioner, Alaska Department of Fish and Game; Dr. Kenneth Hall, Chief, Biometrics Section, Oregon Department of Fish and Wildlife; Will Daspit, Systems Design Manager, PacFIN Committee; William G. Gordon, Assistant Administrator for Fisheries, National Oceanographic and Atmospheric Administration (NOAA); and William G. Saletic, Senior Vice-President, Peter Pan Seafoods. Several of the panel members provided written material which, for the most part, is included herein in its entirety. Others spoke extemporaneously or from notes and these comments are provided in a reportorial manner.

Lawrence Six: "Innovations in Fishery Management - The Pacific Coast Groundfish Plan"

When asked to talk about fishery management innovations, I immediately thought of the Pacific Council's Groundfish Management Plan: a 5-year, 350-page exercise in patience, frustration and compromise. The Plan required considerable experimentation and innovation on the part of the Council, after all there was no precedent to follow; there were few guidelines and some of those kept changing. The Plan is a product of countless hours of interaction among the Plan Development Team, Scientific and Statistical Committee, the users, Council members, National Marine Fisheries Service (NMFS)-Northwest Regional Office, and the NOAA Regional Attorney. All of these groups played a significant role and deserve credit for coming to grips with a complex issue. Special credit is due the Plan Development Team members who spent a significant part of their professional lives shaping this product. There were even meetings with New England groundfish people to attempt to avoid some of the difficulties they encountered trying to manage multispecies fisheries; and there was a significant meeting with NMFS personnel in Washington, D.C., to explain Council policy and to develop acceptable procedures to implement that policy.

The benefits of meeting face-to-face with Washington lawyers and plan reviewers cannot be overemphasized. We were able to justify the approach and they were able to help us add provisions which made it acceptabe to them. What was so surprising about such a complex and sometimes controversial Plan was that fairly early in the development process the scientists, managers, policy-makers and most of the users actually agreed to the basic approach. This is a difficult achievement in itself. The last couple of years have really been spent convincing the powers in control that the system was legal, feasible and justifiable; and in fine-tuning the provisions. Unfortunately we do not know whether we were successful because the Plan has not been approved yet by the federal government. (NMFS approved the Plan in Feb. 1982—Editor)

I would like to focus my discussion today on the innovations included in the Groundfish Plan. What were the problems and obstacles facing the Council in developing a Groundfish Management Plan, how does the Plan address those problems, and what are some prerequisites for successful implementation of the Plan? The latter will relate to the role of the federal government and includes some issues which Bill Gordon might address in his presentation.

First of all, what are the problems facing the Council in managing groundfish resources; why did the Council need to be innovative?

1. The number of species in the management unit alone is threatening and presents an obstacle to planners trying to develop a consistent and understandable management regime. There are about 50 species in the unit, each with differing biological and ecological characteristics. Furthermore, there are numerous gear types and user groups involved, making management much more complicated than the single-gear, single-species situation. Groundfish are harvested by trawlers, pot fishermen, hook-and-liners, gillnetters, shrimp and prawn fishermen, trollers and personal users (anglers and skin divers).
2. Certain groundfish gears, especially trawls, can capture several species in a single haul. How can one optimize the yield of several species caught at once which have different biomasses, different yield potentials, and different vulnerability to capture? There was a tendency among some persons to want a numerical optimum yield (OY) or a quota for each species to ensure that overfishing was prevented and to provide an easy way to determine if overfishing had occurred: if you exceed the OY, then you are overfishing.

   The problem with setting individual quotas for those species in the multispecies fishery is that it can cause waste of the resource. If you have two species that are caught together and the first species is less abundant and has a lower quota, then when you reach the lower quota on the first species you either (1) stop fishing for both species and the second one is underutilized, or (2) you keep fishing and the first species is discarded. Either way waste occurs.
3. Furthermore, given the number of species involved and the relatively low priority previously given groundfish research, our knowledge of these species is understandably limited. We have good information on some species and fair or minimal data on others. Therefore, our ability to obtain accurate numerical estimates of OY or acceptable catch is limited to certain species. Our confidence in numerical OY estimates for many species is not great.

   While the Council reacted negatively to numerical OYs for all species, there was still an overriding need and desire to ensure conservation of the stocks, and an upper limit to harvest or numerical OY would therefore be necessary in some cases; and most important, some sort of conservation safeguard would be necessary for species without an OY.
4. There was a definite need to respond in a timely way

to resource and fishery changes, and it was clear that the federal process for amending plans was unresponsive (250-300 days for major amendments). It was also clear that it would be impossible to foresee all future resource problems and therefore impossible to include specific remedies for certain situations from the outset. There had to be a system which would allow us to choose the right measure at the time which could be implemented quickly enough to do some good, not 6-12 months later.

The paradox here is that in order to do this the lawyers said that the Plan would have to be as specific as possible concerning what action might be taken so that the federal official would use little or no discretion in making a decision. The more discretion, the longer it would take to implement the action. Well, how can you be specific and still keep your options open for the future?

5. While it was possible that some kind of restrictive action would have to be taken in some cases in the future, the Council's objective was to minimize the impact of any restrictions on the users and retain flexibility in the management plan.
6. While there is a need to reduce the time required to take management action, this had to be balanced with the need to ensure adequate public participation and Council involvement in any in-season decisions. We were told that approval and implementation of any adjustments would have to be done by a federal official. So, how do you ensure that the Council retains its policy-setting role and that the public plays an active part in the process?
7. And finally, if a federal official is to act on changes, it should be a regional official who is closer to the problem than the Washington, D.C. office and can take action more quickly. This avoids numerous layers of review as well as the danger of the Secretary imposing his policy on the Council, even though the Secretary is legally limited to disapproval only when a measure is contrary to the Act, the National Standards and other applicable law.

This essentially describes the climate during plan development and sets the stage for Council action in devising an acceptable plan. In short, how do you develop a management regime that ensures conservation, yet minimizes disruption of the fishery, and responds in a timely manner to a changing fishery and resource?

The Council's solution is a framework plan, at the heart of which is a continuing fishery and resource monitoring program designed to prevent overfishing. A framework plan is a multiyear plan that hopefully would not require amendment for several years. Yield, capacity estimates, and management measures are changed periodically within the guidelines specified in the Plan. The Plan describes as specifically as possible how, when, why, by whom, and what action will be taken. Many major changes that are not foreseen and which fall beyond the scope of the framework must then be accommodated by the lengthy plan amendment process. This long amendment process may be the most appropriate for such changes, since maximum Council consideration and public review are warranted in cases where major changes are necessary.

FRAMEWORK:

The major elements of the framework are (1) the non-numerical OY for species in the multispecies group, (2) an intensive stock monitoring program and (3) provisions to adjust OY upward for those species with a numerical OY. Also included are provisions to automatically adjust processing and harvesting capacity estimates within a specified range, adjustments to foreign and joint venture incidental catch allowances, and other adjustments. There is also a provision to allow experimental fisheries on a limited basis which would otherwise be illegal under the Plan.

1. OY: Numerical OYs (quotas) are established only for those species that can be targetted on or which require special protection. The remaining species, which are components of the multispecies groundfish fisheries, have no predetermined numerical OY. Optimum yield in this latter case is whatever amount of fish is harvested under the specific gear and other regulations adopted by the Council. This allows a variable amount of fish to be harvested and provides the flexibility to manage for the maximum yield from the group as a whole. It has the least impact on fishermen since individual quotas are not established. But you might ask, how is conservation ensured? Essentially by gear restrictions which provide protection for juveniles and tend to maximize yield per recruit, and by an in-season intensive monitoring program called the Points of Concern (POC) mechanism.
2. Points of Concern: The POC system is essentially a continuing stock monitoring program designed to detect conservation problems and to provide remedies in a timely way. A management team conducts a review of all of the species in the management unit and when a conservation concern is identified, a detailed assessment is made of the stock in question to determine if biological stress is occurring. If so, then the team recommends appropriate action to the Council. A public hearing is scheduled at the Council meeting, and the Council then recommends management action to the Regional Director (RD) of the NMFS. The RD can either approve the measure, and then implement it by regulation, or disapprove it. He cannot modify it or substitute his own measure. If he disapproves it, he provides the Council with written reasons for the rejection. The Council can then reconsider the matter as appropriate. This system guarantees that the Council and the public play a significant role in determining in-season management policy because it limits the discretion used by the RD, yet it still allows action to be taken in a timely way.
3. Adjustments: Another procedure allows the Council to make in- and between-season adjustments to OYs (up to 30% increases) without a plan amendment. Given that some allowable yield estimates are based on preliminary or incomplete data and that evironmental fluctuations impart variability to abundance, a system to allow adjustments when warranted is necessary to allow full utilization. Near the end of each calendar year, the Council will announce domestic and foreign fishing regulations for the next year.

These are the main elements of the process. The advantage of this system is that it allows the Council to vary harvest limits annually to respond to environmental fluctuations. Constant quotas maintained year after year could lead to overfishing or underfishing over a period of time. Constant harvest limits do not account for the variability in recruitment observed in many marine fish populations. An adjustable yield system combined with a continuing monitoring process allows the Council to adjust management annually, consistent with existing biological and economic conditions. Now that I have outlined the basic elements of this flexible management system, I would like to discuss some of the current issues that might affect our ability to implement it. What are the implications of this system and what are the prerequisites to pave the way for its success?

First of all, as stated before, the Secretary of Commerce has not approved the plan yet. That would be a helpful first step in the process. Assuming that we get approval, there must be at the same time approval to regionalize decision-making by delegating that authority to the RD of NMFS. With the change in Administrations have come changes in federal policies and procedures for implementing regulations. Currently, approval of a fishery management plan involves not only review by NOAA and NMFS, but by the Department of Commerce and even the Office of Management and Budget. If each adjustment under the framework plan requires review and approval by all of these layers, then the Plan will not be responsive to the resource or the fishery.

Further complicating the process is a morass of paperwork and review required by the National Environmental Policy Act, the new Reagan Executive Order (12291), the Regulatory Flexibility Act and the Paperwork Reduction Act. All of these have laudable goals such as minimizing regulatory impact, and I am in total support of their purpose, but applied together to the fishery management process they are really somewhat redundant and create an incredible impediment to rational planning. If all of the documents required by these Acts must be prepared and reviewed prior to implementation of every framework adjustment, or if we cannot regionalize the process, then I think we are out of the framework management plan business; in fact one would have to question the ability to manage fisheries by federal regulation. Bill Gordon may shed some light on any breakthroughs in these areas.

A final consideration is that the monitoring system proposed relies on timely data collection and analysis. This requires that systems be upgraded, and federal funds are necessary to do the job. We are all aware of present cutbacks in federal spending. Without the necessary funds to support the activities of the management team, and to upgrade groundfish data collection, processing and reporting, the Council's ability to ensure conservation of the resources will be limited.

Dr. Ronald O. Skoog: "Emerging Role of the States in Regional Fishery Management"

The role of the States in regional fishery management rather than being identified as "emerging" more appropriately should be termed a re-emergence or re-establishment of that role. In the early days of this Nation the States retained considerable authority over the lands, waters, and resources within their respective boundaries. Through the decades, however, there has been a steady erosion of State authority on all fronts, although until recently the management of fish and wildlife by the States has remained strong. Nevertheless, incursions of the Federal government have continued, and under recent Administrations there has been little support for maintaining State authorities.

In the midst of this growing trend, the present "Reagan Administration" is rather like a "breath of fresh air" with its expressed intent of reducing the "Federal yoke". The important role States play in the effective management of this nation's natural resources finally is being given the recognition and support it deserves. We have entered a time of change, with extensive reductions in budgets of Federal resource agencies being a major force in emphasizing the need for greater Federal-State cooperation. Nevertheless, the Washington D.C. arena remains the key to how far and how rapidly the States can progress in achieving regional fishery management authority.

The question is: will this change force the various agencies and organizations concerned with fish and wildlife resources to work closely to minimize areas of conflict and jurisdictional overlaps, to maximize the strengths of the organizations, and to unify goals that benefit the resources and the public? If the resource and the public are going to realize any benefits now it is imperative that efficiency and effectiveness be tied to realistic goals and objectives. It is critical that important programs are not sacrificed. A true partnership between Federal and State resource agencies will not be accomplished without some *commitment* to change—some movement toward what Interior Secretary Watt has labeled the Federal "good neighbor policy."

One of the most controversial issues has been the deteriorating fish and wildlife jurisdictional responsibilities of the various States. It is imperative that the historic management role of the States be maintained or returned, especially where the States are willing and capable of administering their own programs. Historically, the States have done their job well. There is no need to change that role! Yet the trend of increasing involvement and interference by the Federal government in State management programs is disruptive, not cost effective, not in the best interest of the public or the resources, and is quite unnecessary. The State is in the best position to manage fish and resident wildlife most effectively for a number of reasons. I will mention three:

The *first* is experience, organization, and staff. Each State has developed organizations that are experienced within the State, know its resources, know the problems associated with managing those resources, and know the people and needs of the people. Each State agency has staff that is experienced and has a long employment tenure. Conversely, Federal agencies tend to have a rather high turnover in their personnel within any given State or Region—which does not lend to, and in many cases inhibits, good management decisions simply because they do not have the experience on which to base these decisions. And, of course, Federal agencies tend not to be oriented to the State's interests.

A *second* major area is public involvement and public support. No agency can have an effective management program unless it has public support. A State agency is much more apt to have that support in managing its resources simply because it is more sympathetic and dedicated to the needs of the public and resources within the State. People tend to resent regulations, and they particularly resent them when they are developed or promulgated at a distance, such as in Washington D.C., by people not knowledgable about the State or its problems and, in many cases, not particularly sympathetic toward that State. Generally speaking, the Federal government tends to look at the broader issues and to deal with "groups of individuals". A State's government more often directs its attention to the "grass roots level', to the individual with the problem—e.g., the gill-net fisherman, the herring processor, etc. As such, the State can gather public support more readily.

The *third* general area in which the State performs better is in timely response to the needs of the public and to the needs of the resource. A State program can be more flexible and can respond rapidly to change while the Federal government often becomes bogged down in administrative procedures. In managing fish and wildlife resources in Alaska, I have emergency authority to open and close seasons within a 24-hour period depending on resource needs. I issue 300-400 such emergency orders every year. This capability is very necessary to protect our fish and wildlife resources from over-exploitation or to provide additional harvest opportunities when a given target species is more numerous than expected. Seasons on some of our herring stocks are regulated on an "hourly" basis, under situations where a large number of seiners could devastate a given population if fishing were allowed to continue even for an additional hour or two. The Federal bureaucracy simply does not have this capability due to its procedural morass. A good example of this problem occurred this past year when Alaska closed the off-shore troll salmon season to conform to the OY (Optimum Yield) established for chinook salmon by the State Board of Fisheries and the North Pacific Fishery Management Council, and to allow better escapement. The Department of Commerce was unable to respond in like manner to close the Federal waters in a timely manner. Their closing regulations finally were issued some time later, but not until the State was ready to reopen the season. Fortunately, the fishermen still are responding to State regulations rather than Federal!

The return of State authority and reinforcement of State management programs will require major legislative reform as well as support by the current administration. Considerable savings and improved efficiencies in resource management can be realized by significantly altering major Federal legislation, such as: the Marine Mammal Protection Act (MMPA), the Magnuson Fishery Conservation and Managment Act (MFCMA), and the Endangered Species Act. Although it would be impractical and undesirable to eliminate all Federal involvement, simplification of regulations and procedures, greater coordinated decision making, and more meaningful State roles can be accomplished.

Regarding State-Federal relations—wherever the Congress has preempted a State's management program, I would hope that future efforts of the Federal government in managment of fishery resources will be characterized by "delegation of authority." If the Reagan Administration is sincere in its regulatory reform effort and in returning decision-making authority to State and local governments, then the bureaucratic environment should exist now to effect such delegation. All States, for a variety of reasons. may not want to assume, or reassume, all management responsibilities. But, all States should have the "option" to petition the Federal government to be granted the delegated authorities if they have the wherewithal and desire to reacquire, replace, or augment a Federal program. Given such delegations, however, the States must accept a share, and in many cases the lion's share, of the cost of implementing a delegated program if they want discretionary decision-making authority, and not just become implementors of decisions made by Federal agencies. It is time for States to "put their money where their mouths are"!

The fiscal resources required to develop and carry out sound fish and wildlife management programs are very large—many millions of dollars. More millions, in fact, than are available from State or Federal funding sources. While State governments must assume a financial commitment, so too must the Federal government. If the Federal government has felt compelled in the national interest to usurp in some way the States' rights to manage their fish and wildlife, then those national interests ought to be sufficiently important for the Federal government to commit fiscal resources to them.

I'm not suggesting that the Federal government abrogate any national responsibilities under conditions where Congress has chosen to preempt State management. Under the delegations I envision, the Federal government would retain an oversight responsibility; delegations to the States would be conditional—the conditions including those which ensure the protection of national interests and the application of national policies and standards. However, it is absolutely essential that such conditions be reasonable; that they provide the State with broad-ranging discretion; and that they minimize costly administrative overhead and reporting activities.

Alaska is working in this direction with the Magnuson Fishery Conservation and Managment Act of 1976 (MFCMA). Within the North Pacific Fisheries Management Council, we are developing the concept of "framework management plans" to be adopted by both the Council and Alaska's regulatory Board of Fisheries. The framework plan is simply a statement of mutually agreed-upon management principles approved by the Secretary of Commerce, who delegates to the State the authority to implement the management plan both in State waters and the Fishery Conservation Zone (FCZ). This is one option under consideration. Another variation of this option is to have the Secretary of Commerce adopt State regulations by reference as Federal regulations. The Federal government does not abrogate any responsibilities, for it retains oversight authority to insure that National Standards contained in the MFCMA, and other principles and purposes of the Act, are provided for in the framework plan and in the regulations of the State.

Jurisdictional conflicts between the Federal and State resource agencies are created by Federal legislation.

Implementing Federal law through the development of agency policy and the promulgation of regulations provides the two most insidious and effective means of reinforcing such jurisdictional conflicts. Any meaningful attempt to elevate the role of the State will require a complete review of policies and regulations, now in effect, and the need for new ones. The States must be an active partner in developing the "rules" that affect fish and wildlife management.

The future of effective and efficient fish and wildlife management in this country depends on the ability of the collective States to establish "their" desired partnership arrangement with the Federal agencies. The States must become more involved in the following arenas:

1. *Legislation*—Concerted efforts are needed to outline clearly the role of the Federal and State governments in fish and wildlife management. These efforts must be directed at modifying both existing and proposed "preemptive" or needlessly burdensome legislation.
2. *Policy*—All States have similar concerns about the development, interpretation, and implementation of policies. For the most part, policy decisions are centralized in Washington, D.C., without adequate State involvement. More and more effort by individual States, as well as State associations—e.g., the Interstate Marine Fishery Commissions and the International Association of Fish and Wildlife Agencies—will have to be directed at policy issues. Formal policy development processes between agencies will alleviate many problems of inconsistencies in interpretation and of long term instability. Again, the States "must" be involved in the development of the policies "at the Federal level."

At the present time the Alaska Department of Fish and Game, with the support of Interior Assistant Secretary Ray Arnett, is pursuing a "Master Memorandum of Understanding" with the U.S. Fish and Wildlife Service, to be signed off by its Director and the ADF&G Director. This document is intended to recognize that effective management of fish and wildlife resources on Service lands in Alaska requires the cooperation and expertise of the State and the establishment of special policies—at the Washington level—which reflect the unique management problems of this State. We intend to pursue such MOU's with other Federal agencies as well.

3. *Regulations*—Improvements in regulatory reviews and the regulatory process itself are necessary for greater State involvement. If the States are not happy with the continual intervention by the Federal government into their affairs and authorities, then they must take a more active part in the regulatory process.
4. *Budgets*—No doubt some of the biggest battles will revolve around the budget—the very heart of any bureaucracy and perhaps the most vulnerable part of its "anatomy." The States need to spend more time scrutinizing Federal budgets and programs to identify problem areas. Federal agencies which cut State revenue-sharing programs to fund less desirable Federal programs or overlapping fish and wildlife management programs will be faced with an increasingly stronger and more effective State lobby. Recent recommendations from State agencies on proposed Federal budget shifts and reprioritizations have been surprisingly successful. Increased cooperative program planning between the Federal and State agencies will result in less budgetary waste and greater program support.

Finally, the opportunity exists now for re-emergence or re-estabishment of the historical State role in fish and wildlife mnagement. The major question is: are States willing to make the sacrifices of time and money? The degree of success would seem to be proportional to the amount of effort. The question of whether or not the States are willing to carry more of the financial burden will be answered on a State-by-State, case-by-case basis. The current Federal budget reductions, however, coupled with grim predictions for the future, necessitate a concerted effort by all coastal States to establish their management role and to strengthen their State-Federal relations. They must become involved if this Nation expects to maintain effective fishery management programs.

Dr. Ken Hall: "Fisheries Data Requirements and Mechanisms for In-season Management"

In the past five years, fisheries management has changed rapidly from the setting of seasons prior to the beginning of fishing to in-season changes in regulations and closures of fishing. This dramatic shift in management strategy has placed tremendous demands on State and Federal governments to collect timely and accurate fisheries data. Are State and Federal governments meeting the needs of fisheries managers?

The separation of fisheries management into in-season and between-season decision-making helps to clarify our fisheries data problems. The between-season decision process allows time for data processing, error detection and correction, and analysis. On the other hand, in-season decisions require the use of incomplete, rapidly processed data with little time for analysis.

Past fishery data processing systems were constructed by the States to meet the needs of between-season management and historical recordkeeping. Our current needs for in-season data have stressed the old systems until they are no longer functional and are being redesigned and rebuilt. The Pacific Coast States and the National Marine Fisheries Service have been steadily improving their fishery data systems to meet the needs for timely, accurate in-season data reporting. For example, in 1979 the Oregon Department of Fish and Wildlife had a 2-year delay in reporting landings statistics; now the delay is less than 2 weeks. This kind of improvement has been encouraged and stimulated by the Pacific Coast Fisheries Data Committee with funding from NMFS.

The purpose of the Pacific Coast Fisheries Data Committee is four fold:

- to implement and manage a Fisheries Information Network (FIN) that aggregates summarized State and Federal fisheries data for use by fishery managers and associated agencies;
- to provide data management consultation and technical advice to the Fishery Management Council's Plan Development Teams and participating agencies upon request;

- to establish priorities and coordinate plans to improve the efficiency, effectiveness and timeliness of data acquisition and delivery with a minimum of unnecessary duplication; and
- to promote the development and implementation of coastwide data collection standards to facilitate the merging of Pacific Coast fisheries data in the FIN.

The geographic scope of the Committee extends from Alaska to California, and includes Idaho. Members represent the State fisheries agencies in this area as well as the NMFS Regions and Centers. The Committee began its activities in 1979 by implementing the Coastwide Data Files for 1974-76 on computers located at the NMFS-SW Fisheries Center. In 1980 the Committee completed a study of Pacific Coast fishery data needs and proposed the development of a Pacific Coast Fisheries Information Network (PacFIN).

In January 1981, a System Designer/Manager was hired to begin work on PacFIN. The PacFIN computer system is now being tested. This system collects, stores, and reports summarized groundfish catches made on the Pacific Coast by both domestic and foreign fisheries.

The Pacific Coast Fisheries Data Committee faces several future challenges:

- a regional salmon catch data base needs to be designed and constructed that meets the needs of Council management plans;
- the operation of the Salmon Coded-Wire Tag recovery data system needs direction and improvement;
- groundfish logbook data have been identified as an important component of management data, but processing and reporting systems need to be developed at the regional level to make maximum use of these data; and
- how should the many and often different types of biological data from a variety of State and Federal sampling programs be collected, processed, and integrated?

The Pacific Coast Fisheries Data Committee seeks to improve the State, Regional, and Federal fisheries data systems to meet the requirements of fisheries managers.

