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MARICULTURE — Threat or Promise?

Issues Related to Mariculture Development in Alaska

October 1987

by Central Council for Tlingit and Haida Indian Tribes of Alaska
with support from
Bureau of Indian Affairs
and
Sealaska Corporation

Introduction

Proposals to create a mariculture development policy for Alaska sparked one of the most intense debates of the 1987 legislative session. The level of interest is reflected in the 1,200 copies of the report Aquaculture in Alaska distributed by the House Research Agency in the first six months of 1987. The document was the most requested piece of information from the legislative information offices during the session.

Supporters say mariculture is one of Alaska's most promising economic opportunities and could create thousands of year-round jobs in depressed coastal communities. The proponents claim sea farming could take place in an environmentally sound manner with a minimal threat to wild stocks. These supporters say farmed production would complement wild harvests by helping Alaska maintain its share of world seafood markets now being captured by foreign aquaculture producers.

The opposition to mariculture focuses on salmon farming which some commercial fishermen fear could lower prices to the fishing fleets for wild harvests because of market competition. Opponents also voice concern over the potential of salmon farms to spread exotic diseases to wild stocks. Fishermen and environmentalists have asked the state to proceed slowly on mariculture because sea farms could displace other uses of public waters and uplands.

After holding lengthy public hearings over the teleconference network and gathering other testimony during sessions in several coastal communities, the legislature passed a 13-month freeze on licenses and permits for finfish farming to allow additional time for discussion of the complex issues. Additional legislative action is expected before the moratorium lapses in July 1988.

This paper discusses the pros and cons of the primary issues raised during debate over the pending legislation. It was developed as part of a mariculture education project for Southeast Native Villages by the Central Council of Tlingit and Haida Indian Tribes of Alaska, Bureau of Indian Affairs, and the Sealaska Corporation.

Economic Opportunity

In its February 1987 report Aquaculture in Alaska, the House Reserach Agency estimated a salmon farming industry with a 44 million pound annual production "could realistically produce a total employment effect of about 1,920 jobs and a payroll of \$48.8 million on gross sales of \$132 million. A salmon farming industry of this magnitude would have an economic impact that is roughly comparable to the present Alaska logging industry in terms of employment." No estimates are available for other forms of mariculture.

"Salmon farming is a particularly appealing industry for Native and village corporations with large coastal landholdings and could become an important aspect of village economies," the House Research report concluded. "Salmon farming is not a labor intensive enterprise, but it does utilize the skills of local residents and brings in year-round income."

When his legislation to create a mariculture policy was introduced, Rep. Johnny Ellis said in a speech that approval of the bill was "one of the most important steps this legislature can take to help create new jobs for Alaskans and stimulate non-petroleum dependent economic growth."

This contention was hotly debated by opponents. Earl Krygier, executive director of the Alaska Trollers Association (ATA), told the legislature: "We contend that proponents are exaggerating the potential economic benefits of salmon farming in Alaska. Without strict controls, which are not contemplated by these bills, pen-rearing operations will not be small, Alaska-owned businesses.

"The few Alaskan jobs they will provide will be at the lower end of the technical and pay scales of these operations," Krygier said. "To the extent that Alaskans are involved, either as investors in foreign dominated ventures or as independents, their position will be precarious. This industry is headed for a major shake out worldwide, and small, late entrants will be the most vulnerable."

Petersburg fisherman Gerry Merrigan emphasized a point made by many fishermen in a letter to legislators: "Salmon pen-rearing would not introduce new jobs, it would merely displace historic ones (fishing)."

Market Competition

One of the most commonly voiced concerns about salmon farming is the potential for displacing markets for wild salmon, thereby lowering the prices paid Alaska fishermen.

Typical of the comments were these from a letter to legislators by Petersburg troller Julie Hursey: "Pen-reared fish are predicted to flood the market, and produce a glut as soon as 1990, and if this happens, the price of all salmon will decline, so all gear groups will be affected."

The United Fishermen of Alaska put it this way in a letter to Governor Steve Cowper: "Most people agree that the initial competitive affects will be and are being felt by the Southeast troll fishery and the Southeast, Copper River, Cook Inlet, Kodiak, Bristol Bay, False Pass, Yukon and Kuskokwim gillnet fisheries. Alaska

pen-reared salmon will directly compete with these products. These fisheries primarily involve Alaska residents: they live here, spend their money here, and comprise a large part of the population of coastal towns. Because of this competition, establishing Alaska salmon farming could cripple the very economies it is supposed to enhance."

Proponents counter these arguments by pointing to recent growth in seafood consumption and say the marketplace can absorb enormous new quantities of seafood. In testimony before the legislature, Rodger Painter, executive director of the Alaska Mariculture Association, said, "We believe there is tremendous potential for growth of salmon markets in the United States. American per capita consumption of salmon climbed from .1 to .8 pounds between 1970 and 1985. This represents a very small percentage of the total seafood market, and can be improved through vigorous marketing, continuity of supply and product diversity."

Two recent market studies shed some light on the issue of market impacts. An April 1987 study by the University of Alaska (Salmon Farming in Alaska: Economic Feasibility and Socioeconomic Impacts) concluded: "...it appears that Alaska salmon farming will largely complement, rather than displace the traditional fishery. The increases in world production are likely to have significant effects on the Alaskan traditional fishery. However, incremental Alaskan production is likely to have only marginal effects on the Alaskan traditional fishery."

A 1986 survey of major U.S. seafood buyers by the UA Sea Grant Program (The Marketing Relationship between Pacific and Pen-raised Salmon: A Survey of U.S. Seafood Wholesalers) showed little overlap between the fresh markets for farmed salmon and the frozen gourmet salmon outlets targeted by traditional fisheries, but warned future increases in pen-reared production could change that situation.

Disease

Earl Krygier of the Alaska Trollers Association articulated a primary concern of many fishermen in a July 1987 article in the National Fisherman: "The threat from disease is an entirely different ballgame. A very credible recent study [by Dr. Arthur Whiteley, Professor of Zoology at the University of Washington] clearly shows a relationship between pathogenic bacteria and salmon net culture. We [in Alaska] produce 45 percent of the world's wild salmon and we don't want to gamble with disease in that population. Uneaten food and fish excrement produce a highly fertile bacteriological environment. If you're in Norway, and you don't have any wild stocks and you gamble, what the hell. You don't have anything to lose."

A response to Krygier's statement in the July issue of the Alaska Mariculture Association's newsletter said: "Control of disease is one of the challenges inherent in aquaculture and other forms of animal husbandry. The concerns voiced by Mr. Krygier are very similar to statements by some fishermen when Alaska's salmon ranching program was being debated in the legislature during the 1970s. The success of Alaska's private and public hatcheries and the resulting strong support of fishermen testify to the ability of salmon culturists to

effectively deal with disease."

The AMA newsletter quoted several experts with opinions running counter to Dr. Whiteley's contentions about the threat of disease transmission from farmed to wild stocks. Dr. Donald Weston, in a report for the University of Washington (The Environmental Effects of Floating Mariculture in Puget Sound), said: "While fish held in culture are likely to show more frequent appearance of disease than wild fish, disease does not appear to be transmitted to the wild populations. The bacterial diseases of salmonids in mariculture are not transmissible to humans...Increased bacterial abundance in sediments beneath a mariculture facility is quite probable, but it has not been demonstrated that this increased abundance is of any significance in terms of human health."

In testimony to the Pacific Fisheries Legislative Task Force on Feb. 7, 1987, Dr. Whiteley urged a cautious approach to salmon farming: "The important question...is not whether these organisms pose a present health threat, or ecological threat. The proper question is: can these organisms, and this ecosystem, and these humans tolerate the eutrophic burden that will be imposed by a full blown fish pen industry? it is our belief that there are many too many questions that need resolution, of a public health nature, before we proceed further."

Brian Allee, director of the Division of Fisheries Rehabilitation, Enhancement and Development (FRED), testified that the Department of Fish and Game believes the biological concerns of fish farms and existing salmon hatcheries are "functionally similar. Based on this assumption, the statewide disease and genetics policy should be applied to the fish farm permit, in order to reduce the risk of damage to the wild stocks of salmon, which are a common property resource. Both policies have been well developed and the implementation of these policies will serve as more than sufficient control."

Tidelands Management

Although most opposition to mariculture was directed at salmon farming, much concern was expressed during legislative hearings over the potential of all forms of sea farming to displace traditional uses of public waters.

Laura Dameron of the Southeast Alaska Conservation Council told legislators: "We would like to request a moratorium on issuing permits until each region has done a planning process and has decided what the existing uses for the areas that mariculturists would like to use are, and what would be the best use, and hopefully place an upper limit on how many areas will be used for mariculture in each area. In that way recreation and subsistence users, all the existing users, will be planned for as well."

In calling for a moratorium on all mariculture permits and licenses, a May 6, 1987 press release by the United Fishermen of Alaska said: "One of the big issues is the siting problem. These operations are being located in protected bays and inlets that have traditionally been used for recreational boating and fishing, for anchorages, and for commercial fishing operations. Siting concerns

apply equally to shellfish and to finfish farms."

Sylvia Garady of Tolkeen testified before the House Resources Committee that local residents are getting inadequate notice about proposed oyster farms on Prince of Wales Island: "They are issuing those permits, and they are not asking anybody what other uses are already in existence for a certain area...they are putting oyster farms in key anchorages which could be a matter of life and death if a fishing boat can't get in there when they have to get in there. The thing that really concerns us is that we have nothing to say about this. We feel the state permit process does not have a specific place for public input or for handling public concerns."

Mariculture supporters presented testimony stressing that Alaska's 33,000 miles of largely undeveloped coastline contains many sites where no conflicts will occur. Matt Dick, president of the Kodiak Mariculture Association, told lawmakers: "I think that there are a lot of areas around Kodiak. I've been in this area for ten years, commercial fishing and have done other activities on the water over the entire island, and I know personally that there are many areas where a shellfish farm could be placed with no conflict. The whole question comes down to how can we find those areas. I would like to see...an extension of the permitting process that would provide more public access, allow a longer comment period."

The Alaska Mariculture Association stressed in legislative testimony that sea farming can occur in a manner that does not displace other users: "The state should require that mariculture permits be found compatible with existing uses and the public be given adequate notification of proposed mariculture permits. We also believe that mariculture is no different than any other new use of public lands and waters. While we are not asking for preferential use of the tidelands, we don't want to be treated differently than other tideland users."

Who Pays for State Regulation

Upon introduction of his mariculture legislation, Rep. Johnny Ellis told his colleagues in a speech on the house floor: "I have worked closely with the private sector to develop this legislation, and I am pleased to tell you that the bill asks for no state loans or subsidies. Sea farmers want mariculture to be industry driven so it responds to the marketplace and not to the level of government spending."

An Alaska Mariculture Association position paper said: "While it is true that mariculture development will require the expenditure of state funds for processing permits and protecting public health and the environment, it also is true that economic diversification is one of Alaska's most important goals. The legislature must balance the need to continue important existing government services with the goal of creating new jobs and attracting new venture capital." AMA also told lawmakers that it would support creation of a mariculture products tax to help offset regulatory costs.

The cost of implementing state programs to support a mariculture industry was a primary concern to many commercial fishermen. The United Fishermen of Alaska letter to Gov. Cowper commented: "Finfish

farmers are asking you to take money away from programs you are now funding and use it to establish their project in Alaska. It's unrealistic to think that money will not come from commercial fishing programs, since it surely won't come from the domestic violence budget. It seems unreasonable to make further cuts to a healthy, successful industry to start a program with uncertain chances of success."

A position paper by the executive board of directors of the Prince William Sound Aquaculture Corporation agreed: "We are in a time that the state isn't even able to fund ongoing projects that for a relatively small investment can potentially produce significant economic gain. It seems irrational for the state to even consider the development of a new venture (salmon farming) that will not only require considerable state support but further is most likely not even comparable to existing established programs in terms of its potential long term benefits."

Brood Stock

Advocates of salmon farming say they are interested in purchasing at fair market cost surplus salmon eggs from private non-profit and state hatcheries to use for the initial brood stock needs of the industry. Proponents say private hatcheries could meet future needs, although continued sales of surplus stocks might be attractive new sources of revenue to public and private hatcheries.

In a speech at the Southeast Alaska Marine Trade Fair, Brent Paine of the Alaska Mariculture Association said: "State and federal hatchery managers have stated that there are sufficient surplus stocks of eggs in public and private hatcheries to satisfy the initial needs of an Alaska salmon farming industry. In fact, sales of surplus eggs to salmon farmers could provide a significant new source of revenue to help our ocean ranching programs."

The United Fishermen of Alaska and other critics are skeptical about the projected surpluses of salmon eggs. "Current legislation states fish farmers can get surplus eggs from hatcheries, but no one has yet defined the word 'surplus,'" said UFA in its letter to Gov. Cowper. "There are no state hatcheries operating a full design capacity--they are only operating at their funding level and could produce much more for the state's economy if they had more money. Instead of further funding, six state hatcheries may be closed because of budget cuts. Exactly what is the surplus the fish farmers plan to take?"

The Alaska Mariculture Technical Work Group, which was composed of representatives from numerous state and federal agencies and support groups, in late 1986 projected sufficient surpluses. The group's report explained: "Alaska now has well developed public and private hatchery programs releasing large numbers of (chinook and coho) smolts...Many of these programs achieve large enough returns to satisfy brood needs, provide catches to common property fisheries and allow terminal area cost recovery harvests."

Don Collingsworth, commissioner of fish and game, later said in a letter to Rep. Ellis: "Enclosed you will find a table which lists the

estimated number of salmon eggs that might have been available during 1986. Of these 88.6 million eggs, 4.6 million were chinook salmon, 23.2 million were coho salmon, 40.8 million were chum salmon, 2.0 million were pink salmon, and 20.0 million were sockeye salmon eggs." Collinsworth said "we expect that more eggs might be available" as surplus from future hatchery returns.

Where to Get More Information on Mariculture Issues

Minutes of legislative hearings:

House Resources Committee
P.O. Box V
Juneau, AK 99811

Studies:

(Aquaculture in Alaska, Report 87-B)
House Research Agency
P.O. Box Y
Juneau, AK 99811

(Salmon Farming in Alaska: Economic Feasibility & Socioeconomic Impacts)
Division of Business Development
Department of Commerce & Economic Development
P.O. Box D
Juneau, AK 99811

(The Marketing Relationship between Pacific and Pen-raised Salmon: A Survey of U.S. Seafood Wholesalers, Report 86-3)
UA Marine Advisory Program
590 University Ave., Suite 102
Fairbanks, AK 99709-1046

Position papers:

United Fishermen of Alaska
Senate Building, Suite 306
175 South Franklin St.
Juneau, AK 99801

Alaska Trollers Association
130 Seward St., Suite 213
Juneau, AK 99801

Alaska Mariculture Association
130 Seward St., Suite 201
Juneau, AK 99801

Renegade Norwegian farm salmon polluting wild runs

"Renegade" salmon from Norway's fish farms are destroying important characteristics and genetic differences between farm and river salmon, says Professor Harald Skjervold, following the discovery this autumn that up to 57 percent of the salmon stocks in some Norwegian rivers are of the farm variety.

If the genetic pollution continues at its present rate, the hereditary variations among some of the river species will be halved within seven years. Nature takes tens of thousands of years to fit the salmon to its special environment, and in the light of this fact, the present developments are alarming, says Skjervold.