Will Daspit: "Pacific Coast Fisheries Information Network (PacFIN)"

The current PacFIN system receives daily groundfish landings information (mailed monthly) from State and Federal entities extending from Long Beach, California to Seattle, Washington. Central processing occurs at the Northwest and Alaska Fisheries Center (NWAFC) and monthly management reports are mailed to the Pacific Fishery Management Council (PFMC) Groundfish Management Team. Input for the current system is derived from fish tickets (landing receipts), rockfish composition sampling data, and foreign and joint venture fisheries observations. Data items include: weight of the aggregated catch, number of landings for the aggregated catch, and dollar value of that catch by port of landing. For each daily or weekly aggregated catch, certain keys are provided to identify and stratify the data, including day or week, species group, area of catch, gear, and port (or country).

The future PacFIN system at NWAFC will receive daily catch information via telecommunications, process the data and telecommunicate management reports to the various management Teams (Groundfish, Salmon, Shrimp), and to NMFS Regional Directors. It is envisioned that in the future, the Teams and Regional Directors will have remote terminals for *ad hoc* retrievals of management reports as they are produced at the Center. In addition, future extensions of the data base will include salmon catch, effort, and price data; and shrimp catch and price data. Types of data to be investigated include biological data for groundfish, salmon, and shrimp; logbook data (including effort); salmonid coded-wire tag data; and socio-economic data.

William G. Gordon: "Marine Fisheries Management - Another Look at an Old Issue"

Good morning Mr. Chairman, Members of the Commission, Ladies and Gentlemen:

I welcome this opportunity to be in Portland to participate with my distinguished fellow panelists in this symposium on fisheries management. This is an opportune time to review some of the changes that are occurring in marine fisheries management, some of the bottlenecks in the process, and some of the breakthroughs we hope to achieve. This is an exciting time for me to be in my new position where I can help overcome some of our past problems and meet the very demanding challenges ahead. My strategy is to secure the confidence of our constituency, and to provide strong leadership, and to be informed of your problems and sensitive to your needs.

Before I go further, I want to clarify some misconceptions about NMFS/State interactions. Many have confused the NMFS State/Federal Fisheries Management Program with the NOAA State/Federal Process. The State/Federal Fisheries Management Program began in 1971 to assist the States in developing unified fisheries management regimes for interjurisdictional stocks. The State/Federal Process evolved from our State Fish and Wildlife Directors meeting in Alexandria, Virginia, January 1980. The State/Federal Process focuses on planning as a way to improve State and Federal coordination of activities concerned with living marine resources. The scope of the NOAA State/Federal Process is much broader than that of the NMFS State/Federal Program, which focuses specifically on establishing needed fisheries management regimes. The NOAA State/Federal Process seeks to integrate living marine resources activities of the NOAA Offices of Fisheries (NMFS), Coastal Zone Management (OCZM), and Sea Grant (OSG) with their State counterpart agencies.

One of the principal objectives of the Process is to improve the efficiency and effectiveness of collective State and Federal efforts. To do this, State/Federal Action Plans should be developed which summarize current activities, program strengths and weaknesses, problems and priorities, and which conclude with recommended actions and budget requirements for the upcoming fiscal year. Because of budget uncertainties, however, the NOAA State/Federal Process has barely gotten beyond the proposal stage. While I assure you that I still believe in the State/Federal Process, until the budget situation is clarified, I do not intend to press for full implementation of

the Process. In the meantime, I will work toward establishing a full partnership, improved communication, and closer interaction with the States.

The NMFS State/Federal Fisheries Management Program also will remain a viable program as long as you and NMFS believe it is useful. I will continue to support the Program as long as it serves our major responsibility: conservation and management of living marine resources. However, we are now challenged to find improved ways of doing business with less dependence on Federal funds.

Before I suggest some things that we need to do, I want to review briefly where we are, as a Nation and as State/Federal partners, and from where we have come. There is much of which we can be proud.

What the role of the Federal Government and the States should be in managing living marine resources is a continuing and sometimes vexing problem to State and Federal decision makers. We have all been through situations involving conflicts of authority, or different interpretations of authority, between Federal and State interests. While at time frustrating and awkward, this sytem of State and Federal roles and responsibilities was established by design, although sometimes in an *ad hoc* fashion. Our concept of government calls for a limited role for the national government leaving primary responsibility for government with the States where greater responsiveness and accountability are possible. Historically, the States have managed marine fisheries resources while the Federal Government has served as a national policy-making forum and guardian for our natural resources. Until recently, Federal fisheries activities were restricted principally to research and negotiating international treaties for the protection of common resources.

Following World War II, as a consequence of a rapidly expanding population and increased foreign and domestic fishing effort, greater attention was given to protecting marine fisheries resources. It soon became obvious that, in most cases, the intra-state approach to management would not work. Because most fisheries were regional in nature, effective management required concerted management planning and implementation among the States. Recognizing this need in 1942, the States on the Atlantic seaboard created with Congressional consent, the Atlantic States Marine Fisheries Commission. The Gulf States Marine Fisheries Commission, with five compacting States, was similarly established in 1949 to conserve, develop, and facilitate full use of the Gulf of Mexico fisheries resources. On the Pacific coast, an attempt was made as early as 1945 by the State of Washington to provide some form of control for offshore fishery operations for species other than halibut and sockeye salmon. A resolution was submitted to the Washington State legislature to surrender all interests of the State of Washington in offshore fisheries to existing international fish commissions, or to a third commission, which would be created for regulation of all Pacific coast offshore fisheries. That was defeated because it was believed that such a commission should be comprised of members of the three contiguous Pacific coast States with management responsibility for the Pacific fisheries. Subsequently, the States of California, Oregon, and Washington agreed to join in a compact to promote better use of marine, shell, and anadromous fisheries of mutual concern, and to develop a joint program of protection and prevention of physical waste of these fisheries in all areas over which these States jointly or separately have, or might have, jurisdiction. Congress approved that compact in July of 1947 which became known as the Pacific Marine Fisheries Commission. That Commission has since been expanded to include Alaska and Idaho.

In 1956, Congress again expressed concern for fisheries by passing the U.S. Fish and Wildlife Act, which recognized that fish resources make a material contribution to the national economy and food supply, and that such resources are a renewable form of wealth, capable of being maintained and increased with proper management. In 1964, Congress enacted the Commercial Fisheries Research and Development Act to provide formula grants to the States for research to improve commercial fisheries management. In 1965, Congress passed the Anadromous Fish Conservation Act to provide a special focus for anadromous fisheries. This Act has provided major support in the Northwest for salmon and steelhead work. In 1966, Congress enacted the Marine Resources and Engineering Development Act estabishing a national policy to rehabilitate U.S. commercial fisheries. With this Act came a better understanding of fisheries and the interrelated factors affecting them.

In 1969, the President's Commission on Marine Science, Engineering, and Research, known as the Stratton Commission, reported that: many of the domestic fishing fleets were outmoded; excessive harvesting capacities existed; some stocks were on the verge of being overexploited; catches were declining; user conflicts were prevalent; unemployment in the fishing industry was high; and that low incomes from fishing were typical. The Stratton Commission concluded that these conditions could be traced to two basic causes:

(1) finite fishery resources are considered common property, available to unlimited access by users; and

(2) fisheries are regulated (or not regulated) under split or multiple jurisdictions, with no single focus of management responsibility.

The Commission determined that rehabilitation of domestic fisheries depended on eliminating overlapping, and sometimes conflicting, laws and regulations which were hampering even economically viable fisheries. In a summary report, the Commission called for the development of a new framework based on national objectives and sound scientific data for the management of shared fisheries resources—a State/Federal partnership.

In 1971, based on the Stratton Commission's recommendation for action, and under the general authority of the Fish and Wildlife Act of 1956, NOAA instituted the NMFS State/Federal Fisheries Management Program. Dave Wallace, former NOAA Associate Administrator for Marine Resources, saw a vital role for the interstate marine fisheries commissions in the State/Federal Program. Dave's policy, under which NMFS still operates, was to use the commissions actively in planning and coordinating State/Federal Program activities. Funds for these purposes have been made available to the commissions through contracts and cooperative agreements since the early 1970's. Your own commission, under the able leadership of John Harville, was exemplary in fostering development

of the State/Federal management plan for Dungeness crab.

Perhaps the most valuable product of the State/Federal Fisheries Management Program was the pioneering of a cooperative approach to marine fisheries management. Much of this was written into the Magnuson Fishery Conservation and Management Act (Magnuson Act). For example, the concept of regional fishery management councils came from the State/Federal Program, as did the principles that management be conducted according to plan based upon the best scientific information available and users input. In short, the State/Federal Program encouraged State fisheries administrators to work more closely with each other and with the Federal Government to develop management plans for shared resources. The groundwork laid by the State/Federal Program undoubtedly facilitated the early implementation of the Magnuson Act.

The importance of the Magnuson Act cannot be overestimated. For the first time, Congress assigned specific domestic fisheries management responsibility to the Federal Government by charging it with establishing effective management for fisheries resources harvested predominately in the fishery conservation zone (FCZ). The Act also prescribed standards, principles, and procedures for developing management regimes, while at the same time leaving essentially unchanged the States' responsibilities for managing marine fisheries within their waters. It is an understatement to say that the success of the Act depends upon effective State/Federal interaction because most of the resources receiving attention under the Act's authority occur, and are harvested in, both the FCZ and State waters.

I also should emphasize that habitat and water quality are important to fisheries management. Councils, in developing management plans, should seek to restore, conserve, and enhance critical habitat. For example, salmon spawning, rearing, and feeding areas are continually affected by man's activities in and adjacent to coastal marine, estuarine, and freshwater systems. When these activities affect production or product quality, they should be dealt with in the management regime. The Councils should identify the issues, solicit public advice, and submit recommendations in the fishery management plan (FMP) to the Department of Commerce. State and Federal managers dealing with these issues would benefit from Council advice. State Directors, as members of the Councils, have the responsibility to assure that the Councils carefully address habitat issues.

The funding authorizations provided in the Magnuson Act, combined with State grant-in-aid funds and NMFS budget support, were considered adequate to finance necessary fisheries management activities. However, last November the people of the United States, in response to high inflation and economic stress, asked for a retrenchment in the Federal bureaucracy, budget, and activities. While we in the Federal Government are committed to fiscal and programmatic changes, we must also maintain sufficient capabilities to meet our legislative mandates. Collectively, our first responsibility is to the resources —to assure healthy stocks, effective management regimes, and equitable allocation.

Well conceived management regimes must continue to be developed and maintained to assure the long-term viability of marine fisheries resources, and to allocate properly the use of and benefits derived from those resources. In that regard, I have recently endorsed a comprehensive marine recreational fisheries (MRF) policy for NMFS which will affect our program and budget planning. The NMFS Headquarters Office, Regional, and Center Directors will be responsible for its implementation. We will initially focus (in FY 1982 and FY 1983) on identifying the MRF community and developing a comprehensive MRF communication network. To improve coordination and communication, we are exploring new ways to inform and involve MRF interests in NMFS programs to better address their needs.

Beyond communication, NMFS will begin or continue specific activities important to the MRF community, such as data collection. We will do everything possible to ensure continued collection of critically needed MRF catch, effort, and socioeconomic data. Additionally, we will look at ways to help the MRF industry through the financial assistance, utilization, and development programs of the Agency, and will implement procedures to improve MRF particiption in the decision making process.

Too many times promises made to the MRF community have been unfulfilled. I pledge my personal commitment to full implementation of the MRF policy. I have set up a liaison office, reporting directly to me, which will be composed of highly motivated individuals with backgrounds in recreational and commercial fisheries, and State/Federal activities. Dr. Robert F. Hutton will be my principal MRF liaison to work with and through our Regional and Headquarters Office Directors.

In summary, I am convinced that much can be done within NMFS to improve our State/Federal relationships. I intend to:

(1) restructure NMFS components to achieve more effective and efficient operation and management;
(2) integrate fisheries management and fisheries development activities;
(3) focus management efforts only on those fisheries in need of management;
(4) regionalize the fishery management and plan implementation process;
(5) establish better liaison and support with other institutions such as Sea Grant, Coastal Zone Management, Fish and Wildlife Service, Food and Drug Administration, Environmental Protection Agency, Office of Management and Budget, and Congress;
(6) make NMFS an agency that scientists of all disciplines, and other specialists, will be proud to work for;
(7) achieve better cooperation and coordination with the fishing industries, both commercial and recreational; and
(8) develop a true partnership with the States.

To improve cooperation and coordination with the States, I have asked my staff to develop an in-depth issue paper on State/Federal fisheries management responsibilities and activities, and to explore ways to implement these activities. After a preliminary draft document is prepared, I will review it with our Regional and Center Directors and then send it to all coastal and Great Lakes State

fisheries administrators for their review. With this document as a focus for discussion, I will invite coastal and Great Lakes State fisheries administrators to join us in Washington, D.C. next spring (possibly late April) to develop a consensus on ways to work together. I am optimistic that we can develop arrangements that will enable us not only to continue to conserve and manage our Nation's fisheries resources effectively, but also to improve substantially our working relationships for mutual benefit. I am temporarily delaying full implementation of the State/Federal Process until the proposed spring meeting when I can hear your views on how we can make this Process work.

In conclusion, I recognize the important and irreplaceable capabilities of the States in the management of our living marine resources, and I am committed to improving NMFS's relationship with them. I look forward to working with you toward that goal.

William G. Saletic: "Fishing Industry Interests and Concerns in the 1980's"

Saletic's approach to the subject was somewhat different from that presented by the other panelists since the processing industry obviously has different concerns. He noted that others speaking for the Council, the States, and the Federal Government, discussed progress occurring in their areas of concern. These improvements included developing (Council) management plans, increasing State control over various fisheries, and furthering of State/Federal relations. He stressed that such progress did not carry over to private industry and has in no way prevented a number of fish processors such as New England Fish Company, Alaska Packers Association, and others here and elsewhere from either going out of business or being divested from parent companies. He observed that this seemed to be an increasing trend and, despite major efforts, the fishing industry has been unable to reverse it. Processors have lost markets and have fish "stacked up" in the freezers and warehouses which cannot now be sold at a profit. He blamed weak market demand here and abroad, high storage costs, staggering interest rates, and international currency exchange rates.

Saletic indicated that this situation is not expected to improve in 1982. In fact, the only "foreseeable" certainty is another big salmon run in Alaska in 1982 which will aggravate one of the industry's current problems — that of large inventories. Because industry has little or no control over these events, processors are facing a confused and uncertain future.

Audience Participation

With judicious questions and comments relating to panel statements and remarks, Moderator Bevan provided the catalyst which generated excellent audience response. Among the topics addressed by meeting participants were:

(1) PACIFIC FISHERY MANAGEMENT COUNCIL GROUNDFISH PLAN

In dealing with funding resources to conduct the continuing groundfish stock monitoring program, Larry Six indicated that funds will be available in 1982 but that future funding may be unsatisfactory, given the Administration's efforts to reduce federal spending. The Plan calls for monitoring a group of five species with a numerical optimum yield. Since Council action is required when the OY is achieved, these species will require more intensive monitoring effort than will the remaining multispecies portion that does not have a numerical OY.

(2) STATE CAPABILITIES TO MANAGE RESOURCES

In response to doubts raised by Bevan that Alaska could manage beyond its territorial waters, Skoog replied that even NMFS has no capability to manage offshore fisheries given its present budget problems. By the same token, many fishermen do fish and land their catches in Alaska where the State exerts control. Skoog reiterated that sequestering a percentage of the lease monies from Outer Continental Shelf oil and gas development for fisheries management is a sensible means of funding management and enforcement entities. Bill Saletic agreed with Skoog that Alaska's management capabilities are excellent based on day-to-day decisions made in the 1981 salmon season. In response to a question of national policy and regional differences, Skoog indicated that there are enough regional differences in Alaska alone to preclude a single national policy emanating from Washington D.C. The States must be permitted to help set policy which takes into account these differences.

(3) HABITAT PROBLEMS AND MANAGEMENT AUTHORITY

John McKean questioned Bill Gordon on his statement that regional Councils should address habitat issues — an area presently outside Council purview. Gordon acknowledged that Councils have no authority to make changes in the rivers, but when habitat alteration affects achievement of OY, the Councils have the responsibility to identify such issues in the public review process. It's up to the agencies then to reconcile the problem. Bill Puustinen, Columbia River gillnetter, suggested in order to assure funds are obtained and properly spent on restoring fish runs damaged or destroyed by federal dams in the Columbia River, a "federal umpire" position should be established.

(4) STATE/FEDERAL PROGRAMS

McKean and others expressed concern that the Administration's attempts in 1981 to eliminate grant-in-aid programs along with others, are a signal to change (lower) priorities relating to these grant programs. Gordon responded that it is the Administration's intent to provide block-grants to the States and let State Administrations handle allocations. Bill Wilkerson (WDF) pressed for an answer regarding future State/Federal consultations on Federal budget priorities. Gordon indicated both he and Dr. Bryne, NOAA Administrator, hoped to achieve a consultative dialog with the States on a regular basis on this issue and others. A recently signed memorandum has delegated more authority to the Regions which should help in this sense.

(5) LEGISLATIVE AMENDMENTS

Citing the Marine Mammal Protection Act (MMPA) as an example, McKean asked if the new Administration

will reconsider those laws which hinder implementation of several aspects of the MFCMA. Gordon responded that, while environmental forces will strive to maintain some of the laws intact (such as MMPA), Congress is willing to look at those that are truly impediments. It is here that interstate Commissions, the International Association, and State fishery directors can join forces to present their case.

(6) FISHING INDUSTRY COOPERATION

Russell Bristow, fisherman, commented on the need for fishermen, industry, and agencies to work together to protect the fishery resource. He felt that fishermen would pay 10% of income for this purpose.

Wayne Scott, Salmon Trollers Marketing Association, asked Gordon how fishermen could help in environmental protection. Gordon stated if federal agencies are involved, fishermen should contact the Regional office with their views, or inform the Council which monitors the fishery and changes plans. Public hearings are designed to achieve better management through the planning process. Scott asked further if there is a place for professional fishermen to be involved in data analysis. Gordon explained that the Federal Government and fishermen exchange information by means of a formal interview system established on the East Coast, but no such program is in effect on the West Coast as the States historically have been responsible for collecting and analyzing such information.

Update of Actions Taken on 1980 Resolutions

A number of Resolutions adopted by the Commission in 1980 required continuing efforts by the Secretariat to assure that the Congress or concerned Federal agencies would provide a positive response to permit achievement of PMFC's goals and objectives. These Resolutions grouped according to subject were:

Fishery Development — 1980 Resolutions 1 and 2: PMFC actively sought to gain Congressional support for Saltonstall-Kennedy funding for fishery development projects and opposed the declared intent of the Administration to supplant S-K intent by using an administratively-managed program. PMFC also vigorously supported extension of the Capital Construction Fund and Loan Guarantee Program to shoreside facilities. Partial fulfillment of these Resolutions was provided in the final days of the 96th Congress with enactment of P.L. 96-561. Title II of this public law is known as the "American Fisheries Promotion Act". Among other things, Title II restructures the Fisheries Loan Fund under the Fish and Wildlife Act of 1956 by establishing new priorities for the use of this fund. It does not, however, provide for extension of the Capital Construction Fund (Sec. 607 of the Merchant Marine Act of 1936) to include shoreside facilities.

Anadromous Fisheries — 1980 Resolutions 3 and 6: PMFC coordinated its efforts to obtain assured funding for anadromous fish programs (Resolution 3) with the other Interstate Marine Fisheries Commissions. Letters and supporting documents were sent to PMFC's Congressional delegation and testimony was presented to key House and Senate committees (see Executive Directors Report, p. 22). FY 1981 augmentations to fisheries grant-in-aid programs were $2 million for the Anadromous Fish Conservation Act (P.L. 89-304) and $2.5 million for the Commercial Fisheries Research and Development Act (P.L. 88-309). The release of these add-on funds occurred so late in the fiscal year that undoubtedly there will be a significant carry-over into FY 82.

PMFC's Resolution 6 strongly supported legislation for a coordinated approach to hydroelectric energy production and fishery protection and restoration. Letters, supporting documentation, and personal contacts with key legislators and committees expressed the concerns of the Pacific Coast States regarding anadromous resources of the Pacific Northwest. Congress, indeed, supported such legislation and on December 5, 1980, President Carter signed into law the Pacific Northwest Electric Power Planning and Conservation Act (P.L. 96-501).

Fishery Management Procedures — Resolution 5: PMFC took particular issue with procedures for funding foreign fishing observer programs. It followed up its policy statement with mailings of supporting documents to member States' Congressional delegations, and to Representative John Breaux who sponsored legislation which included full observer coverage of foreign fishing activities. Part C of Title II of P.L. 96-561 (American Fishery Promotion Act of 1980) amends the MFCMA to require increased observer coverage with foreign payment of such costs being made to a revolving fund established to support this program. Unfortunately, a proviso added to Breaux's legislation prior to enactment allows the Secretary of Commerce to omit observers from some vessels if, "for reasons beyond the control of the Secretary, an observer is not available". Since control of budgets are a function of the Office of Management and Budget (OMB), the Administration has not provided for full coverage of this program (see related comment — AuCoin Conference Call, p. 4).

Resolutions Adopted in 1981 and Supporting Actions

A near-record 19 proposals were submitted to PMFC's Advisors and Scientific and Management staff for evaluation prior to presentation to the Commission for additional review and adoption. As a result of these procedures, 12 were unanimously approved, 1 was approved with a 3 to 2 vote, and the remaining 6 were rejected. The process whereby these Resolutions were implemented began with their publication in PMFC Newsletter #35, however, the need for Congressional and Federal agency action relating to Resolutions 7 and 19 required the Secretariat to take measures immediately after the Annual Meeting. The complete texts of adopted Resolutions and a summary of additional supporting actions are provided below.

1. U.S. Policy in Approving Joint Venture Processing Proposals

WHEREAS, the Magnuson Fishery Conservation and Management Act as amended in 1980 recognizes the importance of fostering the U.S. fish processing industry and gives U.S. processors first priority to U.S. caught fish; and

WHEREAS, U.S. fishermen are allowed under the MFCMA to deliver to foreign processing vessels seaward of 3 miles as a means of increasing the markets for U.S. caught fish and encouraging the development of U.S. fisheries; and

WHEREAS, these joint ventures are beneficial to some domestic fishermen over the short-term, however, the furtherance of the entire U.S. fishing industry over the long-term will require the development of increased domestic processing capacity; and

WHEREAS, U.S. processors are competing with foreign subsidized fisheries for world and domestic fish markets; and

WHEREAS, further development of the U.S. fishing and processing industry requires that U.S. processors move into markets now controlled by foreign processors;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission urges the Administration to assure that joint venture processing agreements be approved only in those cases where the signatory countries agree to remove trade barriers which serve to inhibit the sale of U.S. processed fish in that country.