The head of the Directorate for Nature Management, Helge Vikar, also finds the latest findings disquieting and stresses the vital importance of preserving the most valuable of the salmon species in the genes bank now being built up in Trondheim, incidentally the first of its kind in the world.

Sperm from 47 species of Norwegian river salmon were stored in the bank last year, and this number will be doubled by the end of 1987. Vikar blames the extensive genetic pollution in rivers on the import of smolt. This

import is not only responsible for spreading disease, it is also a major hazard for river salmon, says Vikar. He intends proposing to the Ministry of Environment that the Directorate be involved in the assessment of smolt import licenses.

Clipped from the
Fishermen's News
A reason to delete
salmon from the
Mariculture Bill.

Ralph Luthin
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FISH EXPO *continued*

truce and both make money, but the temptation to buy one more toy for the wheelhouse is too great. Pretty soon they don't have room enough in the wheelhouse for another piece of equipment, so they have to buy a bigger boat. Now they really have to catch fish!

Fourteen thousand fishermen milling around under one roof, that's a lot of flannel shirts. Some of them are multimillionaires, but you'd never know it by looking at them. They all look as if they need a manicure. The salesmen, on the other hand, look like a million dollars, in spiffy blue blazers and Rolex watches, giving their sales spiel to what look like poor relatives. (If you go to the show, wear your fishing clothes; you'll have more fun.)

The doors open at 10 A.M. (admission is \$5) and before you know it you're swept up into the show, the biggest commercial fishing show on earth. There are booths to the starboard, booths to the port—about 850 exhibiting companies this year—so many gadgets you don't know which way to look. Some of the booths are "manned" by very attractive women. That's always a good ploy with fishermen, and gets their attention in a hurry. I like that about fishermen. They're close to nature. I'm sick of all this androgyny.

"Are you interested in an automated longlining system?" a salesman asks you. "Well, sure . . ." and he explains the whole system to you. Fascinating. It'll cut up your bait for you, put it on the hooks, pull in the fish while you smoke a cigar, take them off the hooks, do everything but invest the profits. A neat package, you admit. "How much?" "Including the automatic baiter, \$50,000." You mull it over, and move on to the next booth.

What I really want is a machine that will clean the fish for me. They'll have those there, too, starting at around \$100,000. Or you could buy a filleting knife for around \$20. Maybe you'll even get one free. They give away a lot of free stuff here (well worth the price of admission), and everyone is carrying around a big bag of goodies as if it were Halloween and they were trick or treatin'. Last time I took in the show I got a fishhook tie clasp which I wear every time I put on a tie. I probably still have it.

In 1985, on-site sales at Fish Expo tipped the scales at around \$13.5 mil-

lion, with \$40 more million following in its wake. The big exhibitors are the U.S., Norway, Denmark, Canada, Iceland, Germany, Japan—about 40 countries in all. It costs a thousand dollars to rent a small booth, and some of these countries will rent enough space for a dozen booths, flags, native costumes, the whole bit; you round a corner and all of a sudden you're in Little Norway. I like the Norwegians best because they throw great parties at night. "Skoal!" "Skoal!" You betcha.

The parties this year ought to be terrific because Alaska fishermen (who figure heavily in the show) have been on a roll the last few years. "Red hot" is how John van Amerongen, editor of the *Alaska Fisherman's Journal*, sums up the 1987 season. "Whatever it lacked in volume of fish it made up . . . in price. Fueling the fire is greater competition in more compressed seasons, and it takes aggressive fishing and topnotch equipment to stay ahead of the pack these days."

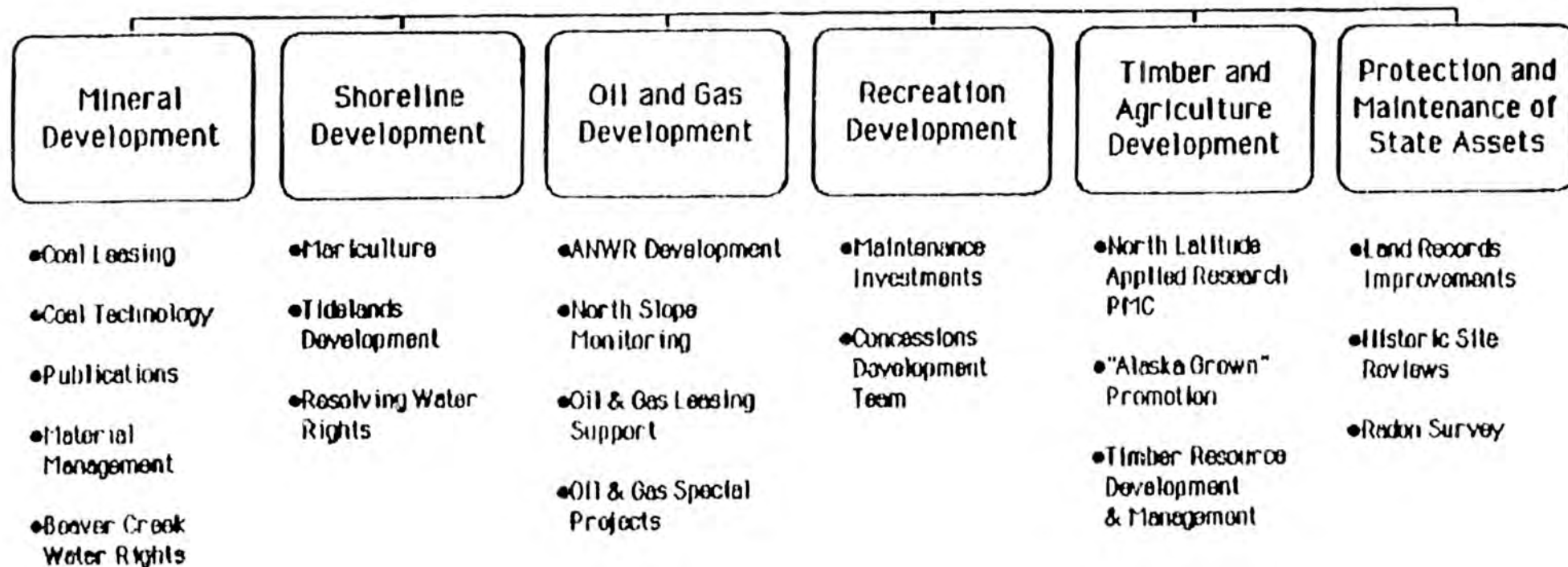
The final salmon tally for 1987 isn't in yet, but it could approach 100 million fish—for a value to fishermen in excess of \$400 million. Trollers in Southeast Alaska were getting \$3 a pound for king salmon with plenty of \$100 fish—big ones—coming over the rail. The high price was influenced strongly this year by heavy losses of farmed salmon in Norway from a disease called hitra.

Halibut were back stronger than ever, although the management of the fishery is still a mess. Halibut is one of Alaska's last open fisheries, which means you don't need a limited entry permit to fish for them (you can gear up at Expo and go yourself). What's happening is that so many fishermen are pouncing on the quotas that all the fish are taken in a matter of a few days—millions of pounds!—forcing bottlenecks at the processing plants, reduced quality and a limited amount of halibut going into the lucrative fresh market (because of the unavailability of planes to fly that much out at once). Anyway, nobody's mad at the halibut. An important part of Fish Expo is the free seminar program in which issues such as this are discussed.

The offshore fisheries in the North Pacific and Bering Sea, pollock, cod and sole, are thriving as the "Americanization" of the fishery proceeds apace. Until the Magnuson Act was passed in 1976, establishing a 200-mile U.S. zone, these waters were dominat-



Investing in Alaska: A "Kick-Start" Resource Development Strategy



AN ENTERPRISE BUDGET
FOR THE
DEPARTMENT OF NATURAL RESOURCES

Summary: Three Proposals

While the strategic objectives of the Department of Natural Resources have increased substantially from what they were in 1983 - particularly as related to its role as catalyst for resource development - the total budget level has been cut in half.

The Department is committed to quality management of Alaska's resources but it is clear that, in order to meet its responsibilities, some changes and some choices have to be made.

We have found that extreme budgetary distress opens a whole world of new tactics for achieving Department objectives: efficiencies, partnerships, joint ventures - in short, policy-making entrepreneurship.

We propose a new way of thinking about Alaska's resources: as the State's principle capital assets.

Unless the State invests in responsible maintenance and development of these assets, we will continue to foreclose income, job, and quality of life opportunities for Alaskans.

We propose a new way of evaluating when and how to invest public money for Alaska's resource assets: an Enterprise Budget.

An Enterprise Budget tells the Legislature and the public what it can expect for its investment dollar by identifying estimated returns in terms of measurable performance objectives.

We propose to help kick-start the economy through a combination of new, low-cost, high-return programs to provide new opportunities for private sector resource development.

The Need for Resource Investment

Alaska is a resource state. Our economic present and future is inextricably tied to the wise use of our oil and gas, timber, minerals, scenic beauty, land and water resources.

- When we talk about economic development in Alaska, we are talking about natural resources.
- When we talk about jobs in Alaska, we are talking about natural resources.
- When we talk about trade with the Pacific Rim, we are talking about natural resources.
- When we talk about tourism and Alaska's unique quality of life, we are talking about natural resources.
- When we talk about financing education - health care - public safety - environmental protection, we are talking about natural resources.

Resource management is the business of the Department of Natural Resources.

We manage the two largest oil fields in North America; the most extensive state park system in the U.S.; 33,000 miles of shoreline that is entering a new development stage with mariculture; the most extensive coal deposits in the U.S. which are only beginning to be mined; 8% of the softwoods in the U.S., which are only beginning to be harvested; the largest gas fields in the U.S., which are only beginning to be tapped.

In total, the Department of Natural Resources manages over 82 million acres of state-owned land and water resources.

No other state owns 28% of its land base. No other state is so dependent on the development of its own resources to support its economy.

Whether the Department of Natural Resources acts primarily as a caretaker and regulator - or as a catalyst and facilitator for development - depends largely on the funding level of the Department.

Unfortunately, at a time when the need is greatest for the Department of Natural Resources to be a catalyst for development, the budget level allows primarily for caretaker management; in some areas, marginal caretaker management.

- Proposals for new oil, gas, mining, timber, and recreation projects with significant economic potential are delayed for lack of staff to review, evaluate, and initiate the required public processes.

- Recreation/tourism facilities that once were open year round or at a minimum for a full seven month season now close their gates after a three month season.
- Resource inventory activities are shut down in some areas; reduced to minimal levels in others.
- Management of State contracts for sale or use of land and resources is backlogged, delaying start-up of revenues to the State.

The Department of Natural Resources is committed to quality management of Alaska's resources, but it is clear that as budget levels decline, some changes and some choices have to be made.

For the long-term, we need a way of thinking about and planning for resource management that helps us to make critical choices about which programs to eliminate, which programs to maintain, which programs to give priority.

For the short-term we need some strategies to kick-start Alaska's economy. In resource management that means making resource development opportunities available to the private sector.

The Long-Term Strategy: An Enterprise Budget

What is an "Enterprise Budget?"

It is simply a more businesslike way of thinking about the expenditures the State makes in the management, protection, and development of its resources and the return it receives from the conservation and use of these resources.

It is an approach to making critical choices about budgeting for resource management.

An Enterprise Budget requires a new way of thinking about natural resources.

It means treating Alaska's natural resources as our principle capital assets.

Unless the State invests in the responsible maintenance and development of these assets, we will continue to foreclose income, quality of life, and job opportunities for Alaskans.

An Enterprise Budget requires a new way of thinking about resource management.

If State expenditures for the management of public resources are, like the expenditures of any business, investments in the future...then there should be a clear expectation of return on those investments.

What can the public expect for its dollar?

An Enterprise Budget identifies the estimated return for dollars invested. The Department of Natural Resources already budgets on a project basis. An Enterprise Budget goes a step further spelling out economic objectives as well as measurable performance objectives for each project - objectives for both the protection and the development of land and water resources.

An Enterprise Budget tells both the Legislature and the public what return they can expect for their investment in the Department of Natural Resources.

It will take another year to fully implement an investment-oriented Enterprise Budget, but the start will be made in the FY 89.

The Short-Term Strategy: A Kick-Start for Alaska's Economy

To help revitalize Alaska's economy, new opportunities for private sector resource development must be offered on public lands.

The objectives are in sync with overall Department responsibilities, focusing on those related to marketable resources. Continued strong attention will be given to regulatory and conservation objectives and - as will be seen in budget proposals - regulation and conservation are components of each new program.

The objectives of the "kick-start" strategy are to:

- Concentrate management on those natural resources that merit public investment because they offer special potential for economic development;
- Create opportunities for those resources to be developed wisely;
- Concentrate management on those natural resources that merit public investment because of their environmental values and contribution to Alaska's quality of life, or because they require continuing maintenance investments to guarantee long-term productivity.

The strategy is to match market demand with available resources and northern latitude technologies.

The investment by the State will be \$2.9 million...or less than 3¢ per acre of land managed by the Department of Natural Resources.

HOW THE DEPARTMENT DEVELOPED THE "KICK-START" PACKAGE

The process of determining which investment strategies would "payoff" for the State included a three-stage culling. First, each Division was asked for their best kick-start proposals. Over \$8 million in budget increments were submitted. Then the Directors of each Division sat as "Board of Directors" and critiqued each increment. The individual packages were sent back to each Division for reworking before a final review by the "Board."

The final package of \$2.9 million is a best bet resource investment package recommended by the Department of Natural Resources as a whole.

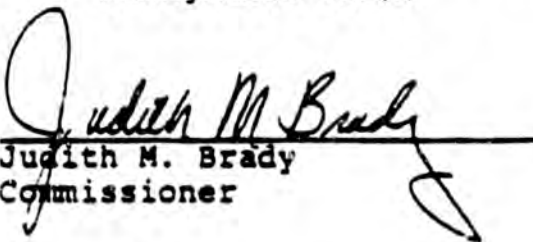
The narrative is presented by resource category, rather than Division category. In every instance, more than one Division is involved in making the strategy work.

In every instance, Divisions put together working teams to maximize the impact of the public dollar investment requested.

The result is 20 separate kick-start action items in six categories for a total investment by the State of \$2.9 million...or 3¢ per acre of land managed by the Department of Natural Resources.

Good On Us!

Congratulations to an outstanding Resource Management Team.


Judith M. Brady
Commissioner

MINERAL DEVELOPMENT

Investment Strategy

Alaska is an industrial and strategic mineral source of international importance. Current developments at Red Dog and Green's Creek, the operation of the Bima at Nome, and the export of Alaskan coal will further that reputation. But to assure maximum return from the development of our resources, we must do more. We must invest in the development of information on mining exploration, extraction, and recovery technologies unique to northern latitude environments. We must invest in the identification and development of new markets. We must, in short, capitalize on our own competitive advantages in mining.

But we must target these investments to those needs not capable of being met by private industry alone and guard against the temptation to spend public monies on projects of purely private benefit. By selecting projects in which there is a direct and present private need with public implications, promoting opportunities for adding value in-state, and assuring the protection of our environment and quality of life -- values which have their own economic importance -- we can use Alaska's mineral resources to build a stronger economy in the future.

Investment Initiatives and Returns

1. REESTABLISHING COAL LEASING. Both national and Pacific Rim companies have requested coal leases, but the leasing program has been suspended for two years for lack of funding. Resumption of the leasing process will bring returns both in terms of income (bonus bids, rents, royalties) and in much-needed jobs. This increment would enable lease sales to be held in the Matanuska Valley and the Healy area.