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

3. Role of Coastal States in the Conservation and Management of Fishery Resources

WHEREAS, The Magnuson Fishery Conservation and Management Act does not provide sufficient definition to the role of coastal states in the conservation and management of fishery resources; and

WHEREAS, the coastal states have demonstrated and will continue to demonstrate a significant contribution to the management of resources throughout their range and these states should have as much authority and discretion as possible in managing fisheries operations in historic state waters and beyond; and

WHEREAS, state and federal agencies have limited funds for fisheries management and research, and enforcement occurs through a clear definition of state and federal agency roles by dividing responsibilities and thus avoiding unnecessary duplication;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission request appropriate Congressional oversight committees to seek advice from the coastal states, the Regional Fishery Management Councils, and the National Marine Fisheries Service in considering amendments to the Magnuson Act as needed to clarify the intent of Congress toward the responsibilities, jurisdiction, and roles of coastal states in the conservation and management of fishery resources. Important issues to be considered include, but are not necessarily limited to the following:

1) *Authorization to the state to permit foreign fish processing activities within the boundaries of the state only where domestic capacity is insufficient;*
2) *Establishment of a baseline for the inner boundary of the territorial sea for fishery management purposes only, that would reflect the historic boundary used by states for fishery management;*
3) *Development of federal Fishery Management Plans only for those fisheries where conservation and management needs are not being handled adequately by a state regime;*
4) *Delegation of federal management responsibilities for domestic fisheries to states which have appropriate scientific, technical, and regulatory capabilities in order to achieve increased cost effectiveness and operational efficiency;*
5) *Authorization to the Secretary of Commerce to reimburse a state for services performed by a state in implementing a federal Fishery Management Plan;*
6) *Authorization to a state to control recreational fishing activities by foreign vessels within the boundaries of the state;*
7) *Regulation between 3 and 200 miles by a state, with concurrence of the Regional Fishery Management Council and the National Marine Fisheries Service shall be conducted within the parameters of the National Standards set forth in the Magnuson Fishery Conservation and Management Act.*

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

5. Joint Management of Anchovies

WHEREAS, National Standard 3 for fishery conservation and management provided in section 301 (a) of the MFCMA requires that "to the extent practicable, an individual stock of fish shall be managed as a unit throughout its range" . . .; and

WHEREAS, the harvesting of a transboundary resource may result in resource and conservation problems unless the total harvest is properly coordinated between the nationals on both sides of the boundary; and

WHEREAS, Section 301 (a) (1) of the MFCMA requires that "conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the Optimum Yield from each fishery", and recognizing that this may not be possible with transboundary resources unless fishing is coordinated on both sides of a boundary; and

WHEREAS, the Anchovy resource off Mexico and Southern California is a transboundary resource, significantly harvested by nationals of Mexico and the United States; and

WHEREAS, Anchovy have been identified as an important forage resource for other species;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission request the Secretaries of State and Commerce to initiate negotiations with the Government of Mexico in order to identify the geographical parameters and Optimum Yield of that portion of the Anchovy resource that is transboundary; and

BE IT FURTHER RESOLVED, that the governments of Mexico and the United States undertake the necessary procedures for joint management of that portion of the resource that is transboundary and to share equitably in the Optimum Yield.

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

6. California Representation on the Pacific Fishery Management Council

WHEREAS, California has over one-half of the coastline within the jurisdiction of the Pacific Fishery Management Council; and

WHEREAS, the Pacific Fishery Management Council presently has management authority over the northern anchovy fishery, the groundfish fishery, and the ocean salmon fishery; and

WHEREAS, the northern anchovy fishery is conducted exclusively offshore of California by vessels whose home ports are in California; and

WHEREAS, California groundfish landings over the last 10 years exceeded, on the average, those of other Pacific Coast states; and

WHEREAS, California salmon landings over the last 10 years, on the average, equal those of Oregon and Washington; and

WHEREAS, California is represented by 23% of the membership of the Pacific Fishery Management Council;

THEREFORE BE IT RESOLVED, that the U.S. Congress be memorialized to increase California representation on the Pacific Fishery Management Council to two obligatory appointive seats.

Adopted by a 3-2 vote of the five Compact States: Alaska, California, and Oregon voting for; Idaho and Washington voting against.

7. Federal Responsibility to Fund Federally Mandated Programs

WHEREAS, recent Federal Acts such as the Endangered Species Act, Marine Mammal Protection Act and the Magnuson Fishery Conservation and Management Act have established exacting standards for resource management; and

WHEREAS, these standards include requirements for extensive biological, social, and economic data upon which management decisions are based; and

WHEREAS, the States of Alaska, Washington, Oregon, Idaho, and California are providing most of the research and monitoring efforts to provide these data; and

WHEREAS, state fiscal problems coupled with pending reductions in federal grant-in-aid will decrease funds available to the States to support these programs; and

WHEREAS, the Departments of Commerce and Interior have not provided long-term base funding for the support of these programs; and

WHEREAS, the Pacific Marine Fisheries Commission unanimously approved Resolution No. 3 in 1980 calling for USFWS and NMFS to support coastwide anadromous fish tagging and recovery programs citing the needs for management under the MFCMA;

THEREFORE BE IT RESOLVED, that the U.S. Departments of Commerce and Interior be obligated to establish long-term, base budget funding to support Federally mandated fishery management programs, including but not necessarily limited to: Commercial Fisheries Research and Development Act, Anadromous Fisheries Conservation Act, Endangered Species Act, Marine Mammal Protection Act and Magnuson Fishery Conservtion and Management Act; and

BE IT FURTHER RESOLVED, that the United States Congress be obligated to provide the federal share of financial support to carry out these programs in cooperation with the States.

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

Action and Status

PMFC requested member State fishery agencies to provide updated budget estimates for coastwide salmonid stock assessment studies, such as coded-wire tagging and recovery programs. The intent is to establish a "fair share" approach to funding, including acceptance by appropriate agencies of the funding burden on a long-term basis. Currently, PMFC is negotiating with the Bonneville Power Administration in regard to this approach while NMFS is pressing for similar planning with respect to P.L. 89-304 funding. All concerned entities, including the Columbia River Council and member State agencies, expect PMFC to coordinate this effort to develop long-term funding.

8. Funding Columbia River Hatcheries

WHEREAS, Federally constructed and operated dams on the Columbia River and its tributaries have caused major damage to the anadromous fish runs of that river system; and

WHEREAS, non-Federal private and public utility owned and operated dams must and will continue to provide mitigation for anadromous fish losses attributed to construction and operation of such facilities; and

WHEREAS, Under P.L. 75-502 and P.L. 79-676 the Congress acknowledged drastic declines in Columbia River anadromous fish runs in the river; and

WHEREAS, anadromous fish produced in the Columbia River provide a substantial portion of the income of

ocean salmon fishermen from Alaska to California, as well as treaty and non-treaty river fishermen in Washington, Oregon and Idaho; and

WHEREAS, the Administration in Washington, D.C. has proposed to either completely eliminate or phase out federal funding of Columbia River hatchery production; and

WHEREAS, this action would be contrary to the solemn commitment of Congress to the citizens of the Pacific Coast of the United States to compensate for losses to the Columbia River anadromous fish runs as a result of Federally authorized dams;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission unanimously support and request continued full federal funding of anadromous Columbia River salmon and trout hatcheries; and

BE IT FURTHER RESOLVED, that states and federal agencies begin exploring other long-term funding sources, including water user fees, to assist but not replace present funding for these programs; and

BE IT LASTLY RESOLVED, that copies of this resolution be provided to the President, the Budget Director, the Secretary of Commerce, the Secretary of Interior, the Secretary of Defense, Chairman of the appropriate Senate and House Committees of Congress and the Governors and Congressional Delegations of the Pacific Marine Fisheries Commission member States.

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

9. Request Financial Support for Navigational Chart Detail

WHEREAS, commercial fisheries for shellfish and groundfish have been developing in the offshore and inshore waters of the Alaska Peninsula; and

WHEREAS, the development of these fisheries is hindered by lack of navigational charts that sufficiently delineate bottom contours and depths; and

WHEREAS, the development of stock assessment programs by state and federal agencies are also being hindered by lack of these charts; and

WHEREAS, these needs are specifically acute in Gulf of Alaska waters between the longitude of Castle Cape and Kupreanof Point and waters surrounding the Simidi Islands; and

WHEREAS, commercial fisheries from Alaska and other PMFC member States and governmental resource management agencies would benefit from more detailed navigational charts in conducting commercial fishing operations, delineating habitat, and reducing gear loss;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission requests the United States Congress to provide the necessary financial support or directives to the National Ocean Survey to undertake this work.

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

10. Financial Support for the United States Coast Guard

WHEREAS, The Magnuson Fishery Conservation Management Act recognized the need to protect the vital fisheries resources and waters adjacent to the United States by the establishment of sound management practices; and

WHEREAS, the United States Coast Guard is the principal law enforcement agency assigned to ensure compliance with regulations issued to facilitate management of these valuable resources; and

WHEREAS, numerous and blatant violations of these regulations continue to be detected by the United States Coast Guard; and

WHEREAS, the United States Coast Guard lacks the resources to detect and apprehend but a small percentage of suspected violators; and

WHEREAS, current and projected fiscal constraints will result in further reduction of the United States Coast Guard's capability to carry out effective law enforcement programs for protection of our valuable fisheries resources;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission requests the Congress to provide at least the current level of funding appropriated to the United States Coast Guard for maritime law enforcement, but not to the detriment of search and rescue and navigational aid programs; and

BE IT FURTHER RESOLVED, if at all possible that the funding levels for maritime law enforcement be increased; and

BE IT LASTLY RESOLVED, that copies of this Resolution be provided to Pacific Marine Fisheries Commission member States' Congressional Delegations.

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

Action and Status

This resolution, attached to a letter strongly urging careful reassessment of Coast Guard budget curtailments of some $46 million, was sent to the Secretary of Transportation. A major thrust of PMFC's argument addressed the uncertain practicality of enforcing existing and impending fishery management plans developed by the Pacific and North Pacific Fishery Management Councils. Copies were sent to the Secretary of Commerce, NOAA Administrator, and NOAA Assistant Administrator for Fisheries. In addition, parallel letters were sent to PMFC member State Congressional delegations, and to other key members of Congress. Overwhelming opposition to these budget reductions from Pacific Coast fishery interests, among others throughout the Nation, resulted in legislative proposals to reverse these cuts. As of March, 1, 1982 a substantial portion of the Coast Guard's FY 82 operating budget had been restored.

14. Support State/Federal Recommendations in Developing Fish & Wildlife Programs under Northwest Electric Power Planning and Conservation Act

WHEREAS, the passage of the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (P.L. 96-501) presents a unique opportunity for the rehabilitation of the fish and wildlife resources of the Columbia Basin which have been severely impacted by the construction and operation of the Columbia River hydroelectric system; and

WHEREAS, the Act (P.L. 95-501) establishes the Pacific Northwest Electric Power and Conservation Planning Council (hereinafter called the Council) and charges it with the responsibility of developing and adopting a fish and wildlife program for the protection, mitigation, and enhancement of fish and wildlife resources—including related spawning grounds and habitat—of the Columbia River and its tributaries; and

WHEREAS, the Act requires that the state and federal fish and wildlife agencies and Indian tribes of the Columbia Basin be consulted and be participants in the development of the fish and wildlife program; and

WHEREAS, the intent of the Act is to achieve a balance among competing uses of the river resource and specifically calls for measures which will provide for improved survival of the anadromous fisheries resource at hydroelectric facilities in the Columbia Basin and provide sufficient flow to improve production, migration, and survival of this resource; and

WHEREAS, the measures must be consistent with the legal rights of appropriate Indian tribes of the region; and

WHEREAS, the Pacific Marine Fisheries Commission supported passage of the Act through its 1979 Resolution No. 4 and 1980 Resolution No. 6;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission reaffirms its unanimous action of 1980 and urges the Council to support the goals, objective, and recommendations of the region's fish and wildlife agencies in the development of member state fish and wildlife programs within the intent of the Act;

BE IT LASTLY RESOLVED, that copies of this resolution be provided to the members of the Council, appropriate members of concerned Congressional oversight committees, and to Governors, and Congressional Delegations of PMFC member States.

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

Action and Status

The Northwest Power Planning Council (Council) established by P.L. 96-501 is required to develop and adopt a relevant, workable program to protect, mitigate, and enhance Columbia River anadromous fish resources within one year of receipt of recommendations from the region's fish and wildlife agencies and Indian Tribes. The Council had received an appropriate program on November 15, 1981 but had not taken definitive action to implement its objectives. PMFC provided additional documentation along with the resolution to the Council Chairman in time for inclusion in the record of public hearings scheduled for mid-March, 1982. Copies were also sent to other Council members. Essentially, the bottom line urges the Council to begin now the process of equitable treatment (with energy) of these valuable fishery resources. Parallel letters including the letter to the Council Chairman as an attachment, were sent to Governors of PMFC member States and to the Governor of Montana requesting that they expedite Council action to adopt a relevant and workable program as intended by P.L. 96-501.

16. Congressional Review of Accelerated OCS Lease Sales Schedule

WHEREAS, the United States has off its shores 20 percent of the world's known fishery resources yet because the United States does not fully utilize these resources, the United States is still heavily dependent upon foreign fishery imports which account for 10 percent of the United States' balance of trade deficit; and

WHEREAS, with a program of full utilization of its marine resources combined with sound management, habitat protection, and fishery restoration programs the United States could become a net exporter of fishery products; and

WHEREAS, offshore oil and gas exploration and development can be harmful to fisheries including, but not limited to, the impacts from large oil spills, chronic small oil spills and seepage in the marine environment, the disposal of toxic drilling muds in the marine environment, and the physical interference and disruption of fishing activities; and

WHEREAS, offshore leasing has already begun off Alaska and California and is scheduled to begin at a later date off Oregon and Washington; and

WHEREAS, many of the areas proposed for leasing are areas of low estimated potential for oil and gas but are in important areas for renewable resources and fishing; and

WHEREAS, weather conditions, depths and seismic activity on the ocean floor in many of the areas being proposed increase the likelihood of a serious oil spill or accident that could harm marine resources and the fisheries dependent upon those resources; and

WHEREAS, the Department of Interior has proposed an accelerated 5-year OCS Leasing schedule which would among other things, (1) eliminate consideration of non-oil and gas resources at the early phase of a sale, (2) permit preparation of an area-wide environmental statement rather than area specific statements that could easily overlook sensitive fishery habitats or fishing grounds, (3) eliminate geo-hazard studies during the pre-sale stage, and (4) not allow for publication of specific tracts until 30 days prior to sale; and

WHEREAS, a suspension has been placed on the hydrocarbon ban in marine sanctuaries, and thus could allow oil and gas exploration and development within the boundaries of the Point Reyes-Farallon Islands and Channel Islands National Marine Sanctuaries;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission requests the Congress to conduct oversight hearings on the Department of Interior's accelerated 5-year leasing schedule; and

BE IT FURTHER RESOLVED, that the Pacific Marine Fisheries Commission requests the Departments of Interi-

or and Commerce to provide area-specific environmental assessments so as to afford the maximum protection for renewable resources areas and fishing grounds from oil and gas exploration and development including banning such activities in critical fishery areas; and

BE IT LASTLY RESOLVED, that the Pacific Marine Fisheries Commission requests the Administration to reinstate the hydrocarbon ban in the Point Reyes-Farallon Islands, and Channel Islands National Marine Sanctuaries.

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

17. Support for the Fish and Wildlife Co-ordination Act

WHEREAS, the Fish and Wildlife Co-ordination Act (16 U.S.C. 661 et seq.) concerns the conservation of wildlife, including fisheries, in projects involving the control or modification of any stream or body of water; and

WHEREAS, the Fish and Wildlife Co-ordination Act accords such conservation equal consideration with other uses for water resources including ascertaining from state and federal fishery agencies those conditions necessary for mitigation or compensation resulting from project-occasioned losses of fish; and

WHEREAS, in the western States the Fish and Wildlife Co-ordination Act has been important in protecting and maintaining valuable anadromous and other fisheries; and

WHEREAS, there are current proposals to eliminate or weaken regulations promulgated pursuant to the Fish and Wildlife Co-ordination Act, rules that are necessary for the protection of West Coast anadromous and other fishery resources;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission oppose any effort to repeal the Fish and Wildlife Co-ordination Act or to weaken or eliminate those regulations promulgated pursuant to said Act.

BE IT LASTLY RESOLVED, that copies of this Resolution be provided to the Governors and Congressional Delegations of PMFC's member States.

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

18. Retain Federal Licensing Requirements for Small Hydroelectric Projects

WHEREAS, the development of small hydroelectric projects is now economically feasible as a result of recent federal legislation, including the National Energy Act of 1978 and the 1980 Crude Oil Windfall Profit Tax Act; and

WHEREAS, there has been a 100-fold increase in applications to the Federal Energy Regulatory Commission for small hydroelectric permits at existing hydraulic structures and at other potential sites; and

WHEREAS, projects of less than 5 megawatts are exempted from federal licensing requirements and therefore are not subject to the provisions of the Fish and Wildlife Co-ordination Act; and

WHEREAS, federal legislation has been proposed to exempt projects of less than 15 megawatts from federal licensing requirements; and

WHEREAS, many of these small hydro projects are being proposed for important anadromous fish spawning and nursery streams and rivers, and could adversely affect the fishery resources of these streams and rivers; and

WHEREAS, the significant increase in applications for projects subject to federal licensing is creating hardships for fishery agencies required to provide comment on and conditions to development of hydroelectric projects; and

WHEREAS, it is essential for the protection of West Coast anadromous fishery resources which support large and valuable commercial and recreational fisheries, that fishery agencies be able to provide comments and conditions on hydroelectric projects, including mitigation and compensation measures;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission request that Congress reject any attempt to exempt hydroelectric projects in excess of 5 megawatts from federal licensing requirements; and

BE IT LASTLY RESOLVED, that the Pacific Marine Fisheries Commission requests that Congress appropriate supplemental funding for those State and Federal fishery agencies required to provide comment and conditions on the small hydroelectric project applications.

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

19. Outer Continental Shelf Lands Act Funds for Fisheries Programs

WHEREAS, the national interest would be well-served by applying a portion of the revenues to be derived from exploitation of "non-renewable" natural resources to assure the continued protection, development, and wise use of "renewable" natural resources as a provident investment to benefit future generations; and

WHEREAS, Reagan Administration policy directs that new sources of funding be developed for national programs which more directly relate expenditures to benefits ("user pays" concept); and

WHEREAS, Reagan Administration policy also seeks to decentralize federal control of national programs in favor of regional authority, delegating increasing responsibility for direction and support to the States; and

WHEREAS, these programs must serve a combination of national, regional, and local needs and interests and therefore merit State-Federal sharing of costs as well as responsibilities; and

WHEREAS, Federal revenue-sharing in support of these programs can be accomplished most efficiently via a single consolidation of funds to each State;

THEREFORE BE IT RESOLVED, that the Pacific Marine Fisheries Commission strongly endorses the establishment of a fund derived from a small fraction of revenues generated pursuant to the Outer Continental Shelf Lands Act; that fund to be applied to Federal cost-sharing for coastal zone management programs, fishery programs,

and related activities, in accordance with allocation formulas and procedures to be developed jointly with the States; and

BE IT FURTHER RESOLVED, that the mechanisms for disbursement of these Federal funds be consolidated into single grants to the States for these related purposes, in accordance with guidelines and procedures agreed upon with the States; those procedures designed to provide reasonable in-State flexibility for achieving State and regional objectives, yet at the same time restricting use of funds to long-range natural resource development and management goals; and

BE IT LASTLY RESOLVED, that copies of this Resolution be provided to members of the Congressional Delegations of Pacific Marine Fisheries Commission States, appropriate Congressional Committees, and concerned State and Federal agencies and offices.

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

Action and Status

Immediately subsequent to PMFC's Annual Meeting, the Secretariet received a request from the Subcommittee on Oceanography of the House Committee on Merchant Marine and Fisheries, to testify on the concepts underlying revenue-sharing of H.R. 4597, and addressed by this Resolution. Executive Director Harville developed a written statement and, with concurrence of the other two Interstate Marine Fisheries Commissions, Irwin Alperin, Executive Director of the Atlantic States Marine Fisheries Commission, presented this testimony to the Subcommittee. It is expected that dialogue regarding implementing guidelines and formulas will be further developed at a national meeting of NMFS/State fisheries directors to be held in late April, 1982 (see William G. Gordon's speech, p. 10).

Status Reports on PMFC Activities

Marine Recreational Fishery Statistics Survey

In December 1981, fishery agencies in California, Oregon, and Washington will have completed two and one-half years of data collection under the federally funded Marine Recreational Fishery Statistics Survey program. Methodology calls for two separate surveys: a telephone survey of randomly-selected households designed to estimate fishing effort by mode, and an intercept (creel census) survey designed to estimate catch by mode. In addition to catch and effort data, demographic and economic data are also collected and analyzed. Survey interview goals for 1981 were set at 33,000 field interviews at the completion of each fishing trip and 73,000 telephone interviews. By December the survey will have interviewed (since July 1979) more than 105,000 fishermen in the field and 215,000 households by telephone.

Telephone surveys are conducted at 2-month intervals during a 2-week period at the end of each 2-month sampling wave. Calls are placed at random to households in the survey area. The survey area is comprised of coastal counties in the three Pacific States. Cross checks of fishermen interviewed in the field show that, depending on time of year and county, 87-99% of the marine anglers reside in the telephone survey area. Corrections are then made in the estimates from the telephone survey for anglers not residing in the survey area. The telephone survey area includes about 9.5 million households along the Pacific coast. A random sample of these households is used to produce an estimate of those households containing marine recreational fishermen (prevalence rate) who fished during the previous 2-month sampling wave. This prevalence rate is used to estimate the total number of fishing households and their total fishing trips by mode for the 2-month sampling wave. In addition to obtaining prevalence rates, the telephone survey determines average number of fishermen per fishing household, and the average number of fishing trips within each mode in the 2-month sampling period. Estimates are then made of total fishing trips by mode by area for the 2-month period.

The intercept or creel census survey consists of interviews of fishermen in the field to determine their average catch by mode for each fishing trip. These data are used in conjunction with the effort estimates from the telephone survey to determine total effort and catch by mode for the survey areas. The following tables provide the relative ranking of the ten top species by number and weight for 1980. Fish are identified by the sampler to genus and species, if possible. Also recorded are fish that have been filleted, thrown back, or for other reasons are unidentified. Annual reports for 1979 and 1980 that will provide many catch and effort tables as well as demographic and economic data will be available in early 1982. The Marine Recreational Fishery Statistics Survey will continue in 1982.

Top Ten Species Caught by Numbers and Weight in 1980

Area	Number	Weight
So. California	Pacific mackerel	Pacific bonito
	White croaker	Pacific mackerel
	Pacific bonito	Bocaccio
	Kelp bass	Kelp bass
	Bocaccio	Blue rockfish
	Queenfish	Lingcod
	Blue rockfish	Barred sandbass
	Surfperches	White croaker
	Barred sandbass	Copper rockfish
	Rockfishes	Vermilion rockfish
No. California	Surf smelt	Lingcod
	Night smelt	Surf smelt
	Rockfishes	Blue rockfish
	Staghorn sculpin	Black rockfish
	Blue rockfish	Yellowtail rockfish
	White croaker	Olive rockfish
	Northern anchovy	Canary rockfish
	Lingcod	Bocaccio
	Black rockfish	Redtail surfperch
	Surfperches	Seven gill shark

Oregon	Surf smelt	Black rockfish
	Sculpins	Chinook salmon
	Black rockfish	Redtail surfperch
	Redtail surfperch	Lingcod
	Striped seaperch	Blue rockfish
	Kelp greenling	Starry flounder
	Shiner perch	Striped seaperch
	Staghorn sculpin	Pile perch
	Surfperches	Kelp greenling
	Starry flounder	Surf smelt
Washington	Surf smelt	Black rockfish
	Black rockfish	Lingcod
	Pacific herring	Walleye pollack
	Walleye pollack	White sturgeon
	Redtail surfperch	Pacific cod
	Spiny dogfish shark	Quillback rockfish
	Sculpins	Redtail surfperch
	Pacific cod	Surf smelt
	Staghorn sculpin	Copper rockfish
	Surfperches	Kelp greenling

Marine Recreational Fishery Socioeconomic Survey

A second national survey was begun in early 1981 to provide more extensive socioeconomic data on the marine recreational fishery. This survey was conducted on the Pacific coast in 1981 in conjunction with the Marine Recreational Fishery Statistics Survey. It consisted of a field interview coupled with two telephone surveys — one to randomly-selected fishing households, and a follow-up call to fishermen interviewed in the field. The telephone surveys are conducted by a private consultant. The survey sample size in 1981 was small (1,500 field interviews on the Pacific coast). Extensive data were collected on the capital investment in fishing gear and boats, daily trip expenses, disposition of catch, reasons for fishing, alternative recreational activities, etc. Preliminary tabulations of these data show that the average fishing trip on the Pacific coast for all fishing modes costs about $26 with a standard error of about $2. Costs vary greatly and the final report on this survey will separate these costs by mode: party/charter boat, private/rental boat, beach/bank fishermen, and man-made structures (piers, jetties, etc.) Preliminary results indicate about 65% of a fisherman's expenditures for each trip occur within 5 miles of the fishing site, and that 65% of the catch is retained and 35% is discarded. Of the latter, 80% is returned to the water and 10% is used for bait. Of the 65% retained, 75% is eaten or frozen for later use, and 20% is given away. The top three reasons for fishing were: "relaxation", "for the sport", and "to catch fish". The final report of this one year study will be available in May 1982.