Investment: \$89,000

Estimated Returns: The State can expect approximately 200 new jobs as a result of both sales, assuming coal production begins, and approximately \$1,000,000 per year in new rents and royalties.

2. NORTH LATITUDE COAL TECHNOLOGY DEVELOPMENT. Making maximum economic use of Alaska's coal resources requires advances in coal technology in several areas, including coal drying, liquification, and basic coal chemistry. By investing modestly in this initiative the State has the opportunity to leverage a significant amount of federal research money into the solution of unique north latitude coal development and processing problems crucial to making Alaska coal competitive.

Investment: \$75,000

Estimated Returns: Approximately \$200,000 in federal research funds could be obtained by the State as a result of this investment and directed towards Alaska research groups including the University of Alaska and MRL. The ultimate pay-off in 10 to 20 years will be world market sales of competitively priced, clean burning Alaska coal.

3. ACCELERATED PUBLICATION AND DISTRIBUTION OF GEOLOGIC DATA. There is a well documented correlation between the publication of state geological survey reports and increased mineral exploration and claim staking. Moreover, state geo-surveys are critical to the resolution of state, federal, and private land use and ownership issues. But while a significant amount of survey data has been developed, publication has been slowed by budget cuts. This initiative proposes accelerated publication of reports through inexpensive in-house desktop publishing.

Investment: \$100,000

Estimated Returns: Savings of at least 50% of previous publication costs through use of innovative black and white and color processing techniques and desk top publishing for document paste-up and lay-out tasks. Saved dollars and staff time will be used to publish additional reports and maps. As a result, more private sector exploration of lands with mineral potential could occur. If development occurs as a result of mineral discovery, private sector jobs will be created and rents and royalties will be earned by the landowner.

4. INDUSTRIAL MATERIALS DEVELOPMENT AND MANAGEMENT. Sand, gravel, riprap, and associated industrial materials are valuable resource assets -- so valuable, in fact, that in those cases where the State has identified reserves and permitted their development, illegal and over-extraction is a real and present problem. Year to date receipts from material sales exceed \$1.2 million. This increment, funded by program receipts, will allow the state to continue reserving and selling industrial materials, protecting these deposits, and monitoring their extraction once they have been sold to ensure appropriate development and payments to the State.

Investment: \$205,000

Estimated Returns: At least \$680,000 can be returned to the State during FY 88 from sales to the 330 applicants with pending requests to purchase State materials.

5. RESOLUTION OF THE BEAVER CREEK WATER RIGHTS CONFLICT. Beaver Creek is highly mineral dominated by placer mining operations and a part Wild and Scenic River System. The federal government requested the adjudication of federal reserved water to protect the Creek's wild and scenic status. If the project is not funded for this project, mining activity on the Creek could be enjoined. This increment would permit the State to get on with the job of adjudicating the water rights, resolving the federal request and removing the cloud currently hanging over the miners.

Investment: \$59,000

Estimated Return: The water flow essential to protecting the river's wild and scenic status will be quantified and reserved, and approximately 50 miners will be allowed to continue placer mining operations.

SHORELINE DEVELOPMENT

Investment Strategy

Alaska's 33,000 miles of shoreline borders over 10 million acres of state-owned tidelands and submerged lands. Largely underdeveloped today, these lands are easily accessible to most of the State's people and enable the marine transport central to the distribution of many goods and services. Moreover, these lands are a storehouse of economic assets: fisheries, recreation sites, mariculture, ports and harbors, tideland leases for log storage and transfer, setnet sites, mineral development, and oil and gas development. The opportunities for revenue and job creation are significant, but there are both barriers to overcome and fragile resources to protect. The increments proposed here begin the task of moving ahead to develop these resources wisely.

Investment Initiatives and Returns

1. MARICULTURE. Rapidly expanding markets for finfish and shellfish mariculture products and Alaska's clear competitive advantages in the production and marketing of these products have spurred a boom in mariculture applications on state land. While a one-year legislative moratorium suspended new activity, dozens of potential operators are scrambling to obtain sites in Southeast Alaska and Prince William Sound. To assure that mariculture develops in a manner that maximizes the State's development potential while protecting public resources, this increment, which would be funded through program receipts, would allow the Department to process applications in a thorough and timely manner. Failure to do so will jeopardize both the economic opportunities and the resource itself.

Investment: \$77,200

Estimated Returns: At least \$220,000 per year will be returned to the State in new lease rental payments when the anticipated 200 mariculture lease applications are granted, and 1000 new jobs will be created when development occurs. Additional spin-off jobs will be created in seafood processing, transportation, cold storage, and marketing.

2. **TIDELANDS DEVELOPMENT.** Besides mariculture, the State's tidelands offer a wide range of other development opportunities -- and an equally wide range of management challenges. This proposed increment would permit the Department to meet these challenges: process tidelands lease applications, identify areas with development potential, broker and coordinate development with private investors, help communities, establish shoreline development priorities, and develop an innovative new permitting process designed to expedite the regulatory process while assuring the protection of unique coastal resources.

Investment: \$235,200

Estimated Return: Approximately \$415,000 in new annual rentals will be returned to the State after processing the 250 pending tideland applications. Major development projects associated with processing lease applications, including Greens Creek, Humpback Creek, Alaska Lumber and Pulp, and Chilkoot Lumber, will generate up to 5,000 new private sector jobs.

3. **RESOLVING WATER APPROPRIATION ISSUES.** Water appropriation and use is an essential component of all shoreline development projects, especially mariculture and fish processing. For some time now, the Department has only been equipped to accept water rights applications, not resolve competing uses. The result is increasing water resource problems in rapidly developing areas. If we are to ensure the benefits of shoreline development and guard against the problem of overuse, we must have the increased capacity provided by the proposed increment, which would be refunded from program receipts.

Investment: \$61,400

Estimated Returns: Large scale development, including Greens Creek, Red Dog, and Quartz Hill mining operations, and Bradley Lake, Humpback Creek, Whittier Creek, and Katmai hydro-electric projects plus smaller scale development, including 25 seafood processors, 30 hatcheries, 100 small mining operations, 20 oilfield permits, and 150 public water supply systems will proceed in a timely manner because water appropriation issues will have been settled.

OIL AND GAS DEVELOPMENT

Investment Strategy

During fiscal year 1988, Alaska will receive approximately \$1.4 billion in revenues from oil and gas development -- more than 80 percent of the General Fund. These revenues support much of the infrastructure that drives the economic machinery of the State. And yet scant attention has been given to the mechanism that enables the receipt of these revenues -- the Department of Natural Resources -- or to the Department's responsibilities to ensure that the State continues to receive the revenues it is due and to represent the State's interests in the debate in Washington over the opening of the Arctic National Wildlife Refuge to exploration and development. Virtually nowhere in state government is the need for reliable investment more obvious, or the payoff more clear, than here. To help assure that the State's interests continue to be addressed, three increments are proposed.

Investment Initiatives and Returns

1. PROTECTING THE STATE'S INTERESTS IN ANWR. The State must be able to represent its sovereign and proprietary interests, including navigability claims, water use, proposed land exchanges, royalty interests, and subsurface values, in all ANWR discussions. The increment proposed would enable the State to achieve this objective, and to proceed smoothly and capably into the authorization and permitting phase should exploration and development occur.

Investment: \$48,000

Estimated Returns: Protection of State interests and State income during future oil and gas development in ANWR.

2. MONITORING EXISTING NORTH SLOPE LEASES. The Department currently does not have the capacity to effectively monitor some 91 leases that have been issued or need to be re-issued in the oilfield service area for the North Slope. Some lessees have declared bankruptcy, others have failed to make payments and left equipment and debris behind in their race to leave town. If the State is to maintain its position as a responsible manager of land it must be able to conduct regular field inspections, ensure responsive management by leaseholders, secure prompt payment, pull in the bonds posted by those who cannot meet their responsibilities, and/or re-lease the properties. With this increment, the Department will be able to more effectively monitor and enforce lease requirements and coordinate with industry to help avoid major cleanup problems. As a result, the north slope oilfields will continue to be the model for northern latitude development.

Investment: \$132,200

Estimated Return: Approximately \$178,000 in State income each year from the 91 existing leases, avoidance of unnecessary cleanup expenses, and protection of the land from environmental damage.

3. OIL AND GAS LEASING SUPPORT. In order to meet the State's responsibilities for title searches and analyses and thus avoid title conflicts which would slow or eliminate pending lease sales under the five-year leasing schedule, the Department requires an increment to support a land title analyst.

Investment: \$44,800

Estimated Returns: Scheduled 1988 oil and gas lease sales will go forward without delay because land title questions will have been answered. Exploration of leased areas by private industry could result in new oil and gas discoveries on state land, and provide new revenues for the State and jobs for residents.

4. OIL AND GAS SPECIAL PROJECTS. Oil and gas production from state land will begin its expected decline by the end of this decade unless new discoveries are made or new fields are brought on-line. It is imperative that revenues from current oil and gas production be maximized, that marginal field development be promoted, and that new strategies to enhance oil and gas production be implemented. This increment would fund a coordinator to ensure that these actions are taken.

Investment: \$92,300

Estimated Returns: Increased in-state development potential for gas lines, refineries, exploratory drilling, and marginal field development, with associated increases in jobs and revenues.

RECREATION/TOURISM FACILITIES

Investment Strategy

Alaska's 118 state parks, recreation areas, and historic sites had over 6 million visits last year, making state park units the most intensely visited recreation areas in Alaska. Some 20 percent of these state park visitors were tourists. There is an inconsistency in the State continuing to invest in tourism promotion to increase the number of tourists when, at the same time, it fails to invest in the maintenance and improvement of visitor attractions and services. The likelihood that the State will be able to reap the full economic value of its tourism

investments is severely limited by the steadily declining condition of the recreation assets themselves. The combination of increased use, additions to the system, decreasing operating budgets and dramatically reduced work months for seasonal staff has affected the adequacy of visitor services and facilities in state parks and resulted in deferred maintenance and increases in vandalism. Not only are we losing badly needed income and jobs at existing park facilities, but the Department's lack of trained staff has meant that it is no longer able to develop new, privately-financed facilities on public land. The projects proposed here are designed to turn this trend around with minimum new State investments.

Investment Initiatives and Returns

1. MAINTENANCE INVESTMENTS. Increasing services worked by seasonal workers will bring basic services such as clean restrooms, garbage and litter removal, vandalism repair, and patrols of heavily-used areas back to maintenance levels, though no more.

Investment: \$193,200

Estimated Returns: Protection of the State's considerable investment in recreational facilities and continuation of the state park system's ability to attract visitors and provide expected minimal services.

2. CREATING A CONCESSIONS DEVELOPMENT TEAM. A modest investment will permit the creation of a concession development team able to broker opportunities and process contracts for private lodge and recreation facility concessions on state lands. Such a program would permit the State to follow through on a \$175 million proposed resort in Chugach State Park, an expected Prince William Sound wilderness resort proposal, a South Denali resort complex, a private development in the Willow Creek State Recreation Area, and advance commercial use permitting within state parks. Currently, there is too wide a gap between the first spark of an idea for development and the actual construction of the project. The Department needs a team that can help projects move smoothly through the system.

Investment: \$137,200

Estimated Returns: Approximately 2000 jobs would be created if the ski resort in Chugach State Park is constructed, and over 500 other jobs could be generated during the next five years if other park land projects are developed.

TIMBER AND AGRICULTURAL DEVELOPMENT

Investment Strategy

Alaska has unique import substitution and export opportunities associated with both timber and agricultural resources. Both hinge upon clearly indentifying the competitive advantages presented by the State's resources and location, identifying potential markets and products to fill those markets, and investing in or brokering development to take advantage of these opportunities. The State's mistakes in this regard (the grain storage facility, the slaughterhouse, etc.) have come from a failure to analyze proposals, markets, products, and competitive advantage vigorously, not from absence of real opportunities. It is time to reverse the trend. We need to redirect our energies and our resources away from grandiose projects toward smaller scale, demand-driven enterprises designed to maximize our own competitive advantages, not mimic development elsewhere. For both timber and agriculture the challenge is the same: inventory and protect our assets, be knowledgeable about new market opportunities for projects particularly suited to our northern latitude, providing the opportunity to the private sector to develop those resources. As a beginning, three initiatives are proposed.

Investment Initiatives and Returns

1. NORTH LATITUDES PLANT MATERIALS RESEARCH CENTER. The Department's Plant Materials Research Center at Palmer has developed international expertise in research and development of plant varieties and production processes uniquely suited to northern latitudes. This research has particular importance to oil and gas, mining, timber, and other land disturbing industries which must comply with revegetation, reclamation and other environmental requirements, as well as for Alaska's \$15 million per year nursery, vegetable and greenhouse crop industry. The Department proposes to strengthen this effort to create an international Center of Excellence in northern latitude plant science with the express objectives of increasing the sale and export of plant materials, increasing the availability of revegetation materials and methods critical to energy and mineral resource development projects, and strengthening the State's existing horticulture industry. The increment proposed is a first step down this path.

Investment: \$174,200

Estimated Returns: Increased ability of the mining, oil and gas, and timber industries to reclaim disturbed land and comply with environmental protection requirements. Increased cash receipts by private sector farms and businesses from sales of new or specialty agricultural products.

2. "ALASKA GROWN" PRODUCT PROMOTION. Both for import substitution and potential export income, the Department proposes an expanded marketing and market development program for Alaskan agricultural products, both fresh and processed. This represents a shift in direction, away from promotion of grandiose subsidized projects to small scale, demand driven enterprises that produce unique and cost competitive products for which there is a known market. The first stages of the program would be funded through the interest paid by farmers to the Agricultural Revolving Loan Fund.

Investment: \$82,100 (ARLF funds)

Estimated Returns: Approximately \$25,000 in matching federal funds can be leveraged to support this program if State funds are made available. Improved marketing of Alaska farm products will result in increased gross sales for private sector farmers and fresher food for Alaska's residents.

3. COOPERATIVE TIMBER DEVELOPMENT AND MANAGEMENT PROGRAM. To increase efficiencies, the Department intends to offer two long-term contracts for cooperative timber management and development programs -- one with harvest potential of 300 MMBF in the Mat-Su Valley, another for 12 MMBF in the Kantishna area. Under the terms of the cooperative program, recreational resources will be developed and some 800,000 seedlings will be grown for reforestation programs on state and private lands. The cooperative program will be managed in full compliance with the Forest Practices Act.

Investment: \$680,400

Estimated Returns: The two timber sales are expected to create over 100 new jobs, generate over \$2 million annually in private sector wages, generate additional millions in related private sector sales and services, and return over \$100,000 in stumpage revenues to the State each year. Seedling sales resulting from this program will generate an additional \$100,000 in State revenues each year, and increased forest land oversight by the Department will ensure that all forest resources on state and private land are protected for the use and enjoyment of present and future generations.

Investment: \$55,000

Estimated Returns: More timely review of development projects by Department personnel will allow projects to proceed more rapidly, and updated locating and mapping of historic and archeologic sites will prevent development delays caused by unexpected antiquity discoveries.

3. RADON SURVEY. Spot surveys have revealed a clear and present danger to public health in several areas of the state: high concentrations of radon. The State has a responsibility to all Alaskans to conduct a more comprehensive survey of the radon threat. This increment, designed to leverage federal matching funds, would permit the State to address the potentially significant health hazard radon presents.