Regional Mark Processing Center

The work of the Regional Mark Processing Center consists of two discrete but interrelated functions:

a) maintain and upgrade a regional data base, including publication of annual data reports, and

b) regional coordination of tagging studies.

Substantial progress has been made in maintaining and upgrading a regional data base for coded-wire tag (CWT) studies. In 1981, an extensive project in software development was completed which permits the Center to more effectively process data. Processing time has been sharply reduced by employing a hierarchial "menu driven" (pre-designed) system which simplifies the use of a number of different programs. The Center acquired a federally-financed (NMFS) computer system after it was determined that time-sharing on the Oregon Department of Fish and Wildlife system had become impractical due to agency needs and usage of that system. One advantage of an in-house computer is direct interaction by and with other agencies through a telephone hook-up. The simplicity of the menu driven system will, in the future, facilitate efficient use of RMPC data banks by others. The annual Mark List and CWT Release Report is now published within the established goal of one to two months after the year's end. This has been made possible by the prompt reporting of new marks and new CWT releases by agency tag coordinators. Publication of past recovery data, however, has been less successful due to a variety of reasons. The 1977 Recovery Report was completed in January, 1981 with publication of California's information. The 1978 Recovery Report was published in May, 1981 but lacked California and Alaska data. Based on current progress in the various States, the 1979 report should be published in early 1982.

Regional coordination was less emphasized in 1981 due, in part, to commitments to upgrade computer software and computer purchase and installation. On the other hand, the Mark Committee evaluated and updated all agreements on fin marking with particular emphasis on regional understandings on the use of the adipose clip and non-standard coded-wire tags. Procedures to be followed in case problems arise on a marking issue were established. Also, RMPC's request of the International North Pacific Fisheries Commission, that Japanese research vessels sample for adipose clips, resulted in recovery of 22 chinook tags, 1 coho tag, and 11 steelhead tags during 1981. Further, the RMPC extensively revised the Pacific Salmon Sampling and Tagging Manual in 1981. New chapters include: Types of Marks, Regional Agreements on Marking, and Reporting Procedures for Marks. In addition, chapters on Tagging, Sampling, and Laboratory Procedures were upgraded.

Control of Interstate Transfers of Shellfish

Beginning in 1979 and continuing into 1981, shellfish scientists from PMFC's member States plus Hawaii, the Province of British Columbia, and the Federal government met periodically to discuss problems and possible solution arising from increasing introductions and transfers of native and exotic shellfish. PMFC's Executive Committee in 1980 approved further investigation of these problems by formally establishing a new subcommittee of the Commission's standing Shellfish Committee. These scientists agreed that significant danger exists to the shellfish resources by accidental introduction of pests, predators,

and disease organisms, and that it is essential to develop a means of control among the States and the Province of British Columbia.

At initial meetings, individual members of the subcommittee agreed to assemble existing information relating to the problem within their area of expertise. Information on the following topics has been assembled and will be distributed to participating fishery agencies:

1. A summary of laws, regulations, and policies of each State concerning shellfish introduction and transfer;
2. Summaries of information on pests, predators, and diseases endemic to abalone and clams;
3. Outlines of pest, predator, and disease problems associated with the freshwater shrimp *Machrobrachium*, Penaeid shrimp, and Dungeness crab.

The history of oyster pests and pathogens has long been assessed and was not included in the subcommittee reviews. A preliminary agreement of policies and procedures to be followed in any consideration of interstate transfers of shellfish has been drafted and reviewed by the subcommittee. Technical agreement on context has been reached, and this draft will be forwarded to appropriate agencies for further review and adoption.

ADMINISTRATIVE REPORTS AND ACTIONS

Executive Committee Actions

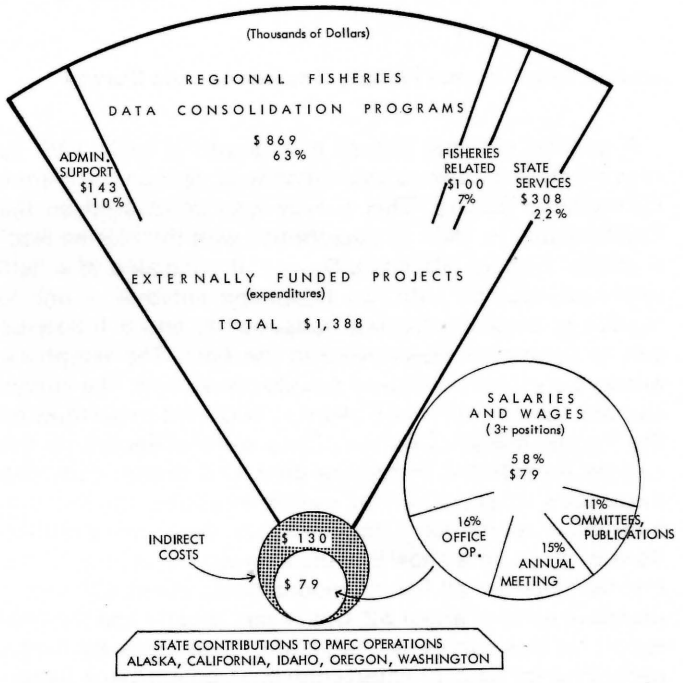
The Executive Committee met on August 6 and November 9 in Portland, Oregon and took the following actions:

1. Approved a proposed 1981-1983 biennial budget expenditure of $506,811, including an addition of $51,600 during FY 1983; (The additional expenditures resulted mainly from increases in employee benefits, operation and maintenance, and cooperative research and management programs.) Also, approved the Treasurer's Report and accepted the Audit Report (See Appendix 1-Financial and Audit Reports);
2. Approved the list of new PMFC Commissioners and Advisors for 1981-1983 and directed the States to take action to improve Advisor participation at the Annual Meeting and in Commission affairs;
3. Approved minor housekeeping changes in employee benefits and the pension plan;
4. Approved a proposal to search for a replacement for the retiring Executive Director and approved drafts of recruitment documents to seek a Deputy Director designate during 1982;
5. Approved four emergency proposals for review by PMFC participants as Resolutions;
6. Approved a meal allowance of $26, and actual cost of rooms for the 1981 Annual Meeting; Directed the staff to survey prevailing per diem rates and develop recommendations for Executive Committee approval and inclusion in PMFC's general guidelines;
7. Assigned oversight responsibility for the Regional Mark Processing Center to the FIN Committee;
8. Approved November 15-17 as the time and the Casa Munras Hotel in Monterey, California as the place for the 1982 Annual Meeting.

Executive Director's Report

Service Functions

PMFC's service functions in 1981 continued long standing programs of data collection and dissemination, management-related research, and other cooperative programs. The functions were coordinated, in large part, under external funding support as indicated in the following illustration.



From September 1, 1980 to September 30, 1981, PMFC has managed some 25 different contracts and expended a total of $1,388,000. These conracts provide support for about 70 man-years of fisheries work in our Pacific States, principally in California, Oregon and Washington. PMFC's payroll for these projects currently is on the order of 100 employees, who are paid by the Commission but are supervised by their state fishery project leaders. The payroll averages about $75,000 a month.

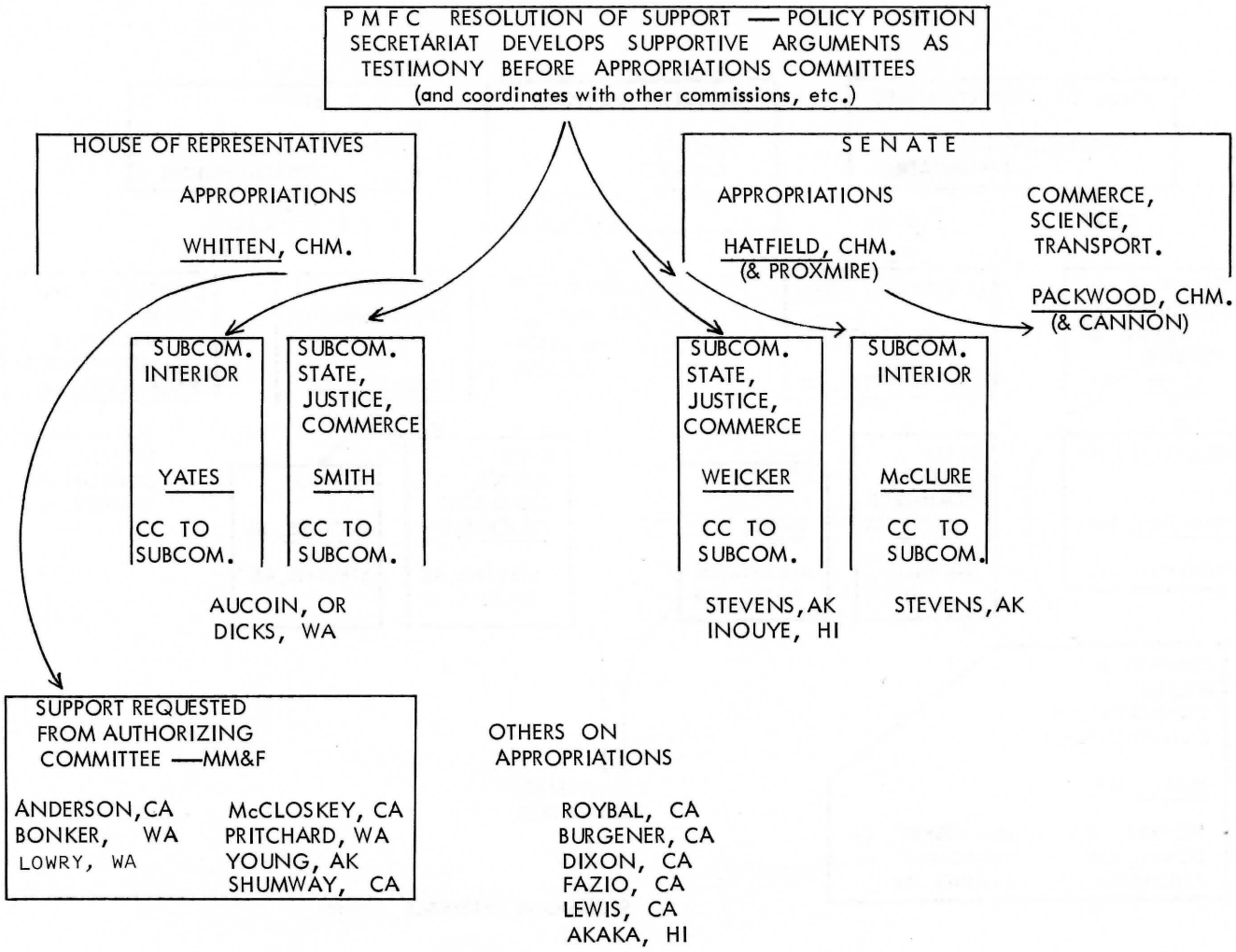
The illustration graphically indicates the relationship of external funding to PMFC's basic budget as provided by its member States, and the approximate distribution of this effort. State contributions in 1981 were $79,000. Federal contracts provided an additional $1,388,000 in contract support which, in turn, generated $130,000 in indirect costs to support those field projects. PMFC's secretarial

support thus totaled about $209,000 - state contributions plus the accrued indirect costs. Contract support efforts were grouped into four general categories: (1) about 10% of the total, or $143,000 provided broad administrative support for services such as regional fishery management council participation, assistance to the Columbia River Fisheries Council, assistance to the West Coast Aquaculture Foundation, and assistance to PMFC's State/Federal programs; (2) about 22%, or $300,000 provided funds to support programs of salmon sampling, data management, etc.; (3) by far the largest fraction, roughly 65%, or $900,000 was expended for interstate data collection, processing and dissemination, maintaining the salmonid regional mark processing center, operation of the Pacific Coast segment of the Marine Recreational Fisheries Statistical Program, and operations related to the Pacific Fishery Information Network (PacFIN); and (4) about 7%, or $100,000 was provided to the States for specific fishery projects for albacore, herring, swordfish, and marine mammals. While these four categories are somewhat artificial, they relate to PMFC's goals and objectives in support of conservation and management of shared fishery resources, and to fisheries development.

Legislative Advocacy

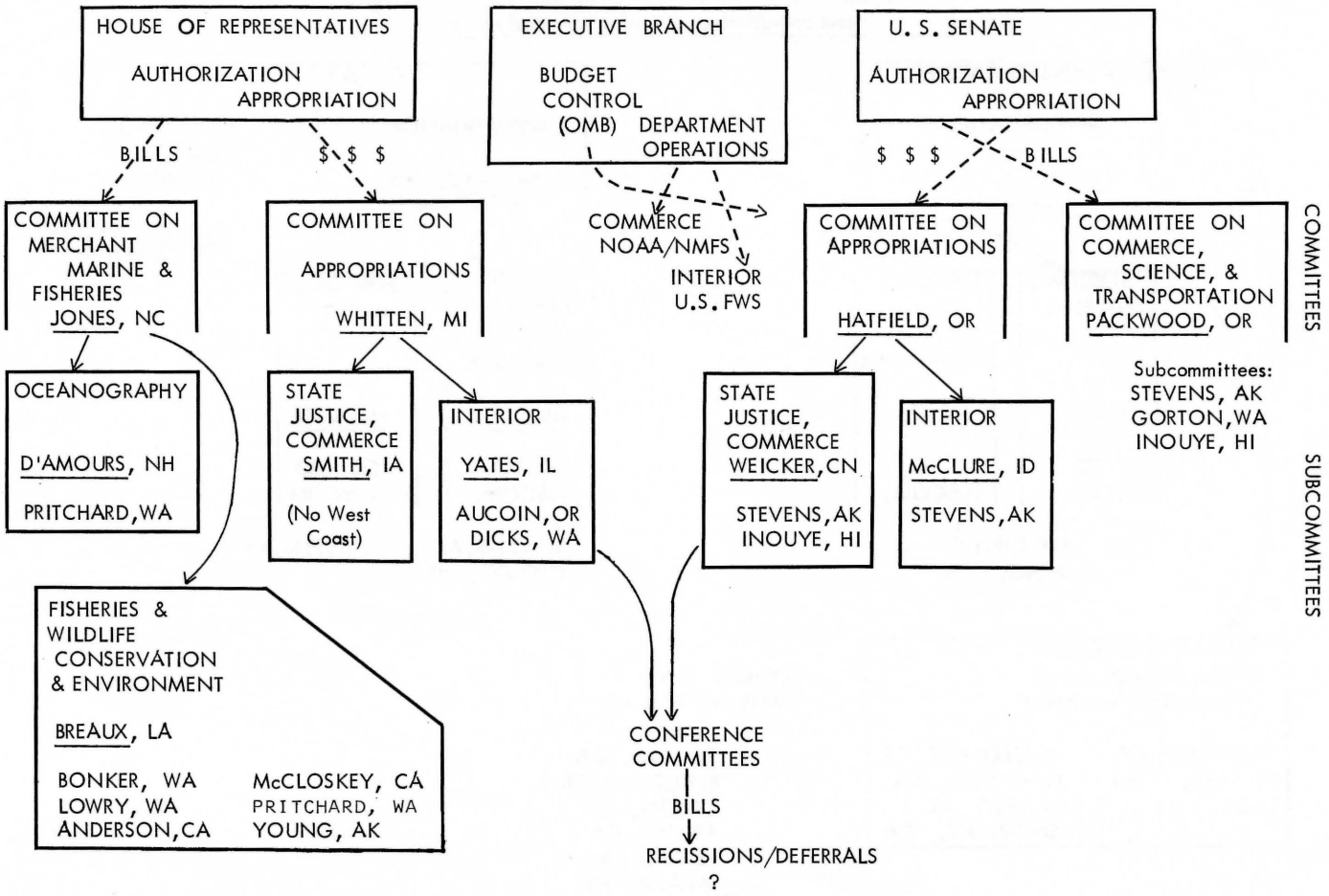
Among other important external functions conducted by PMFC's Secretariat, is that of legislative advocate for Pacific Coast fishery interests, particularly with the Congress. In broad terms, this relates to Resolutions adopted by the Commission and in which PMFC's concerns are addressed. Because PMFC's national legislative advocacy role is so important to the implementation of its policies and objectives, Executive Director Harville reviewed the procedures which must be followed for an effective presentation of PMFC views to the Congress. He stressed that this is of particular importance because the Secretariat cannot be effective alone - it needs the vigorous support of the member States in order to gain the attention of the Congressmen concerned, and it requires the cooperation of the Atlantic and Gulf Coast States Marine Fisheries Commissions to broaden the base of influence as the combined interstate Commissions speak for 25 coastal States. When State agencies and leaders in the private sector support Commission initiatives to their own Congressmen and Senators, the additional staff work on behalf of the Resolutions is extremely persuasive.

EXAMPLE OF A SINGLE STEP IN LEGISLATIVE ADVOCACY PROCESS—TESTIMONY ON BEHALF OF P.L. 89-304
(FOR F Y — 1982 BUDGET)



Harville reviewed briefly the steps required to gain Congressional support for Pacific Coast concerns through PMFC's resolution process. Each issue is addressed with strong arguments and effective documentation for the action requested. As spokesman for the States, the Executive Director must understand the legislative process, must know who the legislative movers are in both the House and Senate, and must establish credibility so that whenever requests are made they will influence those movers to take the desired action. The Congress consists of the House and the Senate - either may introduce bills which may eventually become laws. Thus, it is essential that the Executive Director be familiar with activities of authorizations Committees as well as appropriations Committees in both Houses. While the latter Committees are the ones that appropriate funds for authorized expenditures, it is the Executive Branch, through its Office of Management and Budget, that actually controls the budget and has the capacity to divert Congressionally-approved funding by means of recissions or deferrals.

In addition, continued adequate funding of existing public laws affecting fisheries is of particular concern to PMFC. Strong arguments for funding grant-in-aid programs such as the Anadromous Fish Conservation Act (P.L. 89-304), and the Commercial Fisheries Research and Development Act (P.L. 88-309), must annually be emphasized through policy positions and statements of support or funding can be lost in the budget shuffle. In 1979, 1980, and 1981 PMFC emphasized its continued support for these two public laws. This support began with PMFC Resolutions, followed by development of strong justifications for program extension, the coordination of these efforts with the Atlantic and Gulf States Marine Fisheries Commissions and other organizations, and finally with personal testimony before the Appropriations Committees. In large part, the persuasive arguments hinge on such matters as the existing investment in data programs, the millions of dollars in coded-wire tagged fish now in the ocean and waiting to be recovered which would be lost if anadromous fish recovery programs were no longer funded. Coordinated arguments also emphasized the importance of shared resources, and the role of the Federal government in managing those resources. Further, the relationship between data produced by these programs and subsequent management decisions of the Regional Councils is stressed, as is the international posture of the United States vis-a-vis Canada, *to wit:* implementation of a negotiated salmon treaty requires that both countries work together effectively in data collection and analysis, and at the cooperative research level. It is these kinds of arguments, beginning with the policy statements, and further documented by PMFC's Secretariat with the help of key State agency personnel, and coordinated with the other Interstate Marine Fisheries Commissions, that have been instrumental in the past in obtaining moderate levels of funding for these programs.



Treasurer's Report

At the Annual Meeting, Treasurer Gerald L. Fisher presented the Report of Receipts and Disbursements for the 13-month period September 1, 1980 to October 1, 1981 (see Appendix 1 - Financial and Audit Reports). Receipts were: (1) member States contributions of $79,200 without California's 1979-1980 and 1980-1981 fiscal year contributions (at the meeting, California declared its intent to pay its 1981-82 contribution of $26,000 during November 1981); (2) external contract payments of $1,506,855 with the National Marine Fisheries Service paying $1,081,106; and (3) interest of $6,667. Disbursements totaled $1,502,293 divided between PMFC general support of $214,777 and external contract expenses of $1,387,515. The audit report for the fiscal year ending June 30, 1981 found the financial statements of the Commission to be in satisfactory condition.

Fisher further reported that the Executive Committee had approved a revised 1981-1983 budget of $506,811. This represented an increase of $51,600 over the budget proposed and approved earlier in 1981, and was necessitated by increased expenditures associated with office operations supported by indirect costs charged to external contracts. Because of a substantial carryover balance from prior fiscal years, however, the revised 1981-1983 budget can be accommodated without an increase in State contributions.

Publications in 1981

The PMFC document entitled *Releases of Coded-Wire Tagged Salmon and Steelhead from Pacific Coast Streams Through 1980,* published in February 1981, is the eighth of a series of annual reports detailing the use of coded-wire tags in Pacific Coast States. This lists all previously-known codes, necessary corrections, and any new codes released in 1980. This listing replaces all previous release reports and is the most current data available to the Regional Mark Processing Center (RMPC).

The *1981 Mark List,* also published in February, contains a record of all groups of salmon and a selected group of steelhead (primarily from the Columbia River basin) that had been fin marked prior to release.

The 1978 Pacific Salmonid Coded-Wire Tag Recoveries report was published and distributed in May 1981. This report contains the number of observed and estimated tags (the latter is based on expansion factors developed by each State) taken in Pacific Ocean fisheries.

Three issues of the *Marine Recreational Fishery Statistics Survey Newsletter* were published and distributed in 1981. This leaflet provides Survey participants and other interested parties with current information on Survey-related business.

The *33rd Annual Report of the Pacific Marine Fisheries Commission for the Year 1980* was published and distributed in May 1981. In addition, the 34th and 35th issues of the *PMFC Newsletter* were published in September and December, respectively. The latter issue provided highlights of Annual Meeting events including summaries of contributions to the symposium on fishery management innovations (see p. 5).

1982 Annual Meeting

The 1982 Annual Meeting will be held on November 15-17 in Monterey, California, at the Casa Munras Hotel.

Personnel

The following were Commissioners during all or part of 1981:

Alaska
- Dr. Ronald O. Skoog, Juneau — 3rd Vice Chairman
- Honorable Richard I. Eliason, Sitka
- Charles H. Meacham, Juneau

California
- E. Charles Fullerton, Sacramento — 1st Vice Chairman
- Helen Xitco, Lakewood

Idaho
- Jerry M. Conley, Boise — 2nd Vice Chairman
- Steven J. Herrett, Twin Falls
- Keith Stonebraker, Lewiston

Oregon
- Dr. John R. Donaldson, Portland — Chairman
- Don Barth, Newport
- Herbert F. Lundy, Lake Oswego

Washington
- Rolland Schmitten, Olympia — Secretary
- Robert D. Alverson, Seattle
- Honorable John Martinis, Olympia

Coordinators for 1981 were:

Alaska
- Stan Moberly, Spec. Ass't. External Affairs, Alaska Department of Fish and Game

California
- Mel Odemar, Project Manager, California Department of Fish and Game

Idaho
- John Coon, Anadromous Fisheries Manager, Idaho Department of Fish and Game

Oregon
- Kirk Beiningen, Executive Assistant, Oregon Department Fish and Wildlife

Washington
Fred Holm, Interagency Coordinator, Washington Department of Game
Dr. Charles E. Woelke, Assistant Director for Intergovernmental Operations, Washington Department of Fisheries

PMFC's State Coordinators facilitate all aspects of PMFC programs within their State agencies. They constitute a scientific/management advisory body to PMFC's Secretariat and assure appropriate communications among PMFC and agency personnel and the States' PMFC Advisors.

Advisory Committee members during 1981 were:

Alaska
William Bernhardt, Sitka
Ole Harder, Kodiak
Pete Islieb, Cordova
Bruce Lewis, Juneau
Ed Linkous, Ketchikan
Andy Mathisen, Petersburg
Larry Powell, Yakutat—Section Chairman

California
Frank Mason, San Diego
Carl E. Nettleton, San Diego
Anthony V. Nizetich, Terminal Island
Robert Ross, Sacramento—Section Chairman
L.R. Budd Thomas, Fields Landing
Roger Thomas, San Jose
Paul Wood, Bodega Bay

Idaho
Fred A. Christensen, Nampa—Section Chairman
Richard A. Schwarz, Idaho Falls
E.G. Thompson, Sandpoint

Oregon
Theodore T. Bugas, Astoria
Don Christenson, Newport—Section Chairman
~~Charles S. Collins, Roseburg~~
G. (Joe) Easley, Astoria
~~Robert Hudson, Charleston~~ Jim Sugg
John Marincovich, Astoria
Phillip W. Schneider, Portland

Washington
Philip Anderson, Westport
Barry Collier, Seattle
Earl Engman, Tacoma—Section Chairman
Kent Martin, Skamokawa
Guy McMinds, Taholah
Rudy Petersen, Seattle
Ted Smits, Seattle

Elections were held at the 1981 Annual Meeting to select the Commission's Officers and the Advisory Committee's Steering Group for 1982.