Investment: \$100,000

Estimated Returns: Lives may be saved because the magnitude of Alaska's radon problem will be determined and data will be available for agencies or individuals working on solutions to the radon problem.

PROTECTION AND MAINTENANCE OF STATE ASSETS

Investment Strategy

At the core of the Department's investment strategy is its fundamental responsibility to the people of Alaska -- in this and future generations -- to protect and maintain the State's principal productive assets: its natural resources. Though at only the most rudimentary level, most of these responsibilities are being addressed within the constraints of our maintenance budget. However, a few gaps need to be closed. Most of them are operational flaws, one addresses a clear and present health hazard.

Investment Initiatives and Returns

1. LAND RECORDS IMPROVEMENTS. Perhaps the most important function of the Department is also the most prosaic: creating and maintaining accurate land records and making them available to both public resource decision makers and private developers. Land is the source of our wealth and our future growth and managing it well must be our highest priority. Improving the land record management system requires three proposed increments. The first would shift funding for the Automated Drafting System project manager out of the CIP budget to the general fund, devoting CIP monies thus made available to the task of automating status plats for 2700 townships. The second increment would fund a Land Administration System audit team to ensure the absolute accuracy of the State's computerized land records. The last would provide for the purchase of new land record reader/printers that would make access to land records easier for our clients and more efficient -- and thus less costly -- for the State Recorder's Offices. Each is a small improvement; together they will substantially enhance our land records maintenance system.

Investment: \$220,500

Estimated Returns: Accurate, accessible land records that developers and other public and private sector land users can depend upon when making business and project related decisions. Savings of over \$600 per year in paper costs alone will result from use of new reader/printer equipment.

2. EXPEDITED HISTORICAL AND ARCHEOLOGICAL SITE REVIEW. Personnel shortages have made impossible the timely completion of mandated review of construction projects for compliance with state and federal antiquities laws and resulted in costly delays for both public and private developers. This increment provides for the additional position needed to keep up the current workload -- assuring both adequate protection of antiquities, and responsive action on development projects.

Salmon farm owner to switch harvests

The Associated Press

SEATTLE — The state's oldest and largest salmon farm has been purchased by a Norwegian aquaculture business which plans to switch the fish-farming operation from Pacific salmon to Atlantic salmon.

The Domsea salmon farm was sold by Campbell Soup Co. to Global Aqua USA Inc. which says it will harvest four million pounds of Atlantic salmon a year and hatch another four million young salmon annually, a spokesman said.

Global Aqua is owned by Global Aqua A-S of Norway and a Norwegian investor group. The sale price was not disclosed. The sale involved four farm sites, three off Bainbridge Island and one near Port Townsend.

John Pitts of the Washington Department of Agricul-



ture said Atlantic salmon are easier to domesticate than Pacific salmon and that the switch should be seen as a positive move for the state.

"It will combine Norwegian and American expertise that will contribute to the further development of fish farming here," said Havard Rabben, general manager of Global Aqua.

"By raising Atlantic salmon we will not be competing with the commercial fishery of Pacific salmon," Rabben said.

Under the Campbell Soup Co.'s ownership the Domsea farm raised chinook salmon and produced about 1 million pounds of fish per year.

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Ministry of Fisheries
June 1987

THE AQUACULTURE INDUSTRY IN NORWAY AND THE ROLE OF THE GOVERNMENT

INTRODUCTION

Fish farming is a new and important sector of the fisheries industry. Salmon and trout farming in the sea has been carried out in Norway since the beginning of the 1960s. Since early in the 1970s the developments in this field there have been considerable. Today there are approximately 690 food fish facilities in Norway and approximately 560 plants which supply spawn to these facilities.

From 1973 until the present day, the production of salmon and trout has increased at a very great rate. In 1986 the production increased to approximately 50,000 tons (46,000 tons of salmon and 4,600 tons of trout) with a first hand value of just over NOK 1,700 million. Some 90 per cent of the salmon and some 30 per cent of the trout from the farming facilities is exported. In 1986 the total export value of farmed fish was approximately NOK 1,800 million.

Permission from the authorities is required in order to carry out fish farming. For salmon and trout, permission has so far been granted for the building of plants with a total capacity to produce 90-100,000 tons of fish. This capacity is not fully utilized, however, due to lack of smolt, but the situation is expected to change in 1987-88. The occurrence of fish diseases will also have an effect on the actual utilization of the capacity.

THE LICENCING SYSTEM

In order to regulate and control the increasing fish farming activities, the Storting passed a provisional Act in 1973, followed by a permanent Act in 1981. This second Act was again repealed when a new Act relating to the Breeding of Fish, Shellfish etc. entered into force on 21 June 1985. The licencing system, which was liberalized by

the latest Act, is the main instrument used by the Fisheries Authorities to maintain the fish breeding industry as a profitable and viable regional industry. At present there are quantitative restrictions on the establishment of new farms for the breeding of salmon and trout for food. However, the Ministry aims at granting a certain number of licences periodically for salmon and trout. These are limited in size, to 8,000 m³. In 1985 it was decided to grant 150 new licences for production of salmon and trout. These licences were specifically distributed between the different coastal regions.

As regards the breeding for food of species other than salmon and trout, as well as all hatching of roe, production of fish fry and larvae etc., licences are normally given if the locations are approved by other authorities concerned with fish diseases, water pollution and traffic at sea.

RESEARCH AND DEVELOPMENT

Commercial farming of oysters and mussels is also taking place. Fish farmers and scientists are working together in an effort to improve the quality of farmed fish. Considerable resources are also used to minimize the spread of disease. At the same time attempts are being made to solve the problems connected with the farming of marine fish species. This applies primarily to cod, halibut and turbot but also to lobster and scallops. On the whole, the purely technical problems connected with the hatching of spawn have been solved for these species, but a good deal of work still remains to be done with regard to finding out how this experience can be used profitably in practice.

The Government and the Storting consider fish farming to be such an interesting sector for the future that it is one of the four growth sectors which will be the focus of research in the years to come. In the National Budget for 1987, it was estimated that public funds to a total of NOK 170 million will be spent on marine research.

EMPLOYMENT FIGURES

At the turn of the year 1986-87, approximately 3,000 persons were

directly employed in the fish farming industry and about the same number in related activities. It is estimated that by 1990 11-12,000 persons will be employed in Norwegian fish-farming, including related activities.

FIRST HAND SALE

Almost all the fish landed in Norway is sold in the first instance through the fishermen's cooperative sales organizations. The organizations vary in structure and methods, but have a common goal: to stabilize prices and to ensure for the fishermen the highest price that the market will permit. . .

At present there are 12 sales organizations with statutory exclusive rights of first-hand sales of fish and shellfish. These rights are either related to a definite geographic area, or to a particular species of fish, or to a combination of area and species, as established by the Raw Fish Act of 1951.

As for farmed fish, the first hand sale from the fish farmers must go through the Norwegian Fish Farmers Sales Organization, established in 1978.

QUALITY CONTROL

The responsibility for the control of disease in fish rests with the Veterinary Authorities under the Ministry of Agriculture, which administers the Act concerning Measures to Counteract Diseases in Freshwater Fish.

As regards quality control of farmed fish for the purpose of human consumption, the responsibility rests with the Directorate of Fisheries' Quality Control Service for Fish and Fishery Products. Its task is to exercise strict quality supervision of all types of fish. The Directorate usually issues inspection certificates for all farmed fish for export and for domestic consumption.

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University of Alaska

Statewide System of Higher Education

OFFICE FOR FISHERIES

ALASKA SEA GRANT COLLEGE PROGRAM

April 17, 1987

Senator Fred Zharoff

~~Senator Richard Eliason~~

Representative Adelheid Herrmann

Alaska State Legislature

P.O. Box V (MS 3100)

Juneau, AK 99811

RE: Aquaculture

Dear Legislators:

Following the opportunity to sit in on the aquaculture hearing in Dillingham last week, and after hearing the discussion about the concerns for the interplay of traditional fisheries with culture fisheries, I obtained from the State of Maine copies of their statute on aquaculture and more importantly the regulations used by the Commissioner of Marine Resources for approving or disapproving culture leases. I enclose a copy for your information and reference.

Having been involved in research on both traditional and culture fisheries in Maine for the period 1975 - 1985, and having observed the changes and developments of both types of fisheries in Maine over that period, it is my impression that for the most part, both types of fisheries have been good neighbors. I believe that the sound regulatory basis found in these attachments has done much to accommodate the mutual growth of these fisheries. Over the same ten-year period that Maine fishermen have increased their share of the total commercial take in the Gulf of Maine, they have also become by far the most successful aquaculturists in the Northeast. The newest cultured product in the Northeast is salmon. It is under the regulatory process contained in these attachments that Maine has within this year approved 17 pen-rearing sites for salmon, and for which an additional 90 are being considered.

There are traditional conflicts between gear types in all fisheries, and those exist in Maine as well as in Alaska. However, compared to other uses of coastal Maine waters and shoreside facilities, e.g., industrial development, recreation and tourism, housing/commercial development at dockside, etc., aquaculture has been an ally of the fishery more often than an enemy or competitor. Both traditional and culture fisheries have a tremendous stake in shoreside access and environmental/water quality issues. As we look to the future of Alaska, I predict that these two segments of the fishery will become good neighbors by compari-

Senator Fred Zharoff
Senator Richard Eliason
Representative Adelheid Herrmann
April 17, 1987
Page two

son to others who will be joining the future development of this state. Just as we are all concerned with protecting the investment of our traditional fishermen now, I encourage us to find a harmonious way for aquaculture to develop so that when other pressures come to our coast later, we will have a sound legal and investment basis to protect the quality of our coast in the future.

I very much enjoyed the opportunity to meet all of you in Dillingham and look forward to working with you on a variety of fisheries issues. I hope the enclosed materials contain information which will be helpful to you in your deliberations.

Cordially,



R. K. Dearborn
Director

RKD:lbd
Enclosure

§ 6072. Research and aquaculture leases

1. **Authority.** The commissioner may lease areas in, on and under the coastal waters including the public lands beneath those waters and portions of the intertidal zone for scientific research or for aquaculture of marine organisms. The commissioner may grant a lease to any person. Except as provided in this Part, the commissioner's power to lease lands under this section shall be exclusive. For the purposes of this section, the deputy commissioner may serve in the place of the commissioner.

2. **Limitations of lease.** The commissioner shall determine the provisions of each lease, provided:

- A. A lease shall not exceed a term of 10 years;
- B. A lease may be granted for tracts not to exceed 5 acres in area. The commissioner may grant contiguous lease tracts to a single applicant; and
- C. No applicant shall be permitted to lease more than 200 acres; and
- D. A lease shall not be transferable to any other person.

3. **Municipal approval.** In any municipality with a shellfish conservation program under section 6671, the commissioner may not lease more than 2 acres of the intertidal zone within the municipality without the consent of the municipal officers.

4. **Applications.** The application shall:

- A. Be written on forms supplied by the commissioner;
- B. Describe the location of the proposed lease tract by coordinates or metes and bounds;
- C. Identify the species to be cultivated;
- D. Describe the impact of the project on existing or potential uses of the area;
- E. Describe the degree of exclusive use required by the project;
- F. Include written permission of every riparian owner whose land to the low water mark will be actually used; and
- G. Include a map of the lease area and its adjoining waters and shorelands, with the names and addresses of the known riparian owners.

5. **Application review.** The commissioner shall review the application and set a hearing date if he is satisfied that the written application is complete and the application indicates that the lease could be granted.

6. **Hearing procedure.** Prior to granting a lease, the commissioner shall hold a hearing. The hearing shall be an adjudicatory proceeding and shall be held in the manner provided under the Maine Administrative Procedure Act, Title 5, chapter 375, subchapter IV and the specific procedures of this section.

- A. Notwithstanding the provisions of Title 5, section 9052, subsection 1, paragraph A, personal notice of the hearing shall be required to be given only to the lessee and the known riparian owners.
- B. Under the provisions of Title 5, section 9052, the leasing procedure shall require notice to the general public.

7. **Decision.** The commissioner may grant the lease, if he is satisfied that the proposed project will not unreasonably interfere with the ingress and egress of riparian owners, navigation, fishing or other uses of the area and is not in conflict with applicable coastal zoning statutes or ordinances. The commissioner may establish conditions that govern the use of the leased area and the limitations on the aquaculture activities. These conditions shall encourage the greatest multiple, compatible uses of the leased area, but shall also preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose.

8. **Preference.** If more than one person applies to lease an area, preference shall be given as follows:

- A. First, to the department;
- B. Second, to the riparian owner of the intertidal zone within the leased area;
- C. Third, to fishermen who have traditionally fished in or near the proposed lease area; and
- D. Fourth, to the riparian owner within 100 feet of leased coastal waters.

9. **Rents.** After consulting with the Director of the Bureau of Public Lands, the commissioner shall determine the rent which shall be paid under each lease. The rent shall represent a fair value based upon the use of the leased area.

10. **Lessee's actions.** After being granted a lease, each lessee shall:

- A. Record the lease in the registry of deeds of each county in which the leased area is located;
- B. Publish a notice in the newspaper in which the commissioner published notice or would have published notice of any public hearing. The notice shall describe the area leased and enumerate any restrictions in the leased area; and
- C. Mark the leased area in a manner prescribed by the commissioner.

11. **Revocation.** If substantially no research or aquaculture has been conducted within the preceding year, or if it has been conducted in a manner substantially injurious to marine organisms, or if any other condition of the lease has been violated, the commissioner may revoke the lease. A lease revocation shall be an adjudicatory proceeding under the Maine Administrative Procedure Act, Title 5, chapter 375, subchapter IV. A hearing with public notice shall be held prior to revoking any lease.

12. **Renewal.** The commissioner shall grant a lease renewal unless the prior lessee has not complied with the lease agreement during its term, substantially no research or aquaculture has been conducted, or the commissioner finds that it is not in the best interest of the State to renew the lease. Renewals may be granted if applied for no later than 30 days after the lapse of the prior lease. A lease renewal shall be an adjudicatory proceeding under the Maine Administrative Procedure Act, Title 5, chapter 375, subchapter IV. Public notice shall be given as required under subsection 6 of this section and a hearing shall be held if it is requested by an interested person.

12-A. **Transferability.** A lease may be transferred to another person for the remaining portion of its term subject to the following conditions.

- A. Lease transfers shall be subject to the same procedural requirements as initial applications, except that a public hearing is not mandatory unless requested by an interested person.
- B. The commissioner may grant lease transfers if he determines that:
 - (1) The change in lessee does not violate any of the standards in subsection 7;
 - (2) The transfer is not intended to circumvent the intent of subsection 8; and
 - (3) The transfer is not for speculative purposes.

13. **Regulations.** The commissioner may adopt or amend regulations:

- A. Establishing minimum standards for maintaining leases;
- B. For procedures to issue, transfer, review or revoke leases; and
- C. For notices and hearings to the extent that those procedures are not established by this section or the Maine Administrative Procedure Act, Title 5, chapter 375.

14. **Conflicts.** Whenever a project described in a pending aquaculture lease conflicts or could conflict with a project described in a pending submerged lands act lease, the commissioner and the Commissioner of Conservation shall determine which project is in the best interests of the State.

1982, c. 609, §§§§1, 2, 3, & 4; 1983, c. 301, §§§§1, 2, 3, & 4.

§ 6073. Exclusivity; prohibition or interference

1. **Exclusivity.** Each lease for aquaculture shall be exclusive for the species and to the extent provided by the commissioner in the lease.

2. **Prohibition on interference.** It shall be unlawful to interfere with the rights provided in a lease.

DEPARTMENT OF MARINE RESOURCES REGULATIONS

CHAPTER 2

Aquaculture Lease Regulations

Summary:

These regulations prescribe the procedures and substantive criteria governing consideration of aquaculture lease applications submitted to the Commissioner of Marine Resources pursuant to 12 M.R.S.A. § 6072 and Department administration of leases. The regulations set forth procedural requirements for all aspects of the adjudicatory aquaculture lease application and administration process, consistent with the requirements of 12 M.R.S.A. § 6072 and the Maine Administrative Procedures Act, 5 M.R.S.A. § 9051 et seq.

2.01 Purpose

This chapter establishes procedures and explains criteria governing consideration of aquaculture lease applications submitted to the Commissioner pursuant to 12 M.R.S.A. § 6072 and prescribes procedures and criteria for subsequent annual lease review, lease renewal, lease revocation and lease transfer.

2.05 Definitions

- A. The definitions set forth in section 6001 of Title 12, Maine Revised Statutes, shall apply to the terms used in this chapter.
- B. Aquaculture. "Aquaculture" means the culture or husbandry of marine organisms by any person. Storage or any other form of impounding or holding wild marine organisms, without more, shall not qualify as aquaculture. In order to qualify as aquaculture, a project must involve affirmative action by the lessee to improve the growth rate or quality of the marine organism.
- C. Commissioner. "Commissioner" means the Commissioner or Deputy Commissioner of Marine Resources.
- D. Culture or Husbandry. "Culture or husbandry" means the production, development or improvement of a marine organism.
- E. Riparian owner. "Riparian owner" means a shorefront property owner whose property boundaries are within 1000 feet of the proposed lease boundaries.

2.10 Application requirements

A. Form.

Aquaculture lease applications shall be submitted on forms prescribed by the Commissioner and shall contain all information required by the Commissioner in order to obtain information relevant to the aquaculture project. Applications should be submitted at least 80 days in advance of any desired hearing date.

B.

1. Within 15 working days of receipt of a written application, the Commissioner shall
 - a. determine whether the application is complete, containing sufficient information on which a decision regarding the granting of the application may be taken; and
 - b. notify the applicant of his determination.
2. If the application is complete, the Commissioner shall schedule a hearing on the application, if he determines that the application could be granted.
3. If the application is incomplete, it shall be returned to the applicant with a written explanation of the additional information required in order to be complete.

- C. Within 60 days after hearing on an application, the Commissioner shall render a final decision, unless the applicant agrees to a longer time.

2.12 Multiple ownership

- A. Corporate applicants. Corporate applicants for aquaculture leases shall include information in their application concerning:

1. Date and state in which incorporated;
2. Names, addresses and titles of all officers;
3. Names and addresses of all directors;

4. Names and addresses of stockholders, directors or officers owning an interest, either directly or beneficially, in any other Maine aquaculture leases, as well as the quantity of acreage attributed to each such person under paragraph C below.
5. Whether the corporation, any stockholder, director or officer has applied for an aquaculture lease for Maine lands in the past;
6. Whether any officer or director has ever been arrested, indicted or convicted of any violation of any marine resources law, whether State or federal.

B. Partnership applicant. Partnership applicants for aquaculture lease shall include information concerning:

1. The names, addresses and ownership shares of all partners;
2. Whether the partnership or any partner has applied for an aquaculture lease for Maine lands in the past;
3. Whether the partnership or any partner owns an interest, either directly or beneficially, in any Maine aquaculture leases as well as the quantity of acreage attributed to the partnership or partner under paragraph C below.
4. Whether any partner has been arrested, indicted or convicted of any violation of marine resources law, whether State or federal.

C. Aquaculture lease acreage.

Any person, whether an individual, partnership or corporation, will be credited as owning the number of aquaculture lease acres held either directly or beneficially by that person. Thus, the shareholders in a corporation or partners in a partnership will be credited with a number of acres equal to their proportional ownership share in the corporation or partnership. Therefore if a person owns a 50% stock interest in a corporation which holds an aquaculture lease of 100 acres, that person shall be credited as holding 50 aquaculture lease acres.

2.15. Notice of Lease Application and Hearing.

A. Personal notice.

At least 30 days prior to the dates of the hearing, the Department shall mail a copy of the notice of hearing, lease application and chart describing the lease area to the following persons:

1. riparian owners;
2. officers of the town(s) in which the lease area is located;
3. the applicant, except that the applicant shall receive only a notice of hearing; and
4. any public agency the Department determines should be notified, including but not limited to, State Planning Office, Department of Environmental Protection, Department of Conservation, Regional Planning Office, Municipal Officials, United States Coast Guard and United States Army Corps of Engineers.

B. Public notice.

The Department shall publish notice of the lease hearings at least twice in a newspaper of general circulation in the area affected unless otherwise prescribed by the Maine Administrative Procedure Act. Notice of the hearing shall be published once at least 20 days prior to the hearing and a second time at least 10 days prior to the hearing. Notice shall also be published in a trade, industry or interest group publication which the Department deems effective in reaching persons who would be entitled to intervene. Public notice shall include the following information:

1. A statement of the legal authority under which the proceedings are being conducted, including references to the adjudicatory proceedings procedures of the Administrative Procedures Act, 5 M.R.S.A. § 9051 et seq. and the aquaculture lease provisions of 12 M.R.S.A. § 6072;
2. a short, plain statement of the nature and purpose of the proceeding and the nature of the aquaculture lease application;
3. a statement of the time and place of the hearing; and
4. a statement of the manner and time within which applications for intervention may be filed.

2.20 Intervention

A. Forms.

The Commissioner shall supply application forms for intervenor status and require the submission of the following information:

1. identity of intervenor applicant;
2. specific description of the manner in which the intervenor applicant may be substantially and directly affected by the granting of an application. This description shall include information describing the intervenor applicant's existing use of the proposed lease area, (whether recreational or commercial.) In the event that the applicant is not a member of the class which may be substantially and directly affected by the proceeding, the applicant shall describe any other interest he may have in the lease proceeding which merits Department approval of his intervenor status; and
3. a specific description of intervenor applicant's objections, if any, to the proposed aquaculture lease.

B. Filing of applications.

Any application for intervenor status must be filed in writing and received by the Department at least 15 days prior to the hearing. The Commissioner may waive the 15 day deadline for good cause shown.

C. Participation limited or denied.

At least 5 days prior to the hearing, the Commissioner shall decide whether to allow or refuse intervenor applications. The Commissioner shall provide written or oral notice of his decision to the intervenor applicants. When participation of any intervenor is limited or denied the Commissioner shall include in the hearing record an entry noting his decision and the reasons therefore.

1. Full participation. The Commissioner shall approve intervenor status for any person who is substantially and directly affected by the granting of an aquacultural lease application, and for any other agency of federal, state, or local government.
2. Limited participation. The Commissioner may grant limited intervenor status to an intervenor applicant where the Commissioner determines that the applicant has an interest in the proceeding and that the applicant's testimony or interest are repetitive or cumulative when viewed in the context of the interest represented or evidence to be offered by other intervenors.

D. Correspondence of parties.

Once admitted as an intervenor, whether full or limited, the intervenor applicant shall be considered a party to the proceeding. Each party shall provide copies of all correspondence with the Department to all other parties and will be notified of all communications between the Department and other parties to the aquaculture lease proceedings.

2.25. Agency file

- A. Upon receipt of an aquaculture lease application, the Commissioner shall open an agency file, which file shall include all written correspondence from parties and non-parties concerning the application and memoranda of oral communications between the department and parties and non-parties concerning the lease application.

B. Public inspection.

The agency file shall be open for public inspection by prior appointment during normal business hours. The Department will supply copies of the file contents to any person for a charge according to the Department schedule.

2.29. Prehearing Conference.

The Commissioner may require parties to attend a prehearing conference if the complexity of the issues or volume of evidence indicate a prehearing conference would aid in the determination of issues raised by the application.

2.30. Aquaculture Lease Hearing Procedures.

A. Presiding Officer

1. The presiding officer at any aquaculture lease hearing shall be either the Commissioner or a Department employee or representative designated by the Commissioner to act as hearing officer.
2. The presiding officer shall have the authority to:
 - a. rule upon issues of evidence and procedure;
 - b. regulate the course of the hearing;
 - c. certify questions to the Commissioner for his determination;
 - d. administer oaths;
 - e. take such other action as may be necessary for the efficient and orderly conduct of the hearing, consistent with these regulations and applicable statutes.
3. The presiding officer may permit deviation from these procedural regulations for good cause shown, in so far as compliance is found to be impracticable or unnecessary.

B. General Conduct.

1. Opening statement. The presiding officer shall open the hearing by describing in general terms the purpose of the hearing and the general procedure governing its conduct.
2. Record of testimony. All testimony at aquaculture lease hearings shall be recorded and, if necessary for judicial review, transcribed.
3. Witnesses. All witnesses must be sworn and will be required to state their names, residence, and whom they represent, if anyone, for the purpose of the hearing.
4. Testimony in written form. At any time prior to or during the course of the hearing, the presiding officer may require that all or part of

the testimony to be offered at such a hearing be filed with the Department in a prescribed form. All persons offering testimony in written form must be present at the hearing and subject to examination. This subsection shall not be construed to prevent oral testimony at a scheduled hearing by any member of the public.

C. Continuance.

All hearings conducted pursuant to these regulations may be continued for reasonable cause and reconvened from time to time and place to place by the presiding officer. All orders for continuance shall specify the time and place at which such hearing shall be reconvened. The presiding officer shall provide reasonable notice to interested persons and the public of the time and place of such reconvened hearing.

D. Regulations of cameras and microphones.

The placement and use of television cameras, still cameras, motion picture cameras, microphones and other recording devices may be regulated by the presiding officer to ensure the orderly conduct of the hearings.

2.31 Evidence.

- A. Evidence which is relevant and material to the subject matter of the hearing, and is of the type commonly relied upon by reasonably prudent persons in the conduct of their affairs shall be admissible. Evidence which is irrelevant, immaterial or unduly repetitious shall be excluded. The Department's experience, technical competence and specialized knowledge may be utilized in the evaluation of all evidence submitted.
- B. The presiding officer may take official notice of any facts of which judicial notice could be taken, and in addition may take official notice of general, technical, or scientific matters within its specialized knowledge as well as statutes, regulations and non-confidential agency records. When facts are noticed officially, the presiding officer shall notify all parties and they shall be afforded an opportunity to contest the substance or materiality of the facts noticed. Facts officially noticed shall be included and indicated as such in the hearing record.

C. Documentary and real evidence.

1. All documents, materials and objects offered and accepted as evidence shall be numbered or otherwise identified and included in the record. Documentary evidence may be received in the form of copies or excerpts if the original is not readily available. The presiding officer may require any person offering documents or photographs as exhibits to submit a specified number of copies, unless the document or photograph is determined to be unsuitable for reproduction.
2. All written testimony and documents, materials and objects submitted into evidence shall be made available during the course of the hearing for public examination. All hearing evidence shall also be available for public examination upon prior appointment at the Department of Marine Resources in Hallowell during normal business hours.
3. The agency file containing the application and agency correspondence shall be submitted as documentary evidence in the hearing record.

D. Objections.

All objections to rulings of the presiding officer concerning evidence or procedure and the grounds therefore shall be timely stated during the course of the hearing. During the course of the hearing or after the close of the hearing, the Commissioner may determine that the ruling of the presiding officer was in error and order the hearing reopened or take any other action he deems appropriate to correct the error.

E. Offer of proof.

An offer of proof may be made in connection with an objection to a ruling of the presiding officer excluding or objecting any testimony or question on cross-examination. Such offer of proof shall consist of a statement of the substance of the proffered evidence.

F. Public participation.

Any person may participate in a hearing by making oral or written statements explaining his position on the issues, and may submit written or oral questions to the parties through the presiding officer, within such limits and upon such terms and conditions as may be fixed by the presiding officer.

G. Testimony at hearings.

1. Order of presentation. Unless varied by the presiding officer, hearing testimony shall be offered in the following order:
 - a. Direct evidence by applicant and applicant's witnesses in support of the application.
 - b. Testimony by department, staff and consultants.
 - c. Testimony by members of federal, state and local agencies.
 - d. Direct evidence by intervenors supporting the application.
 - e. Direct evidence by intervenors opposing the application.
 - f. Testimony by members of the public.
2. Questions. At the conclusion of their testimony each witness may be questioned in the order described below.. The presiding officer may require that questioning of witnesses be conducted only after the conclusion of testimony by an entire category of witnesses, for the purposes of efficiency or clarity of record.
 - a. The presiding officer, legal counsel and department staff may question witnesses at any time.
 - b. The applicant.
 - c. Intervenor parties.

- d. Federal, state and local agency representatives.
- e. All other members of the public may have the opportunity to question witnesses by oral or written questions through the presiding officer.

H. Conclusion of hearing.

Subsequent to the conclusion of the hearing, no other evidence or testimony will be allowed into the record, except by stipulation of the parties or as specified by the presiding officer.

I. Record.

A full and complete record shall be kept for each aquaculture lease application proceeding. The record shall include, but shall not be limited to, the application, supporting documents, all exhibits, proposed findings of facts and conclusions of the presiding officer, if any, staff documents, the Commissioner's findings of facts and conclusions, and a recording or transcript of the hearing.

2.35. Hearing Officer Report.

- A. In the event that an aquaculture lease hearing is conducted by a hearing officer other than the Commissioner, the hearing officer may prepare a report, including proposed findings of fact, conclusions of law and, at the Commissioner's request, a recommended decision. A copy of the hearing officer's report shall be provided to each party and each party shall have an opportunity to file responses or exceptions to the report within 10 days following receipt of the report.
 - 1. In submitting responses and exceptions, parties may submit a petition to the hearing officer to correct mis-statements of fact in the report. The hearing officer may correct any mis-statements of fact in his report prior to submission of the report to the Commissioner.
 - a. The report shall be submitted to the commissioner with the parties' responses and exceptions.

- B. Nothing in this section shall prevent the Commissioner from reaching his decision based solely on the record, after review of the hearing, tape or transcript and after review of the hearing record.
- C. Whenever a presiding officer other than the Commissioner conducts an aquaculture lease hearing, the Commissioner shall not confer with the presiding officer concerning the aquaculture lease application at issue outside the presence of the parties, whether or not a hearing officer report has been prepared.

2.37 Decision.

- A. After review of the agency record, the Commissioner shall issue a written decision, complete with findings of fact and conclusions of law.
 - 1. The Commissioner may grant an aquaculture lease, if he is satisfied that the proposed project will not unreasonably interfere with the ingress and egress of riparian owners, navigation, fishing or other uses of the area and is not in conflict with applicable coastal zoning statutes or ordinances. The commissioner may establish conditions that govern the use of the leased area and the limitations on the aquaculture activities. These conditions shall encourage the greatest multiple, compatible uses of the leased area, but shall also preserve the exclusive rights of the lessee to the extent necessary to carry out the lease purpose.
 - 2. If the Commissioner denies a lease application, his denial shall be considered "final agency action" for purposes of judicial review.
- B. The final decision of the Commissioner shall be mailed within 10 days to all parties.