Officers for 1982 are:

Chairman—
E. Charles Fullerton, Director
California Department of Fish and Game
1st Vice Chairman—
Jerry M. Conley, Director
Idaho Department of Fish and Game
2nd Vice Chairman—
Dr. Ronald O. Skoog, Commissioner
Alaska Department of Fish and Game
3rd Vice Chairman—
Rolland A. Schmitten, Director, Washington Department of Fisheries
Secretary—
Dr. John R. Donaldson, Director
Oregon Department of Fish and Wildlife

The 1982 Steering Group is composed of:

Committee and California Section Chairman—Rob Ross
Alaska Section Chairman—Larry Powell
Idaho Section Chairman—Fred A. Christensen
Oregon Section Chairman—Don Christenson
Washington Section Chairman—Earl Engman

During 1981 the PMFC Secretariat was composed of:

Dr. John P. Harville—Executive Director
Pam Kahut—Bookkeeper/Secretary, Administrative Assistant
Debbie Wilkins—Secretary (Replacing Sandy Viles)
Gerald L. Fisher—Treasurer
Arthur F. Gallagher—Assistant to the Executive Director (Resigned March 1981)
Dr. J. Kenneth Johnson—Coordinator, Regional Mark Processing Center
Russell G. Porter—Coordinator of the Marine Recreational Fishery Statistics Survey, Pacific Coast Region
Grahame King—Computer Consultant to the Regional Mark Processing Center (Resigned July 1981)

Assisting the staff part-time were:
Leon A. Verhoeven, Consultant
Henry Q. Wendler, Special Assistant—Consultant

APPENDIX 1 — FINANCIAL AND AUDIT REPORTS

1981 Financial Statement

The Commission receives its financial support from legislative appropriations made in accordance with Article X of the Interstate Compact (creating the Commission) 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 those member States having as a boundary the Pacific Ocean; and five percent (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

September 1, 1980 to October 1, 1981

CASH BALANCE September 1, 1980 (October 1980 Treasurer's Report)			$109,286.52
RECEIPTS:			
Contributions by Member States[1]			
Alaska (FY 1982)	$29,000.00		
Idaho (FY 1982)	5,300.00		
Oregon (FY 1982)	22,300.00		
Washington (FY 1982)	23,400.00		$80,000.00
Other Receipts;			
Washington Department of Game	$59,613.26		
Pacific Fishery Management Council	68,625.90		
California Department of Fish and Game	11,485.55		
National Marine Fisheries Service	1,081,106.78		
Oregon Department of Fish & Wildlife	27,335.77		
Washington Department of Fisheries	213,735.67		
Pacific Northwest Regional Commission	36,250.00		
Miscellaneous	8,702.79		$1,506,855.72
Interest on Saving Certificates			$6,667.60
DISBURSEMENTS:			
Annual Meeting, October 1980, Renton			
Commissioners	$2,928.37		
Advisory Committee	2,194.79		
Admin. & Research Staffs	6,792.98		
Tape Recording & Room Rental	1,150.59	$13,066.73	
Salaries & Wages		84,827.76	
Retirement & Social Security		12,565.09	
Medical Insurance		5,248.72	
Travel Expenses, unclassified		4,436.58	
Office Supplies & Maintenance		7,473.80	
Telephone & Telegraph		5,260.83	
Postage, Freight, Express		3,698.72	
Rent, headquarters space		8,445.73	
Printing & Publications		3,178.81	
Bond, Accident & Liability Insurance Premiums		5,655.27	
Library Supplies		781.79	
Capital Outlay		279.95	
Professional Services		31,001.55	
Cooperative Research; Otolith Reader & Regional Mark Center Projects		8,818.33	
Prepaid Employer Pension Plan Contributions		19,405.97	
Other		631.84	
Subtotal State Funded Expenditures		$214,777.47	
External Contract Expenditures			
Council Liaisons	$26,594.51		
PNRC-Columbia River Fisheries Council	29,883.67		
Wash. Coastal Sampling	156,062.07		
Federal & Oregon Shares of Salmon Maturity Study	2,596.24		
State-Federal Relations Contracts	14,135.97		
Federal Share of Otolith Reader	12,035.29		
NMFS-Regional Mark Center	9,635.21		
NMFS-Regional Data Coordination	4,828.25		
NMFS-Marine Recreational Survey	586,736.43		
NMFS-West Coast Aquaculture Foundation	65,424.13		
NMFS-Fisheries Development in Pacific Is.	7,037.21		
NMFS-Albacore Logbook & Port Sampling	48,831.14		
NMFS-Swordfish Sampling	3,082.62		
PNRC-Regional Mark Coordinator	36,499.53		
NMFS-Herring Observers	5,838.99		
NMFS-Compatible Coastwide Fisheries Info.	197,803.20		
PFMC-Oregon Groundfish Monitoring System	1,540.16		
NMFS-Oregon Hatchery Scales Program	31,335.93		
NMFS-Oregon Coded-Wire Tag Sampling	35,271.38		
PFMC-Oregon Troll Salmon Statistics	31,152.89		
USFWS-OSU Studies on Feed. Habits, etc. on Juvenile Salmon	1,270.08		
PFMC-Oregon Ocean Salmon Stock Distribution	22,466.33		
WDG-Marine Mammal/ Fishery Interactions	27,016.12		
Other	30,438.44		
Subtotal External Contr. Expenditures	$1,387,515.79		
Total Disbursements		$1,602,293.36	
CASH BALANCE, September 30, 1981		100,516.58	
		$1,702,809.84	$1,702,809.84

[1]California has advised its intent to pay 1981-82 contribution ($26,000) in November

(The Executive Committee approved the following biennial budget at its meeting on October 6, 1980.)

Revised Biennial Budget for July 1, 1981—June 30, 1983

Salaries and Wages	$184,836
Fringe Benefits:	
Industrial Accid. Ins.	1,848
Social Security	9,448
Retirement Pension Annuity	14,760
Medical & Dental Insurance	8,240
Unemployment Comp. Payments	3,000
Group Life Insurance	3,200
Subtotal Personnel Services	$224,300
General, Operating & Maintenance	
Office Supplies	$15,500
Tel & Tel	14,100
Postage	10,100
Rent - Hdqtrs. Office & Other	18,500
Treasurer's Bond	300
Accounting Fees: Independent Audit	5,700
Travel - Not Otherwise Classified	12,700
Library Supplies	900
Professional Services	20,000
Liability Insurance	11,200
Miscellaneous	500
Subtotal General, Opr., & Maint.	$109,500
Annual Commission & Staff Meetings	
Advisory Comm. - Travel Exp.	$26,221
Commissioners - Travel Exp.	11,781
Res. & Mgt. - Travel Exp.	19,623
Admin. Staff - Travel Exp.	2,950
Mtg. Rms., Steno, Sound Rec'd.	1,350
Pre-mtg. In-State	1,200
Spring and Special Meetings	
Executive Comm. - Travel Exp.	1,500
Mgt. & Res. Special Meetings	11,700
Subtotal Meetings	$76,315
Publications	
Annual Reports Nos. 34 and 35	$8,500
Data Series	800
Subtotal Publications	$9,300
Cooperative Research & Management	
Otolith Reader-25% Match. Share	$21,300
Mark Center-33% Match. Share	64,400
Subtotal Cooperative R & M	$85,700
Capital Outlay	$1,700
TOTAL EXPENDITURES	$506,811
REVENUE	
Interest Income	$10,000
External Contracts Indirect Costs	133,000
State Contributions:	
Alaska	58,000
California	52,000
Idaho	10,600
Oregon	44,600
Washington	46,800
State Contr. Subtotal	$212,000
Total Revenue	$355,000
Balance Avail from Previous Year	201,716
Total Available	$556,716
Less Expenditures	$506,811
Amount Carried Forward to Next Year	$49,905

Audit Reports

CAHALL & ROBERTS
Certified Public Accountants
10700 S.W. Beaverton Highway, Suite 500
Beaverton, Oregon 97005
September 2, 1981

The Board of Commissioners
Pacific Marine Fisheries Commission
Portland, Oregon

We have examined the statement of assets and liabilities arising from cash transactions of Pacific Marine Fisheries Commission as of June 30, 1981, and the related statements of revenue collected and expenditures, changes in cash position and changes in fund balance for the year then ended. Our examination was made in accordance with generally accepted auditing standards and, accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As described in Note 8, the Commission's policy is to prepare its financial statements on the basis of cash receipts and disbursements, with the exception of the accrual of expenses on the General Fund. Consequently, certain revenue and related assets are recognized when received rather than when earned in all funds, and certain expenses are recognized when paid rather than when the obligation is incurred in the special projects funds. Accordingly, the accompanying financial statements are not intended to present financial position and results of operation in conformity with generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly the assets and liabilities arising from the cash transactions of the Pacific Marine Fisheries Commission as of June 30, 1981, and the revenue collected and expenses paid during the year then ended on the basis of accounting described in Note 8, which basis has been applied in a manner consistent with that of the preceding year.

Cahall and Roberts

Balance Sheet June 30, 1981

ASSETS

	General Fund	Property Fund
CURRENT ASSETS		
Cash on hand and in savings	$725	
Cash in certificates of deposit	85,000	
Receivables:		
Due from Washington Department of Fisheries		
-Otolith Project	2,802	
-Ocean Salmon Sampling	29,529	
-Ocean Salmon Sampling	30,942	
Due from Washington Department of Game		
-Marine Mammal Study	6,908	
Due from National Oceanic and Atmospheric Administration		
-Contract #81-ABH-00005	283	
-Contract #79-ABC-00179	537	
-Contract #80-ABC-00191	5,275	
-Contract #03-78-MO2-295	1,909	
-Contract #79-ABC-00207	32,727	
-Contract #79-ABC-00228	896	
-Contract #79-ABC-00260	9,734	
-Contract #80-ABH-00034	9,367	
-Contract #80-ABC-00245	3,030	
-Contract #80-ABH-00072	6,248	
Due from Pacific Northwest Regional Commission		
-Coded-wire Tag Studies	3,386	
-Columbia River Plan	12,370	
Due from Pacific Fisheries Management Council		
-Salmon distribution	18,325	
-Salmon statistics	13,857	
Due from Oregon Department of Fish and Wildlife	6,393	
Due from U.S. Fish & Wildlife	117	
Prepaid employee pension plan contribution	121	
FIXED ASSETS		
Investment in furniture and equipment		$38,827
Total assets	$280,481	$38,827

	General Fund	Property Fund
LIABILITIES		
Bank overdraft (checking account)	$62,881	
Accrued liabilities	791	
Payroll tax withholding payable	21	
Unexpended grant funds:		
Due to National Oceanic and Atmospheric Administration		
-Contract #79-ABC-00175	3,500	
-Contract #80-ABD-00006	265	
-Contract #80-ABD-00033	8,676	
Due to California Dept. of Fish and Game	152	
Total liabilities	$80,393	0
FUND BALANCES		
General fund balance	200,088	
Property Fund balance		$38,827
Total liabilities and fund balances	$280,481	$38,827

APPENDIX 2 — PACIFIC COAST FISHERY REVIEW REPORTS

Albacore Fishery in 1981

The 1981 albacore catch by U.S. vessels fishing off the Pacific Coast is estimated at 27,000,000 pounds. Although this is roughly 2/3 of the 25-year average (Table 1), it exceeds the 1980 landings by almost 13,000,000 pounds. Washington landings totalled 1,800,000 pounds, up 501,000 pounds from 1980. Oregon's landings of 7,077,000 pounds reflect an increase of 3,827,000 pounds over the 1980 landings. California in 1981, like Oregon, almost doubled its 1980 landings, with an estimated harvest of 18,000,000 pounds (Figures 1 and 2). U.S. vessels fishing the Midway Island area (Central North Pacific) experienced good fishing and landed an additional 3,000,000 pounds in Hawaii and Alaska.

TABLE 1. Albacore landings in California, Oregon and Washington (in thousands of pounds)

Year	California	Oregon	Washington	Total
1956	37,005	3,653	630	41,288
1957	43,525	2,702	433	46,660
1958	27,188	9,754	1,503	38,445
1959	32,740	10,574	2,961	46,275
1960	35,113	4,563	526	40,202
1961	29,123	3,250	456	32,829
1962	36,622	8,949	365	45,936
1963	48,860	11,400	527	60,787
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	1,240	48,111
1970	29,932	21,782	4,390	56,104
1971	36,117	8,420	5,250	49,787
1972	21,001	23,056	16,238	60,295
1973	8,641	16,350	14,446	39,437
1974	11,806	25,225	17,983	55,014
1975	15,413	17,166	16,297	48,876
1976	27,754	5,932	7,202	40,890
1977	15,905	4,425	4,948	25,278
1978	21,000	11,248	5,008	37,256
1979	7,235	3,105	830	11,170
1980	9,500*	3,250	1,299	14,049
25-year average	25,043	13,049	4,441	42,627
1981	18,000*	7,077*	1,800*	26,877*

*Preliminary

Conditions Affecting the Fishery

The U.S. coastal albacore catch was the best in three years. The improvement over the last two seasons was attributed to: (1) early arrival of fish along the entire coast; (2) abundance of the 12-lb. size class off California; and (3) development of a highly productive fishing area, 800 to 1,000 miles off Oregon. Factors limiting the albacore catch were: (1) no inshore fishery off southern and central California; (2) closure of Mexican waters to U.S. fishermen; and (3) intermittent rough weather which restricted fishing effort from central California to Washington.

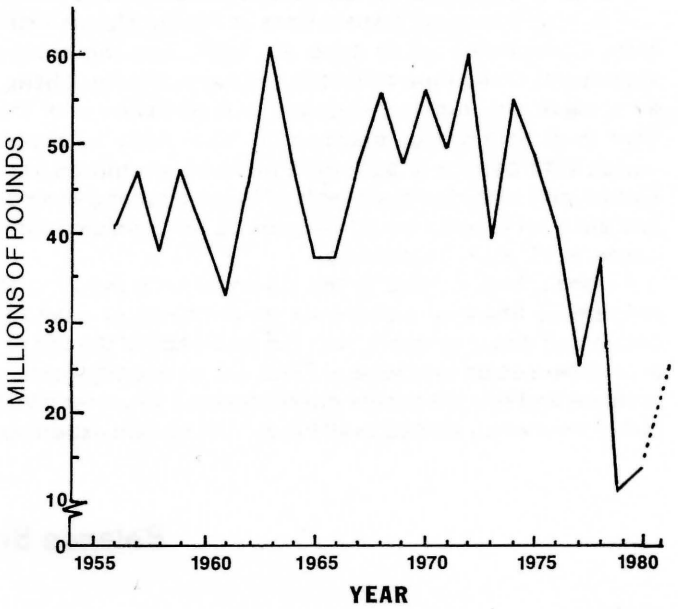


FIGURE 1. Combined annual landings of albacore in California, Oregon and Washington, 1956-1981.

California

The California albacore fishery for 1981 began with minor scattered catches of 10 to 30 fish per day taken 180 to 360 miles off San Diego during mid-June. By late June, fishing ranged from southwest of Pt. Loma to 200 miles west of the San Juan Seamount with occasional individual vessel catches of 100 fish per day being reported. Fish were mixed into two size groups: 12 to 14 lb and 20 to 25 lb. They were taken primarily with trolling gear. The majority of the fleet remained in port this month awaiting reports of consistent inshore catches. The high cost of fuel reduced the traditional early scouting efforts of the fleet.

In July fishing was widespread along the coast from the Mexican Fishery Conservation Zone (FCZ) to between 800 and 900 miles west of Crescent City. The most consistently productive areas were: 60 Mile Bank; 100 miles southwest of Cortes Bank; and 200 miles west of the San Juan Seamount. High catches ranged from 150 to 200 fish per day, but the average was about 50 to 60 fish per day. The fish were from 8 to 35 lb with a mean of 15 to 20 lb. Except for a few days of inshore fishing off San Diego (50-60 miles), albacore remained mainly offshore at least 100 miles. Sport boats from San Diego enjoyed good fishing; however, because of distance to the fishing grounds, trips of 1½ days were required.

Central and northern California inshore waters during July were generally too cold for albacore, yet widely scattered catches of 10 to 15 fish per day per boat were intermittently made along the entire coast from Pt. Conception to Cape Mendocino. The offshore fishing 800 to 900 miles west of Crescent City was excellent with catches per boat of up to 700 fish per day, averaging about 11 lb per fish. Several California boats moved north to fish off Oregon the latter part of July.

In August scattered fishing occurred from the Mexican border north to the Mendocino Ridge. Early in the month the most productive areas were off southern California, mainly 100 to 250 miles southwest of San Diego and the "1820 Spot" - 205 miles off of Pt. Conception. Jig boats averaged 40 to 60 fish per day with high catches of up to 200 fish per day. The fishery harvested mixed-size fish, ranging from 10 to 35 lb with modes at 12 and 21 lb. Good fishing developed the latter part of the month 150 miles west of Monterey and 90 miles off Cape Mendocino. Jig and bait boats averaged about 100 fish per day in these areas. Late in the month, strong winds hampered the fleet and forced boats into ports along most of the central and southern California coasts.

During September good fishing ranged from 200 miles southwest of Pt. Conception to 90 miles off Cape Mendocino. Daily catches per boat averaged about 40 to 60 fish with occasional highs of 300 fish per day. Fishing was hampered by intermittent rough weather. The most productive areas were: the "1820 Spot" - 230 miles southwest of Morro Bay; 150 miles west of Monterey-San Francisco; and the Gorda Valley, southwest of Cape Mendocino. Except for a few albacore southwest of Cortes Bank, southern California waters were unproductive in September.

In October fair fishing ranged from 150 to 200 miles off the coast between Monterey and Cape Mendocino. Poor sea conditions continued to intermittently hamper fishing. Jig boats averaged between 10 and 30 fish per day with some top catches of 150 fish or more. Toward the end of the month, trolling success declined to 1 to 6 fish per day and most jig boats subsequently left the fishery for the season. Although bait boats fared better off of Ft. Bragg and the upper "2000 Spot" west of San Francisco, by the end of the month the 1981 season was over.

The California fishery this year caught fish ranging between 6 and 50 lb with the 12 to 13-lb class predominant. The season was the best in 3 years and with landings estimated to be around 18,000,000 lb.

Oregon

Commercial catches occurred off the Oregon coast on July 5 about 80 miles west of Coos Bay in 61°F temperature water, when several boats reported catches as high as 120 fish. The same day several other boats reported catching 20 to 35 fish about 40 miles west of Newport. Fishing success increased during the second week of July with catches ranging from 25 to 250 fish per day from Cape Blanco to Newport and 40 to 130 miles off shore. The fish averaged 10 to 15 lb, and water temperatures were 60° to 62°F. During the second half of July a large fleet of boats fished along the entire Oregon coast mostly within 120 miles of shore, on fish that averaged 10 to 20 lb. Daily catches ranged from 50 to 300 fish per day with the best fishing occurring northward to the Columbia River as time passed. Late in the month, 20 to 30-knot winds hampered the fleet. On July 28 and 29 the American Fishermen's Research Foundation (AFRF) charter vessel *OUTLAW* caught 301 and 263 fish about 700 miles west of the central Oregon coast. July landings totalled 1,866,800 pounds.

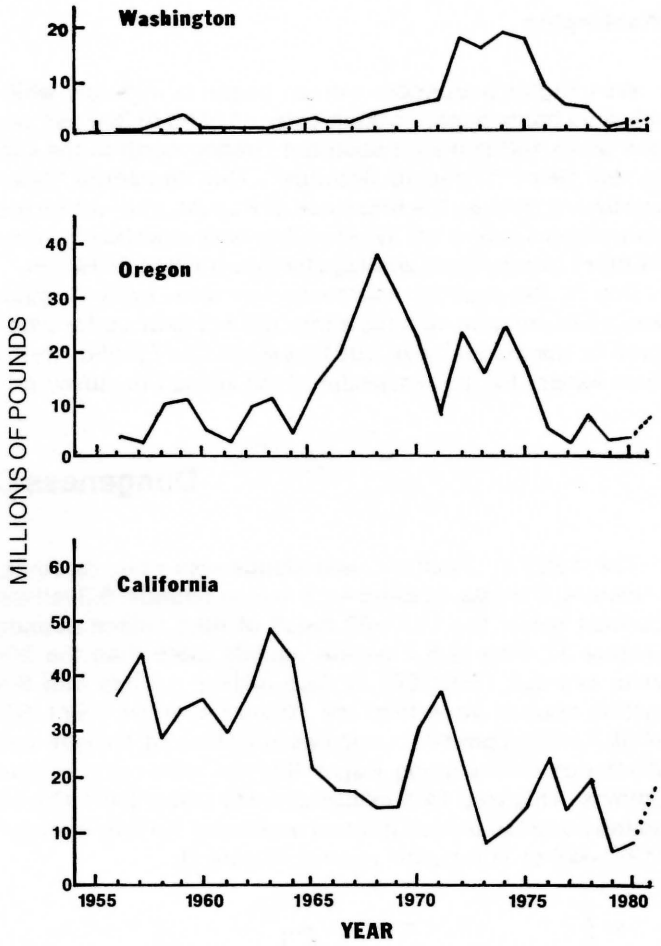


FIGURE 2. Annual albacore landings by State, 1956-1981.

During the first half of August catches inshore dropped to between 20 and 50 fish per day but larger vessels found consistently good fishing 500 to 1,000 miles offshore. These catches averaged 100 to 300 fish per day with high catches of over 600 fish per day. These fish ranged in size from 11 to 13 lb. The area of best catches gradually moved northeastward as the month progressed, so that by the end of August the fleet was 400 to 700 miles off the Columbia River. During the second half of the month, catches ranged from 20 to 50 to highs of 100 to 400 fish per day and then became spotty. Many boats left the area at the end of the month as water temperatures dipped and catches continued to decline and become more scattered. August landings totalled 4,177,181 lb.

In September some large vessels fished the offshore area but catches were sporadic and probably averaged

less than 100 fish per day. The weather became increasingly worse and by the end of the month most boats had either left the Oregon area, quit for the season, or headed toward California. September landings in Oregon totalled 1,032,264 pounds.

Little fishing occurred after September and only a few scattered catches were reported by boats moving through the area. Preliminary total landings in Oregon for 1981 were 7,076,531 lb.

Washington

Washington's albacore season began in mid-July when a few jig boats began making catches of 50 to 300 fish per day 90 to 150 miles off southern Oregon north to the Columbia River "Dumping Grounds". This nearshore "bite" continued through the first week of August, after which the nearshore fishery off Washington was practically nonexistent. Washington landings for July totalled 94,600 lb.

Due to the lack of nearshore fish after early August, many Washington vessels either did not gear up for albacore or concluded their 1981 season. The Pacific Northwest fishery for the remainder of the season occurred primarily in waters 400 to 1,000 miles offshore. Some excellent catches of 300 to 500 fish per day were reported during late August on fish averaging 11 to 13 lb. Fish concentrations, however, were rather "spotty" and average catches per boat for the entire fleet were usually between 50 and 100 fish per day. Poor weather conditions and lack of fish prevented the development of an albacore fishery off Vancouver Island, Canada. Washington landings for August were 1,136,400 lb. The offshore nature of the fishery led to the failure of the Washington sport charter boat fishery for albacore during 1981. Fishing effort off Washington declined during early September and most boats moved southward to California. September landings were 420,500 lb and the season terminated with only 140,000 lb being landed in October. Preliminary landings in Washington for 1981 were 1,791,500 lb.