2.40 Lease issuance.

- A. Prior to issuing a lease, the Department shall send a draft lease for review to the applicant.
- B. Applicant responsibilities. Within 30 days of the Commissioner's decision and prior to issuance of the lease the applicant must complete the following requirements:

1. establish an escrow account or secure a performance bond in the amount required by the Department in the draft lease; and
 2. pay the rental fee due for the first year of the lease term.
- C. Immediately following, but not before, signing of the lease by the Department and the applicant, the lessee must complete the following requirements:
1. file the lease or a memorandum of lease in the Registry of Deeds of the County in which the lease tracts are located, and
 2. publish notice of the lease issuance in the newspapers in which the aquaculture lease hearing notices originally appeared following Department approval of the notice.
- D. Compliance. Failure to maintain an escrow account or performance bond, to pay rental fees in a timely manner, to file the lease in the Registry of Deeds or to publish notice of the lease shall be grounds for lease revocation under 2.42.
- E. Lease term and validity. The term of the lease shall run from the date of the Commissioner's decision, but no aquaculture rights shall accrue in the lease area until the lease is signed.
- 2.41 Competing aquaculture lease applications.
- A. In the event the Department receives more than one application for a lease site, the Department shall give preference in granting a lease as follows:
1. first to the Department;
 2. second to the riparian owner of the intertidal zone within the leased area;
 3. third, to fishermen who have traditionally fished in or near the proposed lease area; and
 4. fourth, to the riparian owner within 100 feet of leased coastal waters.

- B. To qualify for preference under Section A. an application must be accepted by to the Department prior to the publication of the first public notice of hearing to consider a previously filed lease application for identical or overlapping lease areas.
- C. When the Department receives competing applications, it shall schedule one hearing to consider the applications concurrently.

2.42 Annual lease review and revocation.

The Commissioner may conduct an annual review of each aquaculture lease.

- A. If the Commissioner determines following an annual review or at any other time that the applicant has conducted substantially no research or aquaculture within the preceding year, that the aquaculture or research within the aquaculture lease area has been conducted in a manner substantially injurious to marine organisms, or that any other lease condition has been violated, he may revoke the lease.
- B. The Commissioner shall hold an adjudicatory hearing to consider revocation of a lease, subject to the notice and hearing procedures set forth in these regulations.

2.45 Lease renewal.

- A. A lessee must file with the Department an application to renew a lease no later than 30 days following the lapse of the prior lease.
- B. Renewal of a lease shall be an adjudicatory proceeding with notice as provided by these regulations, except that no hearing is required unless it is requested by an interested person.
- C. The Commissioner shall grant a lease renewal unless:
 - 1. the prior lessee has not complied with the lease agreement during its term;
 - 2. the prior lessee has conducted substantially no research or aquaculture in the lease areas during the lease term; or

3. The Commissioner finds that it is not in the best interest of the state to renew the lease. Considerations of the best interest of the state may include, but shall not be limited to, conflict with other new or existing uses of the area.

2.60 Lease transfer.

- A. Application. A lessee may apply for Department approval of the transfer of his aquaculture lease to another person for the remaining portion of the lease term on a form supplied by the Commissioner.
- B. Procedure. A lease transfer shall be an adjudicatory proceeding subject to the notice, hearing and decision requirements, as set forth for initial lease application in these regulations, except that no hearing is required unless requested by an interested person.
- C. Decision. The Commissioner may grant the lease transfer if he determines that:
 1. the change in lessee's identity does not violate any of the lease issuance criteria set forth in 12 M.R.S.A. § 6072(7);
 2. the lease transfer is not intended to circumvent the preference guidelines for treatment of competing applications as set forth in 12 M.R.S.A. § 6072(8); and
 3. the lease transfer is not for speculative purposes. "Speculative purposes" shall be found to exist whenever the owner of the lease to be transferred has not conducted any substantial aquaculture on the lease sites, including but not limited to seeding, cultivation or harvest of organisms.

2.75 Minimum lease maintenance standards.

- A. Each lessee shall mark the lease tracts in a manner prescribed by the Commissioner in the lease.
- B. Each lessee shall maintain his aquaculture lease tracts in such a manner as to avoid the creation of a public or private nuisance and to avoid substantial injury to marine organisms.



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1987 SALMON RETURNS ARE TALLIED

Preliminary figures from the ADF&G tag recovery program indicate that more than 12,000 coho from NSRAA lake and stream plants were caught in the Southeast commercial fisheries in 1987, along with 6000 chum from Deep Inlet and Medvejie releases. The majority of the chums were landed in the Salisbury Sound vicinity.

In addition, a total of 32 tagged Medvejie chinook had been recovered in the troll fishery as of the second week in November. Most were caught in District 113, with some caught in 114 (Icy Strait). Of the 32 tag recoveries 24 have occurred during the winter troll fishery which opened October 1. No expansions of these tag recoveries are yet available, so catch estimates cannot be provided at this time.

The coho catch occurred primarily along and adjacent to the outer coasts of Chichagof, Kruzof and Baranof islands. Nearly all (99%) of the catch, coho bound for southeastern Baranof Island lakes, was taken by trollers. In contrast, those fish destined for northern Kruzof Island were nearly equal in the troll and seine catches (54% and 46%, respectively). This difference was due to two seine openings that occurred in Salisbury Sound in late August and early September, and to the lack of

seine openings in southern Chatham Strait. All, trollers landed 80% of the catch produced coho caught commercially this season.

The great majority of the adult coho produced by NSRAA in 1987 had reared from fry to smolt in Deer Lake. About 10,000 Deer Lake coho were caught in the commercial fisheries and an approximately equal number returned to the Deer Lake outlet stream in Mist Cove. Nearly 9,000 adults (over 70,000 pounds) were seined from the Mist Cove special harvest area and sold for project cost recovery. The vast majority of the fish sold were of good quality and well-received by the processor. An additional 837 adults were collected to meet broodstock requirements. Also, a considerable, but as yet unknown number of coho were caught with sport fishing gear in and near Mist Cove by clients from the charter vessel "Creole".

An additional 2400 cohos caught in the commercial fisheries were produced from three barriered lakes near Deer Lake and from Surprise Lake and Sealion Cove Lake on northern Kruzof Island.

Marine survival was disappointingly low for smolts released from all six barriered lake systems in spring



General manager Pete Esquiro picks up chum salmon out of a beach seine along with Bob Hausler and Chris Mierzejek during the "mop up" cost recovery operation.

(Continued on page 8)

Spawning Channel Chums Return To Haines

Numbers of chum salmon utilizing the 24 mile spawning channel at Haines showed a significant jump in 1987 as the first 4-year-olds reared in the channel returned. While it is not known how many of the 5000 chums estimated to be in the channel were born there, the history of the channel indicates an impressive number. As shown in the table, the number of adult chum utilizing the channel in previous years has averaged about 1500. While the Chilkat chum run was good this year, it was by no means a record run, and it seems unlikely that there would be such a sudden jump in the number of strays. With about 100,000 chum fry counted out of the channel from the 1983 brood year, a return of 3500 would represent unexpectedly high marine survival. While it will take several years to evaluate fry survival realistically,

this year's channel utilization is very encouraging.

There was also a large increase in the number of chum eggs placed in incubation boxes at 31 Mile in 1987. About 638,000 were seeded in the boxes, compared to 254,000 the year before. Unfortunately, the egg take was terminated early due to flooding, so that the 850,000 egg goal was not met.

This summer's hot weather caused significant flooding of the glacial systems in the Haines area. Overflow channels between the Klehini and 31 Mile Creek were deepened, resulting in more frequent intrusion of glacial water into the normally clear 31 Mile Creek. This progressive flooding is a threat to enhancement efforts and wild stock utilization as well. The

possibility of a protective dike is being explored. If dike construction does not work out, alternative sites for the boxes may be needed, despite survivals of 95% at the current site.

24 Mile Spawning Channel

Year	Adult Carcasses Pitched	Estimated Fry
1983	463	97,500 ^{1/}
1984	1,505	355,000 ^{2/}
1985	1,735	308,500 ^{2/}
1986	1,283	293,000 ^{2/}
1987	5,000 (est.)	1,000,000 ^{2/}

^{1/} Emigrating fry were counted for 1983 only.

^{2/} Assuming 20% egg to fry survival.

General Manager's Notes

FRED Budget Crisis and Hidden Falls Hatchery.

It seems very ironic that with all the time currently being devoted to arguing the pros and cons of "finfish farming", such little time is devoted to examining, discussing and recognizing that Alaska has, perhaps, the most successful ocean ranching program in North America. It almost seems as if there is an orchestrated attempt to make us forget about that fact and to divert all of our attention to a new industry whose benefits to the State are as yet undefined. I would hope that through all of the smoke we would continue to recognize and place great value on those programs currently in place.

At a time when much of the talk around the State has to do with economic development and resource development, we are seeing reductions in the Alaska Department of Fish and Game budget which could irreparably harm Alaska's second largest income producing industry. It would seem to me that this should be the time that we do everything that we can to bolster the income producing industries which we currently have in place. It would be a real shame to reduce our efforts in a proven income producing industry only to divert those resources and efforts to as yet unproven industries. We should all be out reminding our decision makers that the fishing industry was here in Alaska long before oil, and will be the mainstay of the Alaskan economy long after the oil is gone.

One of the areas in which these budget reductions have already begun to affect NSRAA and fishermen in general is with the operation of Hidden Falls Hatchery. Hidden Falls Hatchery is one of 19 hatcheries operated by the FRED Division. As funds have dwindled over the past few years, it has been impossible for FRED to fully achieve the production potential at many of these hatcheries. FRED has now been instructed by the legislature to seek alternate ways of funding its programs. One identified way is to transfer the operation of Hidden Falls to NSRAA. The transfer of operations to NSRAA means that NSRAA will also pay for the annual costs associated with its operation, and a majority if not all of those funds will have to come from cost recovery. In the short term this may sound like a poor alternative; however, in the long term, the result will be a net increase in the number of fish available in the common property fishery conducted at Hidden Falls Hatchery. This will be accomplished by increasing the number of fed fry released from Hidden Falls through replacement of its small, inefficient saltwater net pen complex and by increasing releases at the Takatz Bay rearing complex to its capacity of 24,000,000 fry. This coming season will be the second year of releases at Takatz Bay, and the State has already begun the process of securing 11 new "Takatz Style" net pen frames. In order to facilitate this upgrading, NSRAA's Board of Directors at its last meeting in Petersburg authorized the purchase of the 11 nets for this complex.

The total fed fry releases from Hidden Falls this year will be in the neighborhood of 58,000,000 (including Takatz Bay). This is roughly three times the number of fed fry released in past years. By 1990 we will see major increases in adult returns from these expanded releases.

The other aspect of the operational transfer is that the State will be able to begin to develop the full potential of its Snettisham Hatchery. Funds are being diverted to: 1) Increase Snettisham's chum capacity from 40 million eggs to 115 million eggs and 2) operate the 20 million sockeye central incubation facility being built with U.S./Canada treaty mitigation funds at Snettisham. Those efforts should result in increased fish production for the gillnet fleet also.

While we have been authorized by our Board of Directors to proceed with the operational transfer of Hidden Falls Hatchery, there remains a great deal of work to be done in that regard. We will be proceeding toward operational contract negotiations as rapidly as possible. There are many details involved with such a transfer and great care must be taken to cover all bases.

If you have any questions or concerns, I hope that you'll feel free to call me at (907)747-6850.

Board Meeting Highlights

NSRAA's November meeting was held in Petersburg, November 12 - 14. Board actions were as follows:

Board Appointments. Norman Blank was appointed to fill the Haines Gillnet position which was vacant due to the resignation of Cecily Stern. Gregg Digsby was appointed to fill the At-large Gillnet position vacated by Norman Blank.

Hidden Falls. The Board supported the concept of transferring operations of Hidden Falls Hatchery from the FRED Division to NSRAA and directed staff to proceed in working with State personnel in developing a draft contract for consideration. The following gillnetter / seiner joint statement was adopted as policy:

"We recognize the proposal from Fish and Game to transfer the operations of Hidden Falls hatchery to NSRAA and applying the savings of Hidden Falls operating funds to Snettisham is to the benefit of both seine and gillnet gear groups. We certainly recognize that the seiners are giving up around 30% of their harvest for cost recovery and we anticipate that seiners through NSRAA will do everything possible within reason to bring Hidden Falls production up to its full potential. We certainly encourage that. The Association will likewise do all in its power within reason to make Snettisham hatchery the best possible producer for gillnetters. In the event that one of the hatcheries fails, and doesn't come up to expected production levels, the other will be committed to help out. It is recognized that Hidden Falls will be managed in the manner that it has for years."

Remote Rearing Joint Projects. The Board voted to fund the release of Snettisham chums at Limestone Inlet up to \$60,000 and the purchase and delivery of Hidden Falls nets up to \$30,000. It voted to fund the Earl West Cove joint project with SSRAA at \$14,000, with \$6,500 to come from NSRAA's share of the assessment income from Earl West Cove.

Haines. The Board directed staff to work with Haines representatives to develop a proposal for a position of enhancement biologist for the Haines area to be presented as part of the budget at the next Board meeting. David Nanney presented a petition from Haines gillnetters requesting development of a harvest policy for enhanced fish that treats all gear groups equally and stating that Haines gillnetters will lobby to withdraw from NSRAA if no policy has been developed by Dec. 31, 1987. The Board approved a motion stating that if the Haines group decides to lobby at legislative session to withdraw from NSRAA the Association will lobby there also for the same purpose.

Lake Rearing Of Cohos Continues

1987 Emigration: Blanchard Lake

Blanchard Lake, a 108 acre, fishless lake draining into Patterson Bay on southeastern Baranof Island, was planted in July 1986 with 70,000 coho fry. A similar number of coho fry had also been planted in 1985, with most of that group emigrating in spring 1986.

During this past spring, 35,383 Age I coho smolts were released into saltwater, along with 445 age II smolts. Both the size and condition of the 1987 Blanchard Lake smolts were excellent. The age I smolts averaged 5 inches and 17 g (27 smolts per pound) during the peak of the emigration. The age II smolts were about 140 mm and 23 to 25 g.

Fifty yearling smolts that were inadvertently killed during trap operations were examined for tapeworm plerocercoids. None could be found in one-third of the fish examined. In the rest of the sample, counts averaged only 3 tapeworms per fish.

Age II Smolt Emigration: Deer Lake

Deer Lake (977 acres) on southeastern Baranof Island was planted in 1985 with 780,800 coho salmon fry. About 330,000 yearling coho smolts (42% of the plant) were counted as they left Deer Lake in the spring following stocking (1986). Numerous coho remained in Deer Lake for a second growing season. A fin mark-and-recapture study estimated that about 60,000 coho remained in October 1986.

In 1987, two-year-old smolts were counted as they migrated from Deer Lake between April 9 and June 16. A total of 36,600 were tallied.

Condition of the 1987 emigrants was not as good as the previous year's smolts and mortality exceeded 11%, a considerably higher rate than occurred the previous year (4%). The increase in mortality appeared directly related to the higher loads of tapeworms carried by the emigrants that required two years to become smolts.

The reduced quality of the age II smolts emphasizes the importance of stocking fry at a low enough density and in a well distributed manner so that sufficient growth will occur during the first year of lake life to cause nearly all survivors to emigrate as yearling smolts.

The combined yield of 366,800 one- and two-year-old smolts that migrated from Deer Lake in 1986 and 1987 accounts for 47% of the coho fry that had been stocked.

1987 Stocking: Deer Lake

Deer Lake was restocked with coho salmon fry in mid-June and was the

only lake planted in 1987. A total of 842,900 fry were stocked using aircraft provided by the USDA Forest Service.