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Dungeness Crab Fishery, 1980-81

The 1980-81 Pacific Coast Dungeness crab landings, including Canada, totalled 44.2 million pounds, 5.3 million pounds below the 1979-80 catch of 49.5 million pounds (Figure 1). This is 5.7 million pounds more than the 20-year average (1961-80) of 38.5 million pounds and 8.5 million pounds more than the 10-year average (1971-80) of 35.7 million pounds. Landings in California, Oregon and Washington (excluding Puget Sound), were 24.0 million pounds. This was 14.4 million pounds under the 1979-80 season and 3.0 million pounds under the 10-year average (1971-80) of 27.0 million pounds (Figure 2).

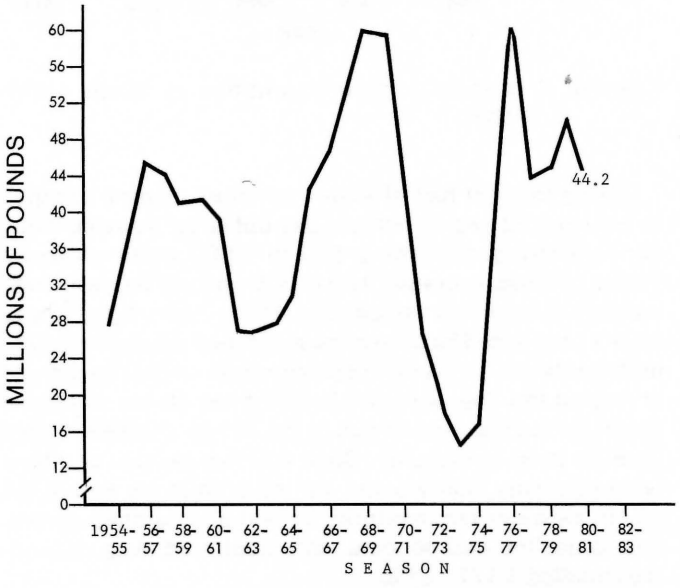

FIGURE 1. Pacific Coast Dungeness crab landings by season, including British Columbia, 1954-81.

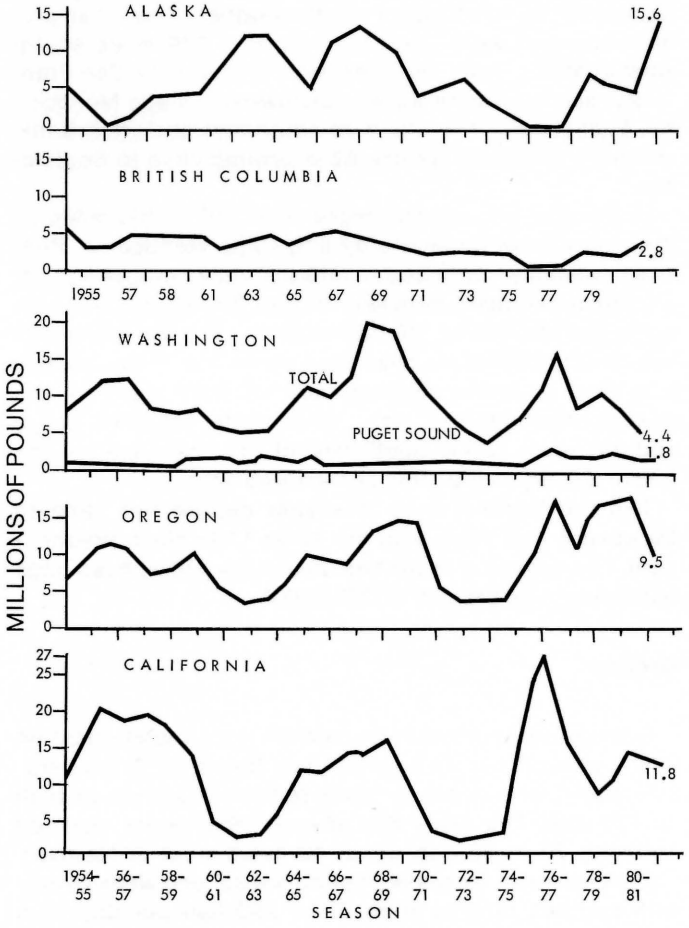

FIGURE 2. Dungeness crab landings by season, 1954-55 through 1980-81, except Alaska and British Columbia seasons are calendar years, i.e. 1954-55 = 1955.

Conditions Affecting the Fishery

The season started off with its usual flair, but within a few weeks the catches from Washington, Oregon, and California fell off drastically. Consequently, the opening price of 65 cents per pound climbed to one dollar by the end of January. Crab condition was excellent although size was only average. Markets were strong, especially for the large Alaska catch.

An intense scallop fishery developed off the coast in 1981 in waters between 40 and 50 fathoms from northern California to southern Washington. North of the Umpqua River the scallop fishery overlapped traditional crab fishing grounds and conflicts between gear and capture of crab in scallop gear were anticipated. Several meetings among fishermen resulted in an agreement to solve the problem, but both sides violated the agreement. Oregon crab fishermen are now asking for a closed season on scallop fishing for the first 3 or 4 months of the crab season.

Alaska[1]

A new record catch of 15.6 million pounds was 9.7 million pounds greater than the 1980 harvest, and four times greater than the 10-year (1971-80) average. Southeastern and Kodiak areas produced 80% of the catch with about 100 boats participating in the fishery.

British Columbia[1]

Landings in British Columbia were 2.8 million pounds, down 600,000 pounds from 1980, but still slightly above the 10-year (1971-80) average of 2.4 million pounds. Effort continued to increase to about 350 boats, but availability of crabs decreased.

[1]Alaska and British Columbia crab data are reported by calendar year.

Washington

Coastal crab landings were only 2.6 million pounds, 5.4 million pounds under the long term (1951-80) average of 8.0 million pounds, and the poorest season in over 30 years. Landings in Puget Sound remained fairly stable at 1.8 million pounds even though a license moratorium reduced effort by 150 boats. The poor season off the Washington coast enticed several boats to venture into northern California waters where more crabs were being caught.

Oregon

Landings in Oregon were only 9.5 million pounds, down 8.8 million pounds from the 1979-80 record of 18.3 million pounds and slightly below the 10-year (1971-80) average of 10.2 million pounds. Effort declined somewhat but 506 boats still participated in the fishery.

California

Landings in California were 11.8 million pounds, slightly above the 10-year (1971-80) average of 10 million pounds. Eureka landings were 10.5 million pounds and San Francisco landings were 500,000 pounds. California fishermen have expressed concern about Washington and Oregon boats fishing in California waters. There is also talk about limiting the number of pots.

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Pacific Halibut Fishery in 1981*

The 1981 halibut fishery produced a total catch of 25.6 million pounds, 3.7 million pounds more than in 1980 (Table 1). The catch by Canadian vessels in Canadian waters was 5.5 million pounds compared with 20.1 million pounds caught by U.S. vessels in U.S. waters. Landings of halibut by regions of the coast are shown in Table 2.

The catch in Area 2 (south of Cape Spencer, Alaska) was 9.7 million pounds, 700,000 pounds above the 9 million-pound catch limit. The catch from Area 2B (Canadian waters) by Canadian vessels was 5.5 million pounds, while U.S. vessels fishing in U.S. waters caught 4.2 million pounds. Of this amount, 200,000 pounds was from Area 2A (Washington and Oregon) and 4.0 million pounds was from Area 2C (southeast Alaska).

The Area 3 (Gulf of Alaska from Cape Spencer to 170° W. Longitude) catch was 14.7 million pounds, 1.7 million more than the original catch limit of 13 million pounds and 300,000 pounds less than the revised catch limit of 15 million pounds. Of the total Area 3 catch, 14.2 million pounds was taken from Area 3A (Cape Spencer to Cape Trinity, Kodiak Island) and 458,000 pounds was taken from Area 3B (Cape Trinity, Kodiak Island to 170° W. Longitude, exclusive of the Bering Sea). The Area 4 (the Aleutian Islands and the Bering Sea) catch was 1.2 million pounds, 200,000 pounds above the 1 million-pound catch limit and nearly 500,000 pounds more than was taken in 1980.

The 1981 halibut fishery was notable for its sharp contrasts. In the waters off Alaska the CPUE increased sharply from 1980 to 1981, particularly in Area 2C. The high catch per unit of effort resulted in a 7-day season in Area 2C and a 13-day season in Area 3A. In contrast, the catch per unit of effort in Area 2B declined slightly from 1980 to 1981, and this, combined with the license limitation program in the Canadian fishery, resulted in a 58-day fishing season between May 7 and August 19. Also worthy of note: Area 2A (the waters off Washington and Oregon) had its own catch limit for the first time in 1981, and that fishery operated a total of 56 fishing days, from June 7 to September 19.

The Commission encountered a problem with the Area 3 fishing season when the entire catch limit of 13 million pounds was taken during the first fishing period, with only 100,000 pounds having been taken from Area 3B. In order

*Provided by Richard J. Myhre, International Pacific Halibut Commission

to allow some additional fishing in Area 3B for stock assessment purposes, the Commission increased the Area 3 quota to 15 million pounds and severely limited the duration of the second opening in Area 3B to prevent excessive removals. Although the Commission achieved its objectives, the extremely short opening in Area 3B was unpopular with the fishermen and the revised Area 3 catch limit required approval of both governments.

TABLE 1. Catch of halibut during 1981 and region of the coast (preliminary in 1,000's lb)

Area and region	Canada	United States	Total
Area 2			
Washington-Oregon	—	197	197
British Columbia	5,529	—	5,529
Alaska	—	4,032	4,032
Total	5,529	4,229	9,758
Area 3	—	14,660	14,660
Area 4	—	1,187	1,187
Grand Total	5,529	20,076	25,605

Recent assessment of stock condition indicates that the halibut resource is rebuilding because the commercial catch has been held below the annual surplus production and because of improving recruitment of young fish into the commercial catch. This stock improvement is occurring despite continuing losses due to incidental catches by other fisheries. At the present time, the poundage lost due to the incidental catch is approximately equal to the commercial halibut catch.

TABLE 2. Landings of halibut in 1981 by region of the coast (preliminary in 1,000's lb)

Region	Canada	United States	Total
Washington-Oregon	491	3,137	3,628
So. British Columbia	2,603	—	2,603
No. British Columbia	2,435	—	2,435
Southeastern Alaska	—	7,925	7,925
Central Alaska	—	9,014	9,014
Total	5,529	20,076	25,605

Scallop Fishery in 1981

Pacific Coast weathervane scallop *(Patinopectin caurinus)* landings in 1981 totalled 26.9 million pounds (rd. wt.). Figure 1 portrays Alaska landings since 1967, with 1981-only landings (shown as dots) for Oregon, Washington, and California.

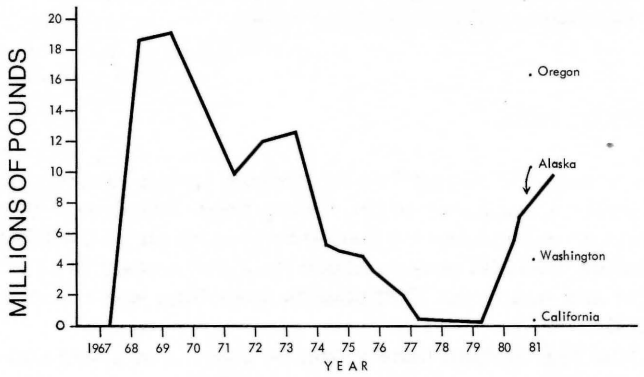

FIGURE 1. Pacific coast scallop landings from 1967 (Round Weight). Dots indicate landings in 1981 in Oregon, Washington and California.

Incidental harvests of scallops have been commonplace for many years along the Pacific Coast. It was not until 1967, however, that a commercial fishery was initiated in Alaska by two east coast scallop draggers. The Alaskan fishery peaked in 1969 at 18.5 million pounds (rd. wt.); 1981 landings were only 8.9 million pounds.

The same two entrepreneurs of Alaska fame began to fish intensively off Oregon beginning in April 1981. This fishery expanded rapidly and peaked in mid-June. An estimated 20 million pounds of scallops were taken off Oregon of which 16.7 million pounds were landed at Oregon ports. The fishery began off Coos Bay, but as effort increased other areas off Oregon and adjoining States were explored. Small beds off Washington and California produced 4.0 and 0.3 million pounds, respectively.

In Oregon, 118 vessels entered the fishery; 22 of which landed over 90% of the catch. These were large, mostly non-Oregon vessels that shucked their scallops at sea. Of 29 processors who attempted to handle scallops only 4 were successful. Processors paid $2.50 to $5.05 per pound of shucked meats and 15¢ to 35¢ per pound for shellstock. Most of the product went to southern California and some to east coast markets. Oregon imposed a license moratorium on its scallop fishery beginning in July 1981; 145 vessels obtained permits. By the end of the year 5 vessels continued to produce about 100,000 pounds (rd. wt.) per month.

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Groundfish Fishery in 1981

Groundfish landed on the Pacific Coast by North American fishermen in 1981 totaled[1] over 330,000 mt (725 million lb) including more than 5,800 mt by recreational anglers in the United States. This is an increase in the total groundfish catch of approximately 100,000 mt or 43%. Over 94% of the U.S. commercial landings (270,600 mt) were trawl-caught, including 139,200 mt in joint ventures. Other individual gears making significant catches in the U.S. fishery include pots (3,100 mt or 1.1%) and longlines (5,700 mt or 2.1%). The remainder of the U.S. commercial catch (6,500 mt or 2.4%) was taken by such miscellaneous gear as jig, troll, gill net, and shrimp trawl. Recreational fishermen used primarily hook and line gear. In the Canadian fishery, trawl gear took 93% of the catch while pot and long line gear captured 6% and 1% respectively.

Pacific whiting, pollock, and yellowfin sole (flounder) were the most important species in the joint venture fisheries, while Pacific cod, widow rockfish (included in other rockfish) and Dover sole were most important to the non-joint venture trawl fisheries. Dover sole production has continued to increase since 1967, and in 1981 market conditions for this species improved over those in 1980. Widow rockfish was again one of the most important species within the U.S. shorebased fishery in 1981. Increased landings of this species, which is caught primarily by pelagic trawlers, are responsible for the 18% increase in the "other rockfish" category. Market conditions for widow rockfish in 1981 continued favorable, even with the increase in supply.

Although British Columbia has traditionally produced most of the Pacific cod, recent increases within the non-joint venture fisheries, as indicated by higher landings in Alaska and Washington, have come from developing domestic fisheries in the Gulf of Alaska and Bering Sea. This trend is expected to continue for at least one to two more years in conjunction with the projected increases in Pacific cod abundance.

Landings of sablefish, the major pot and longline species, increased by 16% in 1981 to 15,600 mt for all gear, excluding 211 mt in the joint venture fisheries. Thirty-seven percent of this catch was taken by trawl gear, and slightly improved market conditions were primarily responsible for the increase. Stock conditions remain poor in Southeastern Alaska.

Trawl Fishery

Trawl landings (Table 1 and Figure 1) continued to increase in 1981 as the market generally made a recovery from the poor 1980 season. The total U.S. trawl catch in 1981 was 255,000 mt. a 60% increase compared to 160,000 mt in 1980. The non-joint venture trawl catches increased by a moderate 18%, while the joint venture landings increased by 124%.

Canadian-only trawl landings in 1981 were 5% less than in 1980, continuing a slightly declining trend since 1979; however, total trawl landings in British Columbia increased by 7% when the 37% increase in joint venture catches is included. In the Canadian shorebased fishery,

[1] 1981 statistics are preliminary.

TABLE 1. Trawl landings for all purposes in metric tons (mt) by region for 1981 and 1981 with percent change

Region	1980 mt	1981 mt	% Change
Alaska	4,361	8,428	+93
Washington	34,791	37,150	+7
Oregon	25,619	35,047	+36
California	33,190	35,500	+7
Joint Venture	62,032	139,200	+124
Total U.S.	159,993	255,325	+60
Canada (B.C.)	32,785	31,236	-5
Canada Joint Venture	13,000	17,758	+37
Total Canada	45,785	48,994	+7
Total U.S.-Canada	205,778	304,319	+48

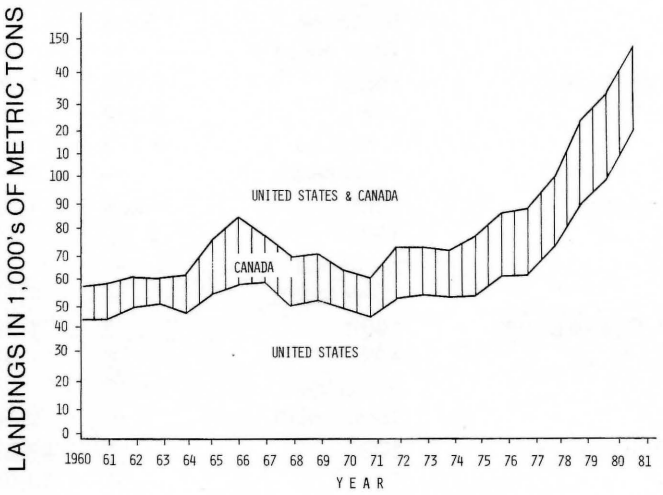

FIGURE 1. Pacific coast trawl landings of the United States and Canada, excluding joint venture landings.

major declines in abundance and landings were seen for rock sole and Pacific cod (Table 2). Canadian catches of Pacific Ocean perch and other rockfish species in 1981 remained essentially unchanged from 1980, but Pacific whiting showed a most substantial increase (966%).

Trawl landings in the State of Washington amounted to 37,200 mt, a 7% increase from 1980. Improved market conditions for sablefish resulted in a 27% increase in trawl landings for this species, and a growing market for pollock roe helped stimulate the Puget Sound trawl fishery. Trawl landings of all species in Oregon were 35,000 mt, an increase of 36%. About 80% of the 1980-81 increase in Oregon trawl landings was due to large increases in landings of widow rockfish (included in other rockfish) and Dover sole. Increases in ex-vessel prices rather than increases in abundance contributed to the increased Oregon landings. Decreases in widow rockfish abundance off Oregon were evident by the end of the 1981 season. Lower catches of Pacific Ocean perch in 1981 were caused by Washington and Oregon implementing 10,000-lb or 10%-trip limits for conservation reasons. California trawl landings for all purposes increased from 33,200 mt to 35,500 mt (7%). Increases in Dover sole (19%) and sablefish (26%) were primarily responsible.

TABLE 2. Domestic trawl landings (mt) for food, 1980 & 1981 (preliminary) & 10-yr. mean[1] (1971-80) by species & region

Species or Group		Alaska	Washington	Oregon	California	Total U.S.	British Columbia	Total U.S. & Canada
Petrale sole	1980	—	599	847	1,027	2,473	223	2,696
	1981	—	356	882	925	2,163	242	2,405
	% change	—	-41	+4	-10	-13	+9	-11
	10-yr mean	—	912	995	1,453	3,360	395	3,755
English sole	1980	—	1,111	714	2,043	3,868	1,244	5,112
	1981	—	882	729	1,750	3,361	1,540	4,901
	% change	—	-21	+2	-14	-13	+24	-4
	10-yr mean	—	1,165	1,014	1,780	3,959	954	4,913
Dover sole	1980	—	2,011	4,011	7,762	13,784	1,274	15,058
	1981	—	1,932	5,215	9,250	16,397	1,278	17,675
	% change	—	-4	+30	+19	+19	—	+17
	10-yr mean	—	1,111	2,844	9,489	13,444	985	14,429
Rock sole	1980	312[a]	148	13	5	212[a]	1,843	2,055[a]
	1981	329[a]	141	10	4	484[a]	1,060	1,544[a]
	% change	+5	-5	-23	-20	+128	-42	-25
	10-yr mean	—	244	12	5	261	1,484	1,745
Pacific cod	1980	2,703	5,704	155	—	8,562	8,667	17,229
	1981	7,392	9,963	46	—	17,401	6,270	23,671
	% change	+173	+75	-70	—	+103	-28	+37
	10-yr mean	—	4,190	308	—	4,498	8,266	12,764
Ling cod	1980	trace	1,324	640	1,161	3,125	1,311	4,436
	1981	—	803	904	1,052	2,759	1,600	4,359
	% change	—	-39	+41	-9	-12	+22	+2
	10-yr mean	—	1,121	627	1,332	3,080	1,311	4,391
P. Ocean perch	1980	3	1,385	1,141	11	2,540	5,290	7,830
	1981	6	681	807	13	1,507	5,225	6,732
	% change	+50	-51	-29	+18	-41	-1	-14
	10-yr mean	—	2,180	453	54	2,687	2,506	5,193
Other rockfish	1980	15	13,678	15,072	15,331	44,096	4,154	48,250
	1981	1	13,869	22,731	16,054	52,655	4,106	56,761
	% change	-93	+1	+46	+5	+19	-1	+18
	10-yr mean	—	7,100	4,142	11,932	23,174	2,818	25,992
Sablefish	1980	16	429	1,034	2,902	4,381	333	4,714
	1981	6	573	1,319	3,654	5,552	200	5,752
	% change	-63	+34	+25	+26	+27	-40	+22
	10-yr mean	—	309	546	2,417	3,272	329	3,601
Pacific whiting	1980	—	123	275	—	398	606	1,004
	1981	—	947	162	—	1,109	6,058	7,167
	% change	—	+670	-41	—	+179	+900	+614
	10-yr mean	—	186	149	—	335	—	335
Walleye pollock	1980	987	425	—	—	1,412	2,200	3,612
	1981	558	958	—	—	1,516	1,421	2,937
	% change	-43	+125	—	—	+7	-35	-19
	10-yr mean	—	61	—	—	61	1,062	1,123

[1]Alaska 10-year means excluded.
[a]All flounder species included for Alaska, primarily starry flounder and rock sole.

In Alaska the trawl fishery landed 103,900 mt, primarily pollock and yellowfin sole (included in flounder, see Table 3). Ninety-two percent was taken by the joint venture fishery; however, shorebased landings did increase by 93% to 8,400 mt. Shorebased landings were primarily Pacific cod, destined for the frozen, salt cod, and bait markets. Additional quantities of Pacific cod and pollock were delivered in Washington.

Other Commercial Fisheries

The longline fishery (Table 4), which had declined in 1980 after the large expansion in 1979, made a slight recovery with coastwide landings of approximately 6,500 mt. Sablefish and dogfish were the most important species, with the rockfish group comprising about 20% of the landings.

Pot landings (Table 5) also increased slightly (3%) to

TABLE 3. Catch (mt) by species or species group by region of U.S.-joint[1] ventures in 1981

Species	Bering Sea	Gulf of Alaska	Mid-eastern Pacific	Total
Pacific whiting	—	—	43,557	43,557
Jack mackerel	—	—	3	3
Pacific ocean perch	1	—	2	3
Other rockfish	7	—	135[a]	142[a]
Pollock	41,938	16,836	—	58,774
Pacific cod	9,330	58	—	9,388
Flounder	21,959	18	trace	21,977
Sablefish	180	trace	31	211
Atka mackerel	1,633	—	—	1,633
Other fish	3,439	43	30	3,512
Total	78,487	16,955	43,758	139,200

[1]Foreign nations involved: Republic of Korea, U.S.S.R., Japan, Federal Republic of Germany, Poland, Greece, and Bulgaria.

[a]May include unidentified Pacific Ocean perch.

6,300 mt. Sablefish is the predominant species in this fishery and is taken primarily from British Columbia, California and Washington.

All other commercial gear (Table 6) landed an estimated 6.500 mt of groundfish in 1981. Of this total rockfish and lingcod accounted for 3,300 mt (51%). Miscellaneous commercial gear includes shrimp trawl (by-catches), troll, gill net, jigs, and seine.

Recreation or Personal Use Fisheries

In 1981, Alaska, Washington, Oregon, and California recreational fishermen caught an estimated 12.8 million lb (5,812 mt) of groundfish, including an estimated 970,000 lb (440 mt) of Pacific halibut caught in Alaska. The catch consisted primarily of rockfish and lingcod. In Washington, Oregon, and especially California, the recreational fishery is substantially conducted from commercial passenger carrying vessels (charters) operating from coastal ports in these States.