In an attempt to improve on growth and survival of coho in Deer Lake, several changes from the 1985 planting procedures were implemented -- (1) fry were stocked on June 12 and 13, two and one-half weeks earlier than in 1985; (2) the fry were released at 10 widely separated sites on the lake in 1987, whereas only 4 release sites were utilized for the first plant; and (3) the fry were more uniform in size and of a slightly larger mean size for the second stocking.

These adjustments resulted in the 1987 cohort maintaining a larger mean size, with less variability, throughout the growing season. More importantly, samples collected in October demonstrated that nearly the entire population (>98%) had surpassed the threshold size necessary for smolting as a yearling. Therefore, nearly all surviving coho will have migrated from Deer Lake by the middle of next June, leaving the lake with a very low fish density until it is restocked with coho fry. This "fallow year" will allow zooplankton populations to rebound before coho are next introduced in June 1989.

Even though growth performance improved, the 1987 plant of coho fry into Deer Lake has not been entirely successful. Heavy rain resulted in high discharge conditions when the fry were planted, and some were flushed out during their initial days of lake life. Additionally, the rearing coho reduced the macrozooplankton population to very low levels by late September -- about 1 month sooner than desired or expected. Greatly diminished food resources caused a large but undetermined number of presmolt coho to migrate to saltwater during high flow conditions in late September and early October. Fall emigrants usually do not contribute to adult returns. In this instance, most fish were killed descending the high barrier falls.

In spite of the early emigration of some of the lake's coho population, sizable catches of coho in funnel traps set around the lake perimeter in mid-October indicate that several hundred thousand coho remain in the lake at this time. In previous studies, pre-smolt coho emigration from a barrier lake with depleted food resources has stopped once lake surface temperatures cool to below about 40°F. Further losses from the Deer Lake population will depend on the frequency of heavy rain between mid-October and the development of cool lake surface temperatures in mid- to late November.

Chinook Incubation And Rearing Facilities Underway At Medveje Hatchery

Construction began in September for expansion of chinook incubation and rearing facilities at Medveje Hatchery near Sitka. Smolt production will climb from the present 225,000 to 825,000. The new facility should increase the adult return from 6,700 to 25,000 chinook per year. These chinook are expected to contribute primarily to the troll fishery with some contribution to sport and net fisheries. This year's tag recoveries from the early portion of the winter fishery are showing that Medveje Hatchery chinook are being caught off Sitka and in Icy Strait.

Longer term plans include expansion of chinook capacity at Hidden Falls and transport of some of these fish to Medveje. Should this occur, the total Medveje chinook return would climb to 51,000. The Hidden Falls expansion is listed as one of the projects that will be funded from US/Canada Treaty funds in the near future.

Funding for the expansion of Medveje was obtained from US/Canada enhancement funds through a contract with the State of Alaska. The State extensively reviewed chinook projects to find those that will best serve the interests of fishermen.

Overall project cost will be nearly \$2 million. The project includes construction of 6 raceways, an incubation building, adult holding ponds, a net treatment shed, surface water intakes, wells, substantial piping, net pens and equipment. The general contractor for the project is McGraw Custom Construction of Sitka.

NSRAA took enough eggs to completely fill the new facility's rearing capacity last fall so that the facility can be used this winter to rear chinook. By mid-January, the water supply pipeline, raceways and effluent lines should be in place so that chinook fry can be ponded in the new raceways by the end of January. The remainder of the construction will be completed by mid-summer.

The overall objective of the enhancement program funded by US/Canada is to provide additional fish to southeast Alaska fishermen impacted by the treaty. Expansion of NSRAA's Whitman Lake Hatchery and the Medveje Hatchery expansion are the two chinook projects funded to date. These projects will provide chinook that can contribute to add-ons to the treaty quota. The Alaska fishermen currently benefit from Alaskan hatchery chinook caught because these fish are generally not counted against the quota.

Meet the Candidates . . .

Ballots for the election to the NSRAA Board of Directors are being mailed to salmon permit holders in December 1987. The ballots must be returned by February 11, 1988. Following are statements submitted by the candidates.

Jim Becker
Juneau, AK

Juneau Gillnet

I am running for re-election because I believe in the Aquaculture Association. It gives fishermen the chance to play a part in our future. I am asking everybody to vote for me because I have been a good representative for the gillnet gear group, I understand the issues, and I am willing to continue as your representative. I am always open to letters or phone calls (536-1900) for information or ideas.

NSRAA is committed to gillnet projects, and several of them show promise. One is a joint project with SSRAA at Earl West Cove. The Snettisham state hatchery is being upgraded from 40 million to 115 million chum eggs, allocated for the gillnet fishery. NSRAA is funding feeding and 2 additional net pens to improve survival. Several of the Lynn Canal fishermen have suggested evaluating the Haines area to see what projects can be done and I agree. We lack opportunities for big hatchery projects in Upper Lynn Canal, but remote releases could be done in several places. The Turner Lake project is important to me. I have pushed hard to get the project started. I believe I was instrumental in getting the seed money from the Association to get the baseline studies started. It has the potential of producing, at the least, several times the annual harvest of sockeye in the Taku system. I would like to continue to work to bring these projects into production, and would appreciate your vote.

Mike LaRussa
Gig Harbor, WA

Gillnet-at-large

I am 33 years old and have been commercial fishing in Alaska since 1972, including 5 years of crewing on Southeast seiners, 4 years of crabbing in the Gulf and the Bering Sea, and 5 years of dragging for salt cod and joint ventures. I have gillnetted in Puget Sound since 1980 and in Southeast Alaska since 1984. I am a member of U.S.A.G., Lynn Canal Gillnet Association, and Puget Sound Gillnet Association. I wish to remain in Southeast fisheries for sometime in the future, and to become more involved in activities of salmon enhancement that affect the Southeast salmon fisheries.

Raymond Dick
Hoonah, AK

Hoonah Seine

I have fished all my life and currently seine on the Sea Ranger. I have been on the NSRAA board since its inception 10 years ago. I am interested in aquaculture as a means of providing fish for the future. I believe it is the only way salmon will survive. Without aquaculture, we would be in a crunch which could end in something like the Boldt decision. At the recent ANB convention, questions were raised concerning the 3% assessment. It is sometimes difficult, but because I am familiar with what is happening, I can explain how important aquaculture is to Native people, and to all.

Mark Guillaume
Juneau, AK

Juneau Gillnet

I am 33 years old, married, and an Alaska resident in Juneau for over 13 years. I have been gillnetting the Peregrine for the last 3 years.

I feel I have got the time and energy to be your NSRAA gillnet representative. It is quite obvious that we gillnetters in Northern Southeast have not gotten much if any "return on our investment" in NSRAA. I would like to work hard to change that.

A few projects are either being developed or started and need to be carried out to the end. 1) Turner lake sockeye development, 2) Sockeye enhancement of Mosquito and Chilkat lakes, 3) more spawning channels on the Chilkat.

By working closely with the gillnet association and the gillnetters in NSRAA, I feel we will get results and begin to see something for our fish tax.

Jeff Hendricks
Auke Bay, AK

Gillnet-at-large

I started commercial fishing in 1977 hand lining halibut out of a skiff. Since then my operation has grown to include salmon, herring, and black cod. In 1982 I started gillnetting salmon and have found it to be the backbone of my livelihood. My boat is the F/V Halia Gail. In the future I feel that salmon enhancement through aquaculture is going to play an even more important part in the success of the Southeast fishermen. If elected, I will work hard to ensure that science and common sense work hand in hand. Thank you.

Michael McNeil
Petersburg, AK

Crew Member

After graduating from Ferndale High School in 1975 I moved to Petersburg and started working at Petersburg Fisheries Cold Storage. I worked at the Cold Storage for four summers while going to college at Washington State University. I'm 30 years old.

In 1980 I moved to Petersburg fulltime to begin fishing. I started fishing on the F/V Defiant for Eric Rosvold. I still fish for Eric. We seine herring in Sitka, Prince William Sound, Cook Inlet and Togiak. We then gillnet salmon in Bristol Bay and then seine salmon in southeast Alaska. I have fished halibut and have 3 years experience seining salmon in False Pass.

Fishing is my chosen profession and I think it is important to get involved with the decision making process. Our hatcheries are very important to all fishermen and I think all sides must be heard. It's important that the crewmember has a strong voice in the process.

Candidates . . . Continued

Earle Johnson
Sitka, AK

Sitka Power Troll

I have been a power troller for 19 years. I fished the WRJ for years, my current boat is the Celedo. I have been on the NSRAA board of directors since 1981, and am currently running for my third term. I have served on the Regional Planning Team also since 1981. As an RPT member I have participated in planning salmon enhancement for the region and reviewing PNP hatchery applications. I have also been active on the Sitka Fish & Game advisory board and the Alaska Trollers Association. I am running for another term on the NSRAA board because I wish to continue to work for the betterment of the fisheries.

Garfield George
Angoon, AK

Rural Hand Troll

I have filled the unexpired term of the rural hand troll seat which resulted when Dennis Eames resigned from the Board. I have been a hand troller for several years and am well aware of the issues facing all fishermen in Southeast Alaska, particularly in rural areas. I am interested in continuing to serve on NSRAA's Board because I am interested in what enhancement can do for Alaska's fisheries and am willing to devote the time it takes to accomplish the job.

St. John Creek Stocked With Tagged Coho Fry

St. John Creek is located on Zarembo Island 20 miles west of Wrangell. A cooperative project with ADFG, USFS and SSRAA, the goal of the program is to establish coho upstream of a barrier where the Forest Service installed an Alaska steepness in 1986. On 16 July, 15,300 coded wire tagged 2 gram coho fry were distributed along several miles of St. John Creek above the barrier. These fry had been moved in a Forest Service boat from Crystal Lake Hatchery, 10 miles away, to St. John Harbor, then transferred to a container in a pick-up truck and driven 6 miles over logging roads to 6 release sites. A Youth Conservation Corp (YCC) crew of 5 helped with dispersing the fish. About 1500 to 2000 fry were released at each of 6 sites. The remaining 3500 coho were backpacked overland to the mainstem of the stream and released.

Approximately 100 fry were lost to spillage during the truck transport over the rough road and another 25 died from stress. The remainder of the coho fry looked robust and swam for cover once released into the stream.

Winter Update From Medvejie Shows Good Returns

Egg-take seasons, at M.C.I.F., are always exciting and this year was no exception. August of this year showed the first substantial return of adult chinook to our complex - 179 adults returned from a 1984 release of 26,500 smolts. Average weight on these five year old returns was 22 lbs. They were held between four and six weeks prior to spawning with minimal difficulty. We were able to secure 300,000 eggs with 97.5% survival rate from the green to eyed egg stage. The resulting sac fry are peacefully passing the winter in their incubators and awaiting completion of our new raceways for ponding in mid-to-late January.

In addition to the chinook eggs taken from Medvejie returns, 1,040,000 green eggs from ADFG's Crystal Lake Hatchery in Petersburg were purchased and transferred to M.C.I.F. These eggs incurred an 80% survival from green to eyed egg. The fry will be ponded in the new raceways in mid-January.

These combined egg-takes will bring M.C.I.F. up to its smolt release potential of 825,000 with completion of the expansion. About 25,000 adults per year should be generated by this size of release.

Not to let the late summer and early fall become too boring, 30,000 adult chum came in on the tails of our chinook. Our raceways were soon filled to capacity and spawning activities started in late August. Thanks

to our hard-working crew's desire to dispatch each and every adult in our complex, 26,650,000 green eggs were seeded into incubators in our chum building. Green to eye up loss was minimal at 2 1/2%. Twenty four million of these eggs will be released as fed fry from Deep Inlet in May of 1988. The adults produced by this release will be destined for the commercial fisheries and cost recovery harvest. The other 3,000,000 fed fry from this egg-take will be released at Bear Cove. The adults generated by this group will be targeted for the commercial fisheries and future brood stock.

Pink salmon are indigenous to the Medvejie system as are the chum. At this time the hatchery has no ongoing enhancement program for pink salmon. To ensure that this species does not become extinct from the Medvejie system, we take 100,000 eggs each season. The fry from these eggs are released unfed into our north fork, usually from mid-to-late March. In addition to the unfed fry release, 1,000 adults are allowed to spawn naturally in the north fork of Medvejie. This combination of hatchery and natural fry emergence fulfills our mitigation obligation for pinks and ensures a continued adult return for the future.

Coho are always the last eggs we take during the season due to their run timing. Egg takes this year took place in late October through early November. We received

eggs from adults returning to the Deer Lake outlet located on the southeast coast of Baranof Island. Four egg-takes, ranging from 200,000 to 350,000, netted a total of 975,000 green eggs for our central incubation facility.

The excellent quality of eggs is a direct tribute to our ever improving adult capture techniques, freshwater lens maturation complex and dedicated crew.

Due to the nature of our coho lake stocking program, it is preferable to hold the fry to an average size of one gram in early June for air flight transfer to remote lakes. Consequently the coho eggs will be chilled this year to extend the time they are held in incubators. This is accomplished by recirculating the incubation water and passing it through a chilling unit. Ten percent of the water the eggs receive will be new water which is needed to introduce oxygen for respiration and dilute waste materials produced by the developing eggs. Incubation temperatures obtained during this chilling process range from 2-3 C. This extended incubation will ensure that the fry can be held to the desired size and release time, when combined with a carefully planned feeding program once the fry are in the raceways.

In all, 1987 was a very productive year for Medvejie and should prove to contribute substantially to the fisheries of the future.

Takatz Bay Chum

Through a cooperative agreement between FRED, Division and NSRAA, the Takatz project was initiated to enhance chum salmon fry survival from Hidden Falls Hatchery by feeding otherwise unfed fry. It is hoped this will spread out the fishing pressure in the terminal harvest fishery at Hidden Falls.

The fry were transferred by boat from Hidden Falls to a floating net pen complex in Takatz Bay. Approximately 20 million fry were held in seven net pens while being fed. They were placed into saltwater beginning on March 23 and were released 56 days later on May 18, 1987. During the two month rearing period there were two NSRAA fish culturists living on site in a floating scow that was lent to the project by Sitka Sound Seafoods. The first two weeks the fry grew on the average of about 1.5 percent per day and by the end of the third week of feeding they were putting on weight at the rate of about 3% of their body weight per day. They were originally ponded at about 0.40 g per fish and were released at an average weight of 1.54 g per fish. During the last week the fish were fed on the average of 1,760 pounds per day. There were 19,250,000 fry released in all.

Pt. Camden Incubation Boxes Successful

In the spring of this year some 198,000 chum fry emigrated from the incubation boxes at the East and West Port Camden sites. The egg to fry survival averaged 99% at the four boxes. The success of this project can partially be attributed to the excellent source water and the stability of the stream.

The project expanded this year with the installation of a new box at each site. Sig Mathisen volunteered his boat to haul materials for this project from Petersburg to Pt. Camden. With the help of ADFG and USFS personnel, the 2 boxes and water intake lines were moved into place during the last week of May. A new water intake box and line was constructed and positioned near the spillway of the dam at the West Port Camden site to alleviate the problem of needles and other organic debris accumulating on the head box. The USFS built a second dam at this site in order to increase the water level an additional foot, which should give added insurance during periods of extreme winter low flows.

Spawning and seeding of the incubation boxes at East Port Camden took place in the second week of September. Two hundred thousand chum eggs were placed in each of the 3 boxes.