TABLE 4. Longline landings (mt) by major species and region in 1981

Region	Sablefish	Lingcod	Rockfish	Pacific cod	Dogfish	Other species	Total
Alaska	1,152	8	208	246	trace	trace	1,614
Washington	626	40	65	1	601	27	1,360
Oregon	682	10	87	trace	trace	1	780
California	750	200	1,000	—	—	—	1,950
Total U.S.	3,210	258	1,360	247	601	28	5,704
Canada (B.C.)	320	—	—	—	450	—	770
Grand Total	3,530	258	1,360	247	1,051	28	6,474

TABLE 5. Pot landings (mt) by major species and region in 1981

Region	Sablefish	Lingcod	Rockfish	Other species	Total
Alaska	18	—	—	16	34
Washington	1,305	1	6	2	1,314
Oregon	277	3	4	2	286
California	1,500	—	—	—	1,500
Total U.S.	3,100	4	10	20	3,134
Canada (B.C.)	3,170	—	—	—	3,170
Grand Total	6,270	4	10	20	6,304

TABLE 6. Landings (mt) from miscellaneous gears by major species and region in 1981

Region	Sablefish	Lingcod	Rockfish	Pacific cod	Flounder	Other species	Total
Alaska	5	15	86	16	—	11	133
Washington	—	248	779	—	—	2,979[a]	4,006
Oregon	63	129	1,003	8	86	19	1,308
California	—	25	1,000	—	—	—	1,025
Total U.S.	68	417	2,868	24	86	3,009	6,472
Canada (B.C.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[a]Includes 527 mt dogfish.

TABLE 7. Estimated recreational landings by major species and region in 1981, in metric tons and (1000's of pounds)

Region	Rockfish	Lingcod	Flatfish	Pacific cod	Other species	Total
Alaska[1]	108(240)	—	—	—	440[a](970)	548(1,210)
Washington[1]	—	—	—	—	—	1,680(3,700)
Oregon	544(1,198)	169(372)	—	—	23(50)	735(1,620)
California	2,500(5,512)	300(661)	50(110)	—	—	2,850(6,283)

[1]Estimate based on 1980 catches.

[a]Pacific halibut.

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Salmon and Steelhead Sport Catches in 1980 in the Pacific Coast States

The estimated total sport catch of salmon and steelhead during 1980 in Alaska, Washington, Idaho, Oregon and California was 2,276,339 fish (Table 1). This catch was composed of 1,907,640 salmon and 368,699 steelhead. The total 1980 salmon harvest was down 9% from the 10-year average (1970-79), while the harvest of steelhead was up 22% over the 10-year average (Table 2).

TABLE 1. Salmon and steelhead sport catches in 1980

State	Chinook	Coho	Pink	Other salmon	Steelhead	Total catch
Alaska	46,248	164,302	196,199	123,718[b]	4,832	535,299
Calif.	86,000	21,000	—	—	unavailable	107,000
Idaho	—	—	—	—	9,100	9,100
Oregon	75,585	337,256	—	4,453[a]	203,712	621,006
Wash.	311,290	460,740	222	80,627[b]	151,055	1,003,934
Total	519,123	983,298	196,421	208,798	368,699	2,276,339

[a]Chum and pink salmon.

[b]Includes 35,783 jack salmon not identified by species, and 44,844 aggregate chum and sockeye.

Alaska

Alaska anglers harvested an estimated 530,467 sea-run salmon and 4,832 steelhead in 1980. The salmon harvest was a record, up about 5,000 over 1978, the previous record year, and up 123% over the 1970-79 ten-year average. The steelhead harvest was also a record and was also up about 500 fish (11%) over 1978, the previous record year. Steelhead harvests were up 124% over the 1970-79 ten-year average.

The total marine harvest of 168,714 fish included 22,453 chinook salmon, 62,859 coho salmon, 6,535 sockeye salmon, 73,452 pink salmon, 3,187 chum salmon, and 214 steelhead. The total freshwater harvest of 366,599 fish included 23,795 chinook salmon, 101,443 coho salmon, 103,666 sockeye salmon, 122,747 pink salmon, 10,330 chum salmon, and 4,618 steelhead.

TABLE 2. Salmon and steelhead sport catches (1,000's of fish) for the Pacific Coast States, 1970 to 1980, and 10-year (1970-79) averages

	Alaska		California		Idaho		Oregon		Washington		Total	
Year	Salmon	Steel-head	Salmon[1]	Steel-head	Salmon	Steel-head	Salmon	Steel head	Salmon[2]	Steel-head	Salmon	Steel head
1970	101.8	1.7	163.0	Steelhead catches are not estimated in California.	5.5	20.5	422.4	164.2	978.4	130.9	1,671.1	317.9
1971	98.8	1.2	255.0		3.5	17.5	463.7	197.5	1,344.8	173.6	2,165.8	389.8
1972	127.2	1.3	245.0		6.5	13.5	403.0	157.9	1,138.9	167.4	1,920.6	340.1
1973	221.7	0.9	230.0		9.5	10.5	406.6	162.2	1,095.4	148.3	1,963.2	321.9
1974	184.9	1.0	234.0		1.5	3.0	465.0	166.8	1,320.4	110.0	2,205.8	280.8
1975	178.0	2.2	125.0		0.0	0.0	415.9	186.4	1,399.4	92.9	2,118.3	281.5
1976	200.6	2.3	139.0		0.0	2.0	669.0	118.3	1,749.6	89.1	2,758.2	211.7
1977	381.1	3.7	154.0		3.5	13.0	372.2	145.1	1,191.4	100.0	2,102.2	261.8
1978	525.4	4.3	128.0		7.0	11.5	386.9	200.6	1,107.9	163.1	2,155.2	379.5
1979	361.2	3.0	138.7		0.0	5.7	278.8	122.4	1,123.9	94.8	1,902.6	225.9
10-year average	238.1	2.2	181.2		3.7	9.7	428.4	162.1	1,245.0	127.0	2,096.3	301.1
1980	530.5	4.8	107.0		0.0	9.1	417.3	203.7	852.9	151.1	1,907.6	368.7

[1]Ocean fishery data only.

[2]Only marine catches reported through 1978.

Washington

Nearly 1.8 million salmon angler trips were estimated for the 1980 season which was slightly above the 10-year average of 1.7 million trips and 15% below the record number of over two million trips recorded in 1979. Chinook catches from marine areas were estimated at 292,100 fish (21% below the 1979 catch) while the freshwater catch provided 119,161 chinook. The marine catch of coho was 441,758 fish (23% below the 1979 catch) with a freshwater harvest of 18,982. Anglers caught an estimated 151,055 steelhead in 1980 which was 22% above the 10-year average.

Idaho

The run of chinook salmon to Idaho in 1980 set a new record low and was below spawning and fishery requirements for the second year in a row; therefore, no fishing season was provided. An estimated 15,227 anglers fished 79,490 days to harvest 9,100 steelhead. This was down 6% from the 10-year average but a 65% increase over the 1979 catch. The steelhead fishery was again structured to harvest predominantly hatchery stocks.

Oregon

The Oregon sport catch of salmon and steelhead (marine and freshwater) was estimated to be 417,294 and 203,712 respectively. The salmon catch consisted of 337,256 coho, 75,585 chinook, and 4,453 chum and pink salmon. The salmon catch exceeded the 1979 catch of 278,814, but was below the 10-year average catch of 428,400. The steelhead catch exceeded both the 1979 catch of 122,426 and the 10-year average catch of 162,100.

California

The 1980 ocean salmon sport catch estimate of 107,000 salmon amounts to only 59% of the 10-year (1970-79) average of 181,000 salmon and is 30% less than the 1979 landings of 139,000 fish. The estimated 1980 chinook landings of 86,000 fish show a 30% decrease from 1979 landings of 123,000 chinook and a 40% decrease from the 10-year average of 141,000 chinook. San Francisco sport anglers accounted for 87% of the statewide recreational chinook landings in 1980. The estimated 1980 California coho recreational catch was 21,000 fish. This represents a 32% increase over 1979 landings of only 16,000 coho, but was still only 52% of the 10-year average of 40,000 coho. As is usually the case, the Eureka area had the highest landings, with 12,000 fish. North Coast (Crescent City to Fort Bragg) anglers caught 99.5% of the statewide recreational coho landings.

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Troll Salmon Fishery in 1981

Preliminary estimates of the 1981 troll catch of combined chinook and coho salmon for Alaska, British Columbia, Washington, Oregon and California totaled 49.2 million pounds round, compared to the 10-year (1971-80) average of 63.6 million pounds (Table 1). Coastwide, chinook landings amounted to about 25.1 million pounds in 1981 compared to the 1971-80 ten-year average of 30.2 million pounds. Coho salmon amounted to about 24.1 million pounds compared to the 10-year average of 33.4 million pounds (Figure 1).

Regulations in 1981 again played a role in reducing troll salmon landings. Quotas were imposed in most ocean areas, limiting harvests in order to improve spawning escapements for several depressed stocks and to comply with treaty Indian fishing right obligations. The North Pacific and Pacific Fishery Management Councils have developed increasingly complex regulations in recent years, to meet the optimum yield and conservation requirements of the Magnuson Fishery Conservation and Management Act of 1976.

TABLE 1. Estimated landings of troll-caught chinook and coho salmon in 1981 and 10-year (1971-80) average (round weight in thousands of pounds, all 1981 data are preliminary)

	Chinook		Coho		Total	
Region	1981	10-year average	1981	10-year average	1981	10-year average
Alaska	4,900	4,900	6,500	5,100	11,400	10,000
British Columbia	10,200	13,000	11,300	15,600	21,500	28,600
Washington	1,400	3,100	2,000	4,900	3,400	8,000
Oregon	1,800	2,600	3,800	5,900	5,600	8,500
California	6,800	6,600	500	1,900	7,300	8,500
Total	25,100	30,200	24,100	33,400	49,200	63,600

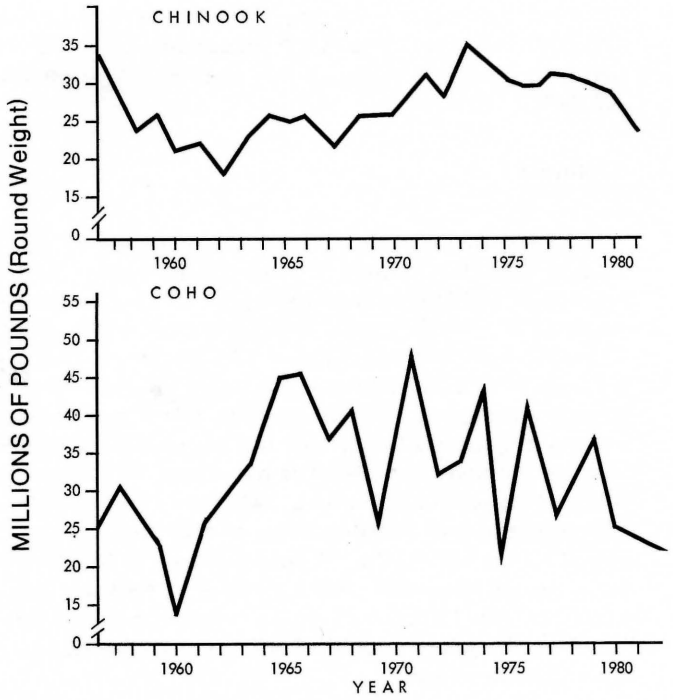

FIGURE 1. Pacific Coast annual landings of troll caught chinook and coho salmon, 1956-80 and preliminary 1981.

TABLE 2. Pacific Coast commercial troll chinook salmon landings in millions of pounds round, 1956-81 (preliminary data in parentheses)

Year	Alaska	British Columbia	Washington	Oregon	California	Total
1956	3.9	9.8	4.0	4.4	11.3	33.4
1957	5.1	9.7	4.8	3.0	5.3	27.9
1958	5.7	9.1	3.3	1.8	4.1	24.0
1959	6.7	8.7	2.7	0.5	7.5	26.1
1960	4.8	6.4	1.7	1.5	7.0	21.4
1961	2.9	6.0	2.5	1.4	9.3	22.1
1962	3.9	5.9	2.4	0.7	7.2	20.1
1963	4.1	6.8	2.8	1.6	7.9	23.2
1964	6.0	8.5	2.1	0.7	8.7	26.0
1965	5.1	8.8	1.3	0.7	9.3	25.2
1966	4.8	11.4	2.0	0.9	6.9	26.0
1967	4.3	10.4	1.7	1.3	4.4	22.1
1968	5.8	10.8	1.9	1.1	5.3	24.9
1969	5.1	10.8	2.3	1.4	5.6	25.2
1970	5.1	9.9	2.5	1.9	6.1	25.5
1971	4.9	15.2	3.1	1.2	5.7	30.1
1972	3.3	14.1	2.6	1.5	6.2	27.6
1973	5.0	12.7	3.8	4.0	8.7	34.2
1974	5.1	13.5	4.3	2.6	5.8	31.3
1975	4.4	12.6	3.3	3.0	6.6	29.9
1976	3.5	13.8	4.4	2.2	5.7	29.6
1977	4.7	12.1	3.3	4.0	6.6	30.7
1978	6.8	13.2	2.4	2.2	6.0	30.6
1979	6.0	11.1	1.9	3.0	7.9	29.9
1980	5.6	11.6	1.8	2.5	6.4	27.9
1971-80 Mean	4.9	13.0	3.1	2.6	6.6	30.2
1981	(4.9)	(10.2)	(1.4)	(1.8)	(6.8)	(25.1)

Chinook

Alaska preliminary troll chinook landings were 4.9 million pounds round. This is 700,000 pounds less than the 1980 landings but equal to the 10-year average (Figure 2, Table 2).

British Columbia preliminary troll chinook landings were 10.2 million pounds round. This is 1.4 million pounds less than the 1980 landings and 2.8 million pounds less than the 10-year average.

Washington preliminary troll chinook landings were 1.4 million pounds round. This is 400,000 pounds less than the 1980 landings and 1.7 million pounds less than the 10-year average.

Oregon preliminary troll chinook landings were 1.8 million pounds round. This is 700,000 pounds less than the 1980 landings and 800,000 pounds less than the 10-year average.

California preliminary troll chinook landings were 6.8 million pounds round. This is 400,000 pounds higher than the 1980 landings and slightly above the 10-year average.

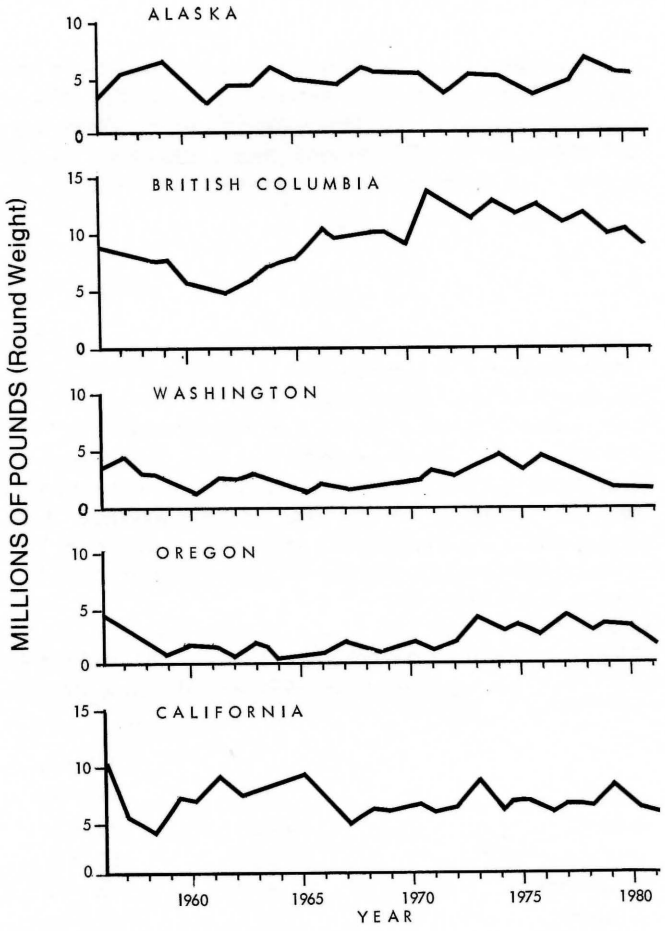

FIGURE 2. Annual troll chinook salmon landings by area, 1956-80 and preliminary 1981.

Coho

Alaska preliminary troll coho landings were 6.5 million pounds round. This is 1.1 million pounds higher than the 1980 landings and 1.4 million pounds above the 10-year average (Figure 3, Table 3).

TABLE 3. Pacific Coast commercial troll coho salmon landings in millions of pounds round, 1956-81 (preliminary data in parentheses)

Year	Alaska	British Columbia	Washington	Oregon	California	Total
1956	3.8	12.9	5.3	3.2	0.5	25.7
1957	7.5	14.4	5.0	3.9	0.6	31.4
1958	5.2	15.6	4.7	1.3	0.1	26.9
1959	5.8	11.7	3.7	1.0	0.3	22.5
1960	2.5	9.3	1.5	0.8	0.1	14.2
1961	3.6	14.8	4.2	2.3	0.6	25.5
1962	5.2	16.4	4.7	2.2	0.4	28.9
1963	6.3	16.1	4.0	3.0	1.2	30.6
1964	5.7	20.5	4.6	4.2	2.2	37.2
1965	6.2	23.5	7.4	4.8	1.8	43.7
1966	4.7	24.3	6.1	5.2	4.0	44.3
1967	4.2	14.1	6.2	8.3	3.9	36.7
1968	5.8	22.6	4.5	5.1	2.7	40.7
1969	3.1	12.7	3.3	3.6	1.4	24.1
1970	2.2	17.3	6.1	8.7	1.5	35.8
1971	3.1	21.4	7.9	10.1	3.7	46.2
1972	5.7	15.9	3.9	5.6	1.2	32.3
1973	4.5	16.2	4.3	5.9	2.3	33.2
1974	6.7	15.6	6.4	8.3	4.3	41.3
1975	1.5	9.5	5.1	4.7	1.3	22.1
1976	4.3	15.3	7.2	10.4	3.3	40.5
1977	4.9	14.4	4.3	3.0	0.2	26.8
1978	8.0	14.9	3.2	3.2	1.5	30.8
1979	7.1	17.7	4.2	5.3	1.2	35.5
1980	5.4	15.3	2.2	2.5	0.3	25.7
1971-80 Mean	5.1	15.6	4.9	5.9	1.9	33.4
1981	(6.5)	(11.3)	(2.0)	(3.8)	(0.5)	(24.1)

British Columbia preliminary troll coho landings were 11.3 million pounds round. This is 4.0 million pounds less than the 1980 landings and 4.3 million pounds less than the 10-year average.

Washington preliminary troll coho landings were 2.0 million pounds round. This is 200,000 pounds less than the 1980 landings and 2.9 million pounds below the 10-year average.

Oregon preliminary troll coho landings were 3.8 million pounds round. This is 1.3 million pounds higher than the 1980 landings but 2.1 million pounds below the 10-year average.

California preliminary troll coho landings were 500,000 pounds round. This is 200,000 pounds higher than the 1980 landings but 1.4 million pounds below the 10-year average.

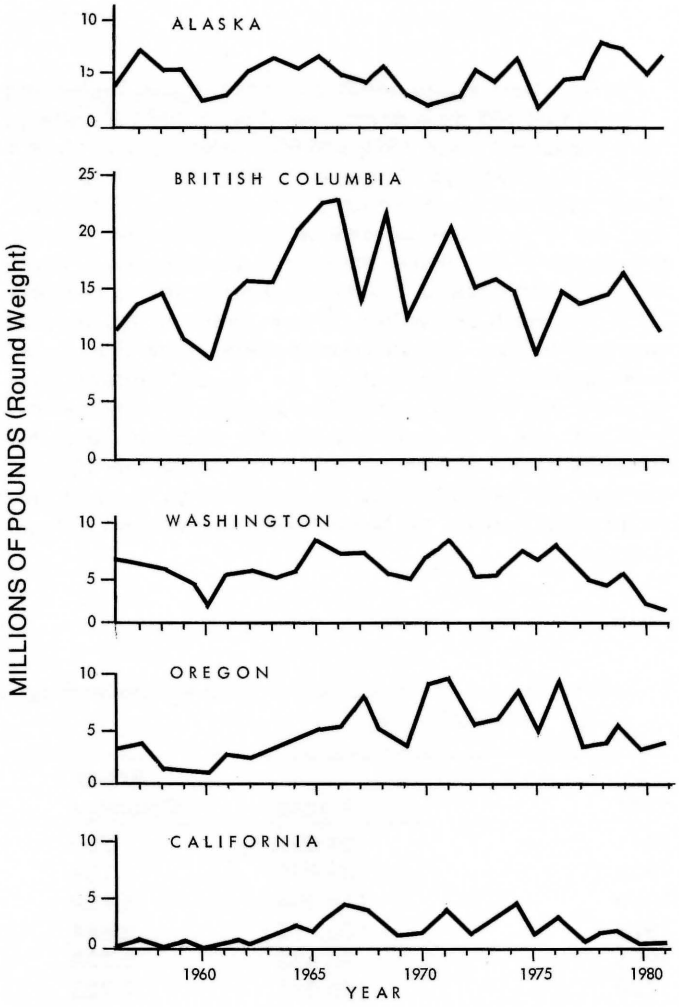

FIGURE 3. Annual troll coho salmon landings by area, 1956-80 and preliminary 1981.

Pink

Alaska preliminary troll pink landings were 2.8 million pounds round. This is slightly above the 1971-80 odd-year average.

Washington preliminary troll pink landings were 1.1 million pounds round. This is equal to the 1971-80 odd-year average.

Oregon preliminary troll pink landings were 400,000 pounds round. This is 100,000 pounds higher than the 1971-80 odd-year average.

California preliminary troll pink landings were 31,000 pounds round. This is the highest poundage since 1973 when trollers landed 100,000 pounds.

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Shrimp Fishery in 1981

Pacific Coast shrimp landings by the United States and Canada totalled 69.5 million pounds in 1981. Landings were the lowest since 1970 and 69.1 million pounds below the 10-year average (Table 1). Combined landings from British Columbia, Washington, Oregon and California reached 41.5 million pounds which is near the 10-year average of 45.8 million pounds for those four areas. British Columbia landings of 1.8 million pounds increased over 1980, but were below the 10-year average. Washington landings of 10.1 million pounds were below the record 1980 landings, but were above the 10-year average. Oregon landings totalled 25.9 million pounds, down somewhat from both the 1980 level and 10-year average. California landings of 3.7 million pounds were below the 10-year average and 1980 landings. Alaska landings reached only 28.0 million pounds, far below the 1980 level and 10-year average.

Conditions Affecting the Fishery

Ex-vessel prices and total number of vessels declined from the record 1980 levels. Fifty-nine fewer vessels fished off Oregon and Washington. Price per pound for trawl caught shrimp ranged from 27¢ in Alaska to 60¢ off the lower west coast. Prices generally declined throughout the season, and by season's end reached a low of 43¢ per pound off Washington and Oregon. Foreign imports and inventories of small shrimp from the 1980 season appeared to adversely affect domestic markets. In addition, processors discouraged the landing of small shrimp. Fleet mobility was reduced by implementation of a uniform season for Washington and Oregon. In Alaska a strike affecting Kodiak-based vessels delayed the season for about 1½ months. High incidental fish catches were generally a problem throughout the western Gulf of Alaska. The resulting reduction in the amount of product purchased, relative to actual pounds of shrimp landed, significantly increased operational costs.

TABLE 1. Annual Pacific Coast pandalid shrimp landings and 10-year averages by State and Province (in 1000's of pounds) 1971-1981

Year	Alaska	British Columbia	Washington	Oregon	California	Total
1971	94,891	735	678	9,291	3,081	108,676
1972	83,830	794	1,582	20,861	2,434	109,501
1973	119,964	1,729	5,271	24,516	1,240	152,720
1974	108,275	2,644	9,325	19,968	2,338	142,550
1975	98,535	1,728	10,167	23,893	4,993	139,316
1976	129,011	7,723	9,261	25,392	3,400	174,787
1977	116,891	6,176	11,803	48,580	15,633	199,083
1978	73,293	3,460	12,298	56,997	13,163	159,211
1979	50,916	1,578	12,135	29,579	4,922	99,130
1980	52,865	1,175	12,600	30,200	4,400	101,240
Average	92,847	2,774	8,512	28,928	5,560	138,621
1981	28,050	1,800	10,100	25,900	3,669	69,520

British Columbia

Pandalid shrimp landings (all species combined) totalled 1.8 million pounds. Landings increased by 700,000 pounds over 1980, but were well below the 10-year average of 2.8 million pounds. These landings represent production from both the trawl and trap fisheries for shrimp.

The trawl fishery consists of an offshore otter trawl and an inshore beam trawl fishery. Offshore ocean shrimp *(Pandalus jordani)* landings totalled 800,000 pounds from the Tofino and Nootka grounds (PMFC Area 66). Both grounds are managed by a quota system. Inshore beam trawl landings of *Pandalus borealis, P. jordani, P. platyceros* and *Pandalopsis dispar* totalled 400,000 pounds from Barkley Sound, Georgia Strait, and Chatham Sound.

The shrimp trap fishery consists of a coast-wide prawn *(P. platyceros)* fishery from all PMFC areas, and a small coonstripe *(Pandalus danae)* fishery in Sooke Harbour (PMFC Area 66). Landings from these trap fisheries totalled 600,000 pounds.

Washington

Ocean shrimp landings totalled 10.1 million pounds, 2.5 million pounds less than the 1980 record. A total of 66 vessels (including 8 single-rigged) had 5 or more landings of shrimp, a decrease of 20 vessels from 1980. The decrease in effort appeared to be due to several causes, a drop in the ex-vessel price from 60¢ to 43¢ per pound during the season, vessels entering other fisheries and a reduced fishing season. The Destruction Island area (PMFC Area 72) was closed to fishing from January through March. All areas were closed to fishing beginning November 1.

The Pacific Fishery Management Council has asked the three States of Oregon, California, and Washington to adopt uniform commercial shrimp fishing regulations. In order to comply, new regulations were adopted from the Council's preferred management regime including: 1) a winter closure from November 1 through March 31; 2) a minimum mesh size for shrimp trawls of 1-3/8 inches

between the knots and; 3) a maximum allowable count per pound of 160 whole shrimp.

The Destruction Island grounds produced 48% of the total landings, or 4.8 million pounds. Catch-per-unit of effort (CPUE) averaged 361 pounds per hour for double-rigged vessels, down slightly from the 1980 average of 379 pounds per hour. CPUE during April reached a high of 709 pounds per hour. Biological samples taken from the Destruction Island area had monthly count per pound averages ranging from 131 to 164 shrimp per pound.

The Grays Harbor area (PMFC Area 74) produced 4.8 million pounds, or 48% of the season's catch. CPUE for double-rigged vessels averaged 280 pounds per hour compared to 300 pounds per hour in 1980. The highest catch rate occurred in April at 499 pounds per hour. The quality of shrimp landed remained high throughout the season. Count per pound from commercial samples ranged from 92 to 135 shrimp per pound.

The Willapa area (PMFC Area 75) again received little effort and produced only 183,000 pounds, or 2% of the total catch. CPUE averaged 245 pounds per hour, comparable to 269 pounds per hour in 1980. Commercial samples ranged from 96 to 137 shrimp per pound. Washington-based vesels landed only 180,000 pounds from Oregon waters.

Oregon

Ocean shrimp landings totalled 25.9 million pounds, 14% less than the 30.2 million pounds landed in 1980, but close to the 10-year average of 28.9 million pounds. The number of vessels decreased to 245 from the 284 participating in 1980. Low shrimp prices coupled with higher fuel prices forced many shrimpers to seek alternative and more lucrative opportunities such as the scallop and tuna fisheries. Still others were forced to tie up or retire their vessels. The number of processors decreased from 25 in 1980 to 21 in 1981. Ex-vessel prices remained fairly stable at 52¢ per pound until mid-July when some processors dropped price to as low as 43¢ per pound. Processors discouraged the landing of small shrimp during 1981, due in part to the presence of very small shrimp still held in inventories from the 1980 season. Shrimp offered at a low price from Norway appeared to adversely impact the domestic market.

Fleet mobility was altered substantially by the implementation of a coastwide uniform season from April 1 to October 31. Vessels normally fishing off Washington after the close of the Oregon season were prevented from doing so this season. Poor catches off California kept Oregon landings from those waters below 1% of the total catch. Despite the shortened season, Oregon-based vessels took 27.7% of their total catch or 7.2 million pounds off Washington. The remaining 71.4% or 18.5 million pounds was taken off Oregon.

The 1981 catch by area was distributed similarly to the 1980 season's catch. Coos Bay-Blanco shrimp grounds (PMFC Area 86) produced 45.8% of the catch or 11.9 million pounds. This bed produced 13.5 million pounds in 1980. Catch rates declined for the fourth year in a row, averaging only 338 pounds per hour on the Coos Bay bed. Comparative catch rates in 1980 were 413 and 259 pounds per hour, respectively. Although the 1980-year class dominated the catch contributing 67.5% of the shrimp landed, the 1979-year class was still strong at 26.9% of the catch. Presence of 2- and 3-year-old shrimp yielded a good grade averaging 121 shrimp per pound throughout the season.

Landings from PMFC Area 88 totalled only 600,000 pounds, down considerably from the 1.4 million pounds landed in 1980. Nearly all of the catch came from the area between the Rogue River and the Oregon-California border. The small bed between Cape Blanco and the Rogue River has been a veritible desert for shrimp the past two years. CPUE for double-rigged vessels averaged 384 pounds per hour. The abundance of 1- and 2-year-old shrimp was nearly identical at 46.7% and 46.9%, respectively. This resulted in an excellent grade-averaging 94 shrimp per pound for the season.

Northern Oregon (PMFC Areas 82 and 84) shrimp catches totalled 6.0 million pounds, nearly identical to the 1980 catch of 5.9 million pounds. CPUE remained low at 250 pounds per hour. Shrimp grade was excellent averaging 97 per pound with numbers of 1- and 2-year-olds making up 47% and 48% of the catch, respectively.

Oregon-based vessels fishing in Washington waters produced 4.8 and 2.2 million pounds in PMFC Areas 72 and 74 (Destruction Island and Grays Harbor beds), respectively. Landings from PMFC Area 75 (off Willapa Bay) were only 71,000 pounds. Catches from California waters were down as well. Only 234,000 pounds from PMFC Area 92 (Crescent City-Eureka) were landed in Oregon.

Although the overall catch was composed of 56% 1-year-old shrimp, the 1979-year class contributed 39% of the catch as 2-year-olds, and 3-year-olds made up the balance at 5%. The presence of 2- and 3-year-old shrimp reduced the count per pound considerably below that for 1980. Additional processors will be using phosphates to gain higher yields from shrimp in 1982, and the processing of small shrimp will be facilitated.

There have been some alarming trends in catch-per-unit effort, total effort, distribution of the catch, and age composition, all pointing to classical signs of over-fishing seen in other fisheries. There has been an increasing trend in effort while CPUE has been declining over the past 4 years. Catches have declined from a peak of 57 million pounds in 1978. Some PMFC areas appear to be devoid of shrimp. Over the past 10 years there has been a shift from catches of predominantly 2- and 3-year-old shrimp to 1- and 2-year-olds. Dynamic modelling of Oregon's shrimp stocks, currently underway, may result in guidelines for optimum size of harvest to achieve maximum biological and economic yields. It is difficult to say whether Oregon's stocks are heading into a recruitment over-fishing situation. Efforts in the near future by Oregon's staff will be directed towards this problem. Conservative measures suggested by the Pacific Fisheries Management Council so far have been aimed at providing uniformity of regulations up and down the coast including a uniform season, 1-3/8 inch minimum mesh size and maximum count per pound. To that end, Oregon will likely maintain the uniform season from April 1 to October 31 that was in effect in 1981 and add a maximum count per pound requirement of 160 shrimp per pound. Oregon intends to complete a yield analysis before deciding on the 1-3/8 inch mesh size management measure.

California

Ocean shrimp landings totalled 3.7 million pounds compared to 4.4 million pounds in 1980 and 10-year average of 5.6 million pounds. Shrimp landings in Area A (Crescent City-Eureka; PMFC Area 92) totalled 2,514,736 pounds, a decrease from last year's catch of 2,716,147 pounds. Only 40,854 pounds have been landed in Area B-1 (Fort Bragg; PMFC Area 94). Last season's catch from that area was 200,000 pounds which was landed in late October. Area B-2 (Bodega Bay; PMFC Area 96) remained virtually unproductive with landings of just 2,005 pounds this season. This is the fourth year in a row with little or no landings. Area C (Morro Bay-Avila; PMFC Area 98) landings totalled 1,111,867 pounds compared to 1,600,000 pounds last season.

Alaska

Shrimp landings (primarily *Pandalus borealis)* reached only 28.1 million pounds, the lowest since 1966, and 65 million pounds below the 10-year average. Stocks in the Kodiak, Chignik and South Alaska Peninsula districts (PMFC Areas 54 and 55) remain severely depressed and most major production areas have remained closed to promote stock rebuilding. Trawl shrimp landings decreased for Cook Inlet, Prince William Sound and southeastern Alaska, but pot shrimp landings reached record levels in the latter two areas. Stocks in the Kodiak, Chignik and South Peninsula districts continue to be managed under a strategy that stipulates the minimum abundance level (as determined from trawl surveys) to which a stock must recover before fishing is allowed. Assigned harvest levels are less for stocks recovering from low abundance levels and higher for stocks at or above established representative abundance levels. The major Cook Inlet shrimp production area, Kachemak Bay, is managed by basing harvest levels on the results of pot and trawl surveys. A trawl shrimp management plan is in effect for Kachemak Bay which stipulates daily and weekly fishing periods so that the harvest is spread throughout the year in order to utilize all segments of the stocks. High incidental fish catches continued to be a problem throughout the western Gulf of Alaska for shrimp fishermen and processors. Up to 30% of the shrimp landed in Kodiak appear to be unreported, apparently as a result of various fish sorting and shrimp grading methods used by processors.

Kodiak (PMFC Area 54) landings totalled only 19.0 million pounds, 8.8 million pounds less than in 1980 and 25 million pounds below the 10-year average. The Alitak complex (Alitak Bay, Olga Bay, Alitak flats) was the major producer with landings of 6.6 million pounds, a decline from the 15.9 million pounds landed in 1980. Most of the decline was attributable to an 8 million pound reduction in harvest from Alitak flats. This area had an unrestricted harvest when it was heavily fished for the first time in 1980. Twoheaded Island and Chiniak Bay were also important producers with 3.0 and 2.6 million pounds, respectively. Combined landings from Marmot Bay, Puale Bay, Wide Bay and West Afognak sections totalled 5.2 million pounds. Kodiak continues to be the primary port of landing for Kodiak and Chignik district catches. The season opened on June 15 in these two districts, but because of a prolonged strike and price negotiations, the first landings did not occur until August 3. A two-year agreement was reached whereby the price per pound would be 27¢ for the 1981-82 season and 30¢ for the 1982-83 season. Although markets were difficult to find, vessels were rotated so that 55 vessels actually participated in the fishery.

Chignik, South (Alaska) Peninsula, and Aleutian shrimp districts (PMFC Area 55) landings totalled only 2.4 million pounds, compared to 15.3 million pounds in 1980. Nearly all of the catch came from the Aleutian district where Makushin Bay continued to be the major producer. All of the South Peninsula district and most of the Chignik district remained closed to promote stock rebuilding. Chignik Bay and Kujulik Bay, which have been primary Chignik production areas, declined radically over the past two years and were closed to fishing in 1981. Former production areas such as Pavlof Bay, Unga Strait-Balboa Bay, Stepovak Bay and Mitrofania Island have shown no signs of recovery despite full protection for 2 to 3 years.

Cook Inlet (PMFC Area 53) landings of 5.2 million pounds were down about one million pounds from the previous two seasons as a result of harvest levels being reduced to reflect lower abundance estimates from trawl surveys. The ex-vessel price per pound for trawl shrimp started at 29¢, but dropped to 22¢ by year's end. High incidental catches of small pollock and cod caused higher fish sorting expenses than in previous years. The number of vessels involved in the trawl fishery increased to a record high of 21. The pot shrimp fishery landed 195,184 pounds of primarily coonstripe shrimp *(Pandalus hypsinotus).* Market demand for pot shrimp was generally poor and prices paid by processors were only 75¢ to 95¢ per pound. Most of these large shrimp were marketed directly to consumers in the local area for $1.50 to $2.00 per pound.

Prince William Sound (PMFC Area 52) landings were 215,463 pounds, well below the record 680,332 in 1980. Trawl landings were only 70,560 pounds, however, the pot shrimp catch (primarily *Pandalus platyceros)* reached a record 144,903 pounds. The record pot shrimp effort of 509 landings by 51 vessels was double that of 1980.

Southeastern Alaska (PMFC Area 51) landings totalled 1.1 million pounds, about 1.6 million pounds less than in 1980. The reduced landings were attributable to the Yakutat Bay grounds remaining closed as minimum abundance levels were not obtained in either the spring or fall trawl surveys. Most of the trawl catch (70%) continues to come from the Duncan Canal-Kah Sheets Bay area, and stocks in the once productive Thomas Bay remain depressed. Pot shrimp landings reached a new record of 84,000 pounds.

Most major stocks in the Gulf of Alaska remain depressed despite being closed to fishing. Some improvement in stock condition was apparent in 1979 and 1980 and modest fisheries were allowed in some areas previously closed. Trawl surveys in 1981 indicate that many stocks, that were expected to improve or remain stable, suffered further declines. The most probable cause for these declines is increased fish predation as the groundfish complex as a whole has been on the increase in the Gulf of Alaska for over a decade. The 1982 shrimp harvest in the Gulf of Alaska is expected to be considerably less

than in 1981. Only the fisheries in Kachemak Bay and southeastern Alaska are expected to remain at current levels.

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FOREIGN FISHING ACTIVITIES OFF THE PACIFIC COAST IN 1981

Alaska

The Magnuson Fishery Conservation and Management Act (MFCMA) continued to regulate foreign fishing in the 3- to 200-mile fishery conservation zone (FCZ) off Alaska for the fifth successive year. Preliminary Management Plans (PMPs) for the snail fishery and for the Bering Sea and Aleutian Islands groundfish fishery remained intact from 1979. The Fishery Management Plan (FMP) for Gulf of Alaska groundfish also continued in effect in 1981. Foreign vessels were not allowed to fish under the FMP for Tanner crab in 1981, due to the increase in domestic harvest of that species. Japan was the only nation to fish under that plan in previous years.

Five foreign nations (Japan, South Korea, Poland, Taiwan, and West Germany) received allocations to fish off Alaska in 1981. Vessels from the Soviet Union were not provided an allocation, but were permitted to participate in joint venture activities. In addition, vessels from the Netherlands, United Kingdom, and Norway did not receive an allocation, but operated off Alaska, providing support to West Germany. In total, 590 foreign vessels operated off Alaska, 414 of them under MFCMA management plans. The remaining 176 vessels were employed by Japan in its high seas salmon fishery, which is regulated by the International North Pacific Fishery Commission (INPFC). The total number of foreign vessels present monthly ranged from 162 to 493. Total reported catch was 1.52 million metric tons (3.4 billion pounds) of groundfish, salmon, and snails; total vessel effort was 71,317 days (195.4 years). Compared to 1980, total effort off Alaska declined 6 percent, but overall catch remained at the same level. The Bering Sea and Aleutian Islands area accounted for 84 percent of effort and 80 percent of foreign catch.

Japanese Fishing

As in past years, Japan again dominated foreign fishing activities off Alaska in 1981. A total of 479 Japanese vessels operated off Alaska. Of these, 303 vessels fished under the MFCMA, including 99 medium trawlers, 24 large trawlers, 21 longliners, 2 snail pot vessels, 57 transport vessels, and 3 tankers. Also fishing under the MFCMA were 5 pollock factoryships and 1 yellowfin sole factoryship accompanied by 62 pair trawlers, 16 Danish seiners, and 13 medium trawlers. In addition, 4 factoryships with 172 gillnet vessels conducted a high seas salmon fishery under INPFC regulations. The number of vessels present per month varied from 110 to 445, with peak activity in June and July (during the high seas salmon fishery).

Effort by Japanese vessels totaled 59,335 days, or 83 percent of total foreign effort off Alaska. This effort produced a total catch of 1,159,716 metric tons (2.56 billion pounds), or 76 percent of total foreign catch. Pollock was the predominant species and represented 74 percent of the Japanese harvest, as in 1980. Other species caught were flounders (9 percent) and cod (6 percent). The remaining 11 percent was composed of salmon, snails, and other groundfish species. Eleven percent of the total catch was taken from the Gulf of Alaska, and 89 percent from the Bering Sea and Aleutians. Twelve percent of total vessel effort occurred in the Gulf of Alaska, and 88 percent in the Bering Sea and Aleutians.

Japan's high seas salmon fleets operated in June and July north and south of the western Aleutians. The five pollock factory fleets operated in the central Bering Sea from May to October, and the yellowfin sole fleet worked east of the Pribilof Islands and along the Bristol Bay flats from June through November. Two snail pot vessels fished from July to August, using 124 vessel days to land 240 metric tons (529,108 pounds) of snails (edible meats) in the north central Bering Sea.

Effort by the remaining Japanese fishing vessels (123 trawlers and 21 longliners) was spread over all of Alaska's fishing areas. The trawlers fished for pollock, flounders, and Pacific ocean perch, and operated 27,530 days, 12 percent in the Gulf of Alaska and 88 percent in the Bering Sea and Aleutians. Longliners fished for Pacific cod and sablefish a total of 4,696 days, 71 percent in the Gulf of Alaska and 29 percent in the Bering Sea and Aleutians.

South Korean Fishing

South Korea continued in 1981 as the second most important foreign fishing nation off Alaska. Thirty-one stern trawlers, 2 longliners, 2 factoryships, and 8 transport vessels fished off Alaska, landing 242,931 metric tons of pollock, flounders, Atka mackerel, and other species, or 16 percent of total foreign catch. Effort by South Korean vessels totaled 6,870 days, or 11 percent of total foreign effort. As compared to 1980, South Korean effort increased 26 percent and catch was up 15 percent. Fishing in the Bering Sea and Aleutians produced 69 percent of the South Korean catch and 66 percent of effort.

Polish Fishing

Fishing by Polish vessels continued to expand, from 14 vessels in 1979 and 29 vessels in 1980, to 39 vessels in 1981 (32 large trawlers and 7 transport vessels). These vessels spent a total of 3,437 days off Alaska, 42 percent in the Gulf of Alaska and 58 percent in the Bering Sea and Aleutians. Total catch by Polish vessels was 99,623 metric tons, or 7 percent of total foreign catch, and included pollock and other species. Forty-five percent of the Polish catch was taken from the Gulf of Alaska. Effort by Polish vessels increased 39 percent over 1980 and catch increased 46 percent.

Fishing by Other Nations

Two other nations, Taiwan and West Germany, conducted minor fishing operations off Alaska in 1981. Vessels from these two countries collectively accounted for 1 percent of total foreign catch with 1 percent of total foreign effort. Three stern trawlers and one transport vessel from Taiwan fished in the Bering Sea. These vessels caught 5,913 metric tons of pollock and other species in 358 effort days. West Germany was represented off Alaska by one stern trawler, the same vessel that fished off Alaska last year. This vessel spent 313 days in the Bering Sea and Aleutians and caught 11,873 metric tons of pollock and Pacific cod. In addition, 2 transport vessels from the Netherlands, and 1 each from Norway and the United Kingdom provided aid to the West German vessel for a total of 35 days.

Joint Venture

Vessels from the Soviet Union and South Korea conducted joint venture operations, as in 1980. In addition, joint venture activities were expanded with the participation of vessels from Japan, Poland, and West Germany. In total, 32 vessels (17 Soviet, 8 South Korean, 4 Polish, 2 Japanese, and 1 West German) conducted joint ventures with U.S. vessels. Most of the vessels (excluding Soviet vessels) also participated in directed fishing. The vessels received 95,000 metric tons of pollock, flounders, and other species from U.S. vessels, with 18 percent taken from the Gulf of Alaska and 82 percent from the Bering Sea/ Aleutians area.

Enforcement and Surveillance

Joint NMFS-Coast Guard patrols in 1981 covered a total of 346,826 miles, consisting of 192,474 aircraft miles and 154,352 surfacecraft miles. NMFS Special Agents were aboard 15 percent of aircraft miles and 32 percent of surface miles. There were 4,695 sightings of foreign vessels. Personnel from surface vessels conducted 190 boardings on Japanese vessels, 72 on South Korean vessels, 48 on Polish vessels, 6 on Taiwanese vessels, and 5 boardings on the West German vessel. Infractions detected during boardings may result in the issuance of citations (written warnings), violations (assessement of civil penalties), or in seizures of vessels for flagrant violations. Boardings in 1981 resulted in: 7 citations, 6 violations, and 5 seizures of Japanese vessels; 9 citations, 6 violations, and 2 seizures of South Korean vessels; 12 citations and 7 violations by Polish vessels; and 3 citations and 2 violations by the West German vessel. In addition, Soviet vessels were issued 3 citations and 1 violation by Coast Guard aircraft patrols. Total penalties paid for foreign violations and seizures in 1981 are $958,500 as of February 9, 1982; the majority of cases are yet to be settled.

Washington, Oregon, and California

Foreign fishing effort for Pacific whiting off Washington, Oregon and California in 1981 involved only two nations, Poland and Bulgaria. Sanctions restricting Polish vessels from fishing in U.S. waters (due to imposition of martial law in Poland) occurred after the foreign fishing season off this coast had ended and did not affect the 1981 fishery. However, as in 1980, the Soviet Union was not permitted to trawl in the FCZ in reaction to the Soviet invasion of Afghanistan.

Joint venture operations (foreign receipt of U.S. caught whiting) were not prohibited by these restrictions because U.S. fishermen benefit from the markets made available by off-shore processing. Joint venture participation expanded in 1981, involving four foreign nations: Greece and Bulgaria (new entrants in 1981), Poland (which operated the previous year), and the Soviet Union (which initiated joint venture operations off this coast in 1978 and each year thereafter).

Twenty-nine foreign trawlers harvested about 70,400 metric tons (74 percent) of the total amount of Pacific whiting allowed for foreign fishing (95,000 metric tons, of which 5,000 metric tons were unallocated). In contrast, 21 U.S. trawlers delivered to 20 foreign processing vessels; 11 Soviet, 4 Bulgarian, 4 Polish, and 1 Greek. Almost 43,600 metric tons of Pacific whiting were received, 58 percent of the amount allowed for joint venture processing (75,000 metric tons). In total, only 45 foreign vessels fished or received U.S. caught whiting (6 vessels did both), and no more than 36 of these operated at any one time along the coast.

Polish Fishing

Poland was the major participant in the foreign trawl fishery for Pacific whiting in 1981. Thirty-six stern trawlers were permitted to operate in this fishery, and 29 actually fished, no more than 22 at any one time. In 1981, Poland harvested over 63,300 metric tons of Pacific whiting, 79% of its 80,000-metric ton allocation. About 850 metric tons of other species were taken incidentally in this fishery.

Bulgarian Fishing

Bulgaria entered this fishery in 1981 for the first time since the Magnuson Fishery Conservation and Management Act was implemented in 1977. (Bulgaria conducted a small effort in 1976.) Four stern trawlers were permitted to

operate, but no more than two fished at any one time. Bulgaria harvested about 7,000 metric tons of Pacific whiting, 70% of its allocation of 10,000 metric tons, and almost 50 metric tons of incidentally caught species.

Boardings and Violations

While enforcing the foreign fishing regulations, Special Agents of the National Marine Fisheries Service accompanied the U.S. Coast Guard on 76 aerial and 5 surface patrols. Almost 150 boarding inspections of foreign ve sels were conducted, and logbooks were scrutinized aga at the end of the season. As of February 1, 1982: enforcement actions had been taken; some were s under investigation.

Provided by the Alaska and Northwest Regional Offices the National Marine Fisheries Service:
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