The West Port Camden egg take did not fare as well. Two weeks later, on 22 September, when the chum are normally in the stream and ready to spawn, insufficient numbers of ripe females were present. An estimated 300 to 400 fish were present, but were for the most part in postspawning condition. After extensive efforts, 150 fish were caught but only 2 females were ripe.

It has been suggested that, because of the nature of the stream, the chum ripen in the estuary and enter the stream only when they are fully ripe and ready to spawn. Because of this, there is only a short interval when capturing efforts are practical. Historically West Port Camden has lower escapements than East Port Camden. This could be due to differential harvest rates caused by differences in spawning times between the two Pt. Camden streams.

XTOO-TV from Juneau made 2 visits to Port Camden this year to film the entire operation, from the box installation to the spawning and seeding of eggs, for its Rain Country program which was aired in November. The USFS provided logistical support for the film crew in order to make this program possible.

1987 NSRAA Releases

227,500 CHINOOK SMOLTS

227,500 Silver Bay @ 18.9 gm

67,700 COHO SMOLTS

67,700 S.E. Baranof

920,900 COHO FRY

842,900 Deer Lake @ 1.1 gm

63,900 Slippery Creek @ 2.0 gm *

15,000 St. John Creek @ 2.0 gm *

104,500 PINK FRY

104,500 Bear Cove

47,506,000 CHUM FRY

24,600,000 Deep Inlet @ 1.8 gm

19,250,000 Takatz Bay @ 1.54 gm *

2,900,000 Bear Cove @ 2.7 gm

293,000 Haines Spawning Channel

273,800 Haines Incubation Box

190,000 Port Camden

2,709,000 Earl West Cove * (chum, chinook, coho)

51,535,600 TOTAL RELEASES

* Joint projects

Projected 1988 Releases

170,000 CHINOOK SMOLTS

170,000 Silver Bay

250,000 COHO SMOLTS

250,000 S.E. Baranof

1,320,000 COHO FRY

900,000 S.E. Baranof

400,000 Slippery Creek *

20,000 St. John Creek *

105,000 PINK FRY

105,000 Bear Cove

53,160,000 CHUM FRY

24,000,000 Deep Inlet

24,000,000 Takatz *

3,000,000 Bear Cove (broodstock)

620,000 Haines Incubation boxes

540,000 Port Camden

1,000,000 Chilkat Spawning Channel

4,550,000 Earl West Cove * (chum, chinook, coho)

59,555,000 TOTAL RELEASES

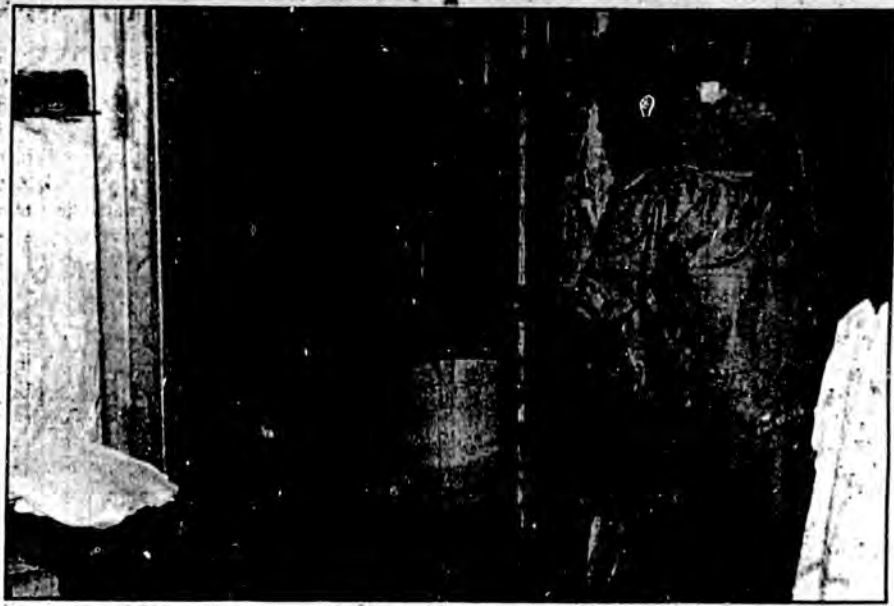
Meet The NSRAA Staff Members: Dan & Lila Goodness

Dan and Lila Goodness live and work in Bear Cove, at the Medvejie Central Incubation Facility. Dan is a permanent full-time employee with the association and Lila works during the spawning and tagging seasons. Dan is the weekend caretaker; he takes his days off on Wednesdays and Thursdays, and "minds the store" on the weekends.

Out of necessity, Dan has become a "jack-of all-trades", since he works not only as a fish culturist but also as hatchery maintenance technician. His weekend duties include test running the back-up diesel generator and performing necessary maintenance when required. He has become proficient at carpentry, plumbing, electrical repair, small engine repair, fiberglassing and other construction techniques. When the fish culturists need a piece of equipment to do a specific job, they go to Dan. He has built outmigration equipment, spawning and tagging furniture, incubation systems and an assortment of tools to make the culturist's job more efficient.

Dan enjoys his job immensely, and hopes to stay with the company, and in Bear Cove, for a long time. "I can't imagine any other place in Alaska where I'd rather live."

Dan was born in Longview, Washington in 1956, and his family lived in Virginia and Wisconsin before moving to Sitka in 1970. After attending Sitka High School, Dan spent seven years in Eugene, Oregon, and graduated



During egg take Dan hands a bucket of fertilized eggs up to Lila for rinsing.

ed from the University with a bachelor's degree in biology in 1981. He returned to Sitka immediately and worked as a chemist at Alaska Lumber and Pulp for one summer; due to budget cuts, he was laid off in September. A year later, Dan worked for the Forest Service for two weeks, and was told about Bear Cove, and how the Aquaculture Association needed temporary help. Dan became a full-time employee on October 1st, 1982. He met the love of his life 2 years later, and he and Lila were married of December 21, 1985.

Dan's hobbies include music, hunting, fishing, and making wood fires. He and Lila enjoy their backyard hot tub, and their bonfire pit. And they raise chickens and goats and peacocks - oh my! "Living here in Bear Cove, at the base of Cross Mountain, with all our pets, and our resident eagles, and all the beauty, this is the greatest thing that ever happened to us."

Visitors are welcome to see the hatchery on weekends, especially if they come out by boat.

CONGRATULATIONS

This August, Steve Reifentstahl and Andrea Thomas were married on Steve's property in Sitka. They have both worked for NSRAA for a number of years, primarily with the Coho Lake Rearing Project. In addition, Andrea has coordinated coded wire tagging of MCIF produced salmon, while Steve has taken on the responsibilities of Assistant Operations Manager. We would like to wish them the best for their future together.



Steve Reifentstahl and Andrea Thomas.

Coho Fry Stocked In Slippery Creek

In a joint ADF&G, USFS and NSRAA project, 63,000 2-gram coho fry were stocked in Slippery Creek upstream of the lake. Of the coho released, about 40,000 were coded wire tagged. The Slippery Creek stream and lake system empties into Port Camden, Kuiu Island.

On 29 July, 2 loads of 30,000+ fry were flown into Slippery Lake and placed in a net pen for holding overnight. The following day the fry were transferred from the net pen to a container, in lots of 10,000, and slung by a helicopter to 6 sites where small net pens had been deployed. From these sites, a crew of 5 loaded the coho into backpacks and distributed them along the stream, selecting the best rearing habitat. Mortality of the coho fry was quite low (200 fry) considering the number of times they were moved from one container to another in the 2 day period. Once the fry were placed in the stream they swam away vigorously and appeared to be doing well when observed later in the day.

Because the Slippery Creek system has a large cutthroat trout population, it was decided to grow the fry to 2 grams before stocking so they would have a better chance of surviving the voracious cutthroat. The potential loss to predation is unknown but thought to be significant. The U.S. Forest Science Lab (FSL) in Juneau has initiated a research project at Slippery Creek that will investigate cutthroat predation and competition with coho fry. Initial visits to Slippery Creek by the FSL were made this year and a full scale study should be in place in 1988 prior to the 400,000 coho fry stream stocking.

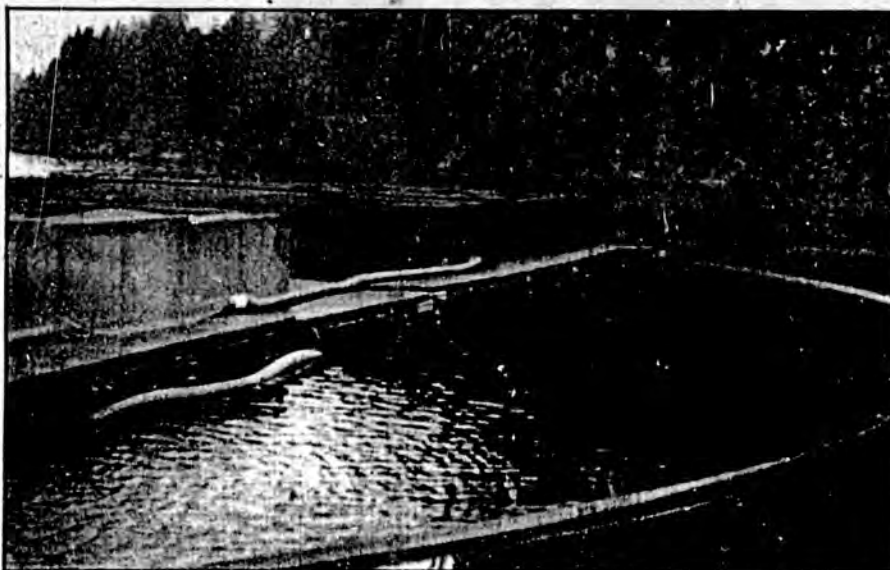
The difficulties of capturing sufficient wild broodstock has necessitated a plan to use Crystal Lake Hatchery stock to meet this year's goal of 400,000 eggs for the 1988 stocking. The U.S. Forest Service is beginning construction of a fish pass on Slippery Creek about 1 mile above tidewater. This ladder will give access to Slippery Lake and some 5 miles of spawning and rearing habitat upstream of the lake.

Medvejie Chinook Get New Lens On Life

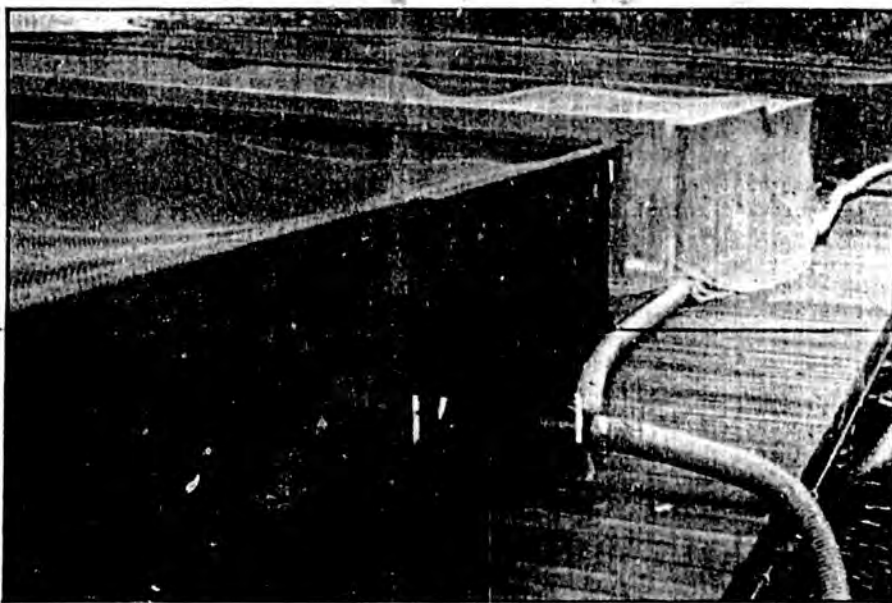
As unbelievable as it may sound with rivers and creeks everywhere, there are not many first class hatchery sites located on Baranof Island.

Some of the limitations are inconsistent water flows, poor water quality, and the remote character of potential sites. To meet the demand for more chinook and coho above and beyond the normal freshwater carrying capacity of the Medvejie Hatchery site, new technologies must be employed. The freshwater lens system was originally developed by two National Marine Fisheries Service research stations; it has been modified and adapted by NSRAA for production purposes. It has been shown that if a freshwater pre-smolt chinook is gradually subjected to an increasing and regulated amount of saltwater, under the right conditions, it can be biologically prompted to smolt earlier than usual. Thus, fish can be introduced to saltwater at a much smaller size, avoiding the increase in freshwater demand that occur as the fish grow and allowing more smolts to be reared for release. Using this method, the Medvejie hatchery could roughly triple the amount of smolts it is able to release.

Now what is a lens system? You are familiar with freshwater's property of floating on top of saltwater. We utilize this property of freshwater by encircling the saltwater net pens with a four foot deep, 360 foot long polyvinyl panel with a flotation device along the top. Freshwater is piped into this cylindrical skirt and contained there. As the trapped freshwater displaces saltwater out the bottom, a gradient of fresh and mixed saltwater is created. The fish can stay at the level of salinity where it is least stressful and can gradually acclimate itself to full strength saltwater. By adjusting the volume of freshwater and directing it to enter at different levels, various combinations of salinity can be obtained, providing culturists with more control over the young chinook's smolting process.



A polyvinyl skirt with styrofoam flotation surrounds the four chinook pens.



Freshwater is piped into the net pens. The greatest concentration remains on the surface. Mixing with saltwater occurs at the 5' to 7' level.

A similar but smaller lens system is used to ripen coho broodstock in net pens at South Baranof. Because convenient freshwater sites are not

available, this method is used to ensure good quality and fertile eggs that only a freshwater environment can provide.

'87 Returns, Continued

1986, indicating that there may have been an area wide problem for coho survival. On the average, marine survival (catch plus escapement) for coho equals about 10%. The 1987 returns for this project ranged from over 6% for the Deer Lake emigrants to about 3% for "Lower Rostislaf" and Blanchard Lake fish. An estimated 5% to 5 1/2% of the "Sea Lion Cove," Surprise, and "Fiddle" Lake coho smolts survived to become adults. Marine survival of coho released at the two SSRAA hatcheries appears to have been about the same (5 to 6%). Also, the 1987 escapement of coho spawners to index streams monitored by the Sitka area office of ADF&G

was the lowest observed since surveys began in 1983.

In contrast, marine survival for Medvejie chums was once again above expectations. Final tally for Deep Inlet and Bear Cove returns is at 132,000 chums. Calculations from preliminary tag analysis reveal an overall marine survival of approximately 4% for the 1983 brood year returning 4-year-olds. An estimated 27,000 5 year olds returned to Deep Inlet increasing the already excellent survival of the 1982 Brood. Bear Cove returning chum comfortably met egg take goals with marine survival estimated in the 4-5% range.

For a second year the "diving dogs" of Deep Inlet made cost recovery fishing a challenging contract. However, fishing went smoother than the 1986 harvest and a full purse, 17 fathom seine again proved effective. Fishing began in early August continuing until the end of September. A total of 33 landings accounted for sales of 746,000 lbs (83,000 chum).

Two days fishing harvested excess broodstock at Bear Cove amounting to 69,600 lbs. (8,600 chum). In addition, the hatchery was able to offset some operational expenses with the sale of spawned chum carcasses totaling 220,000 lbs.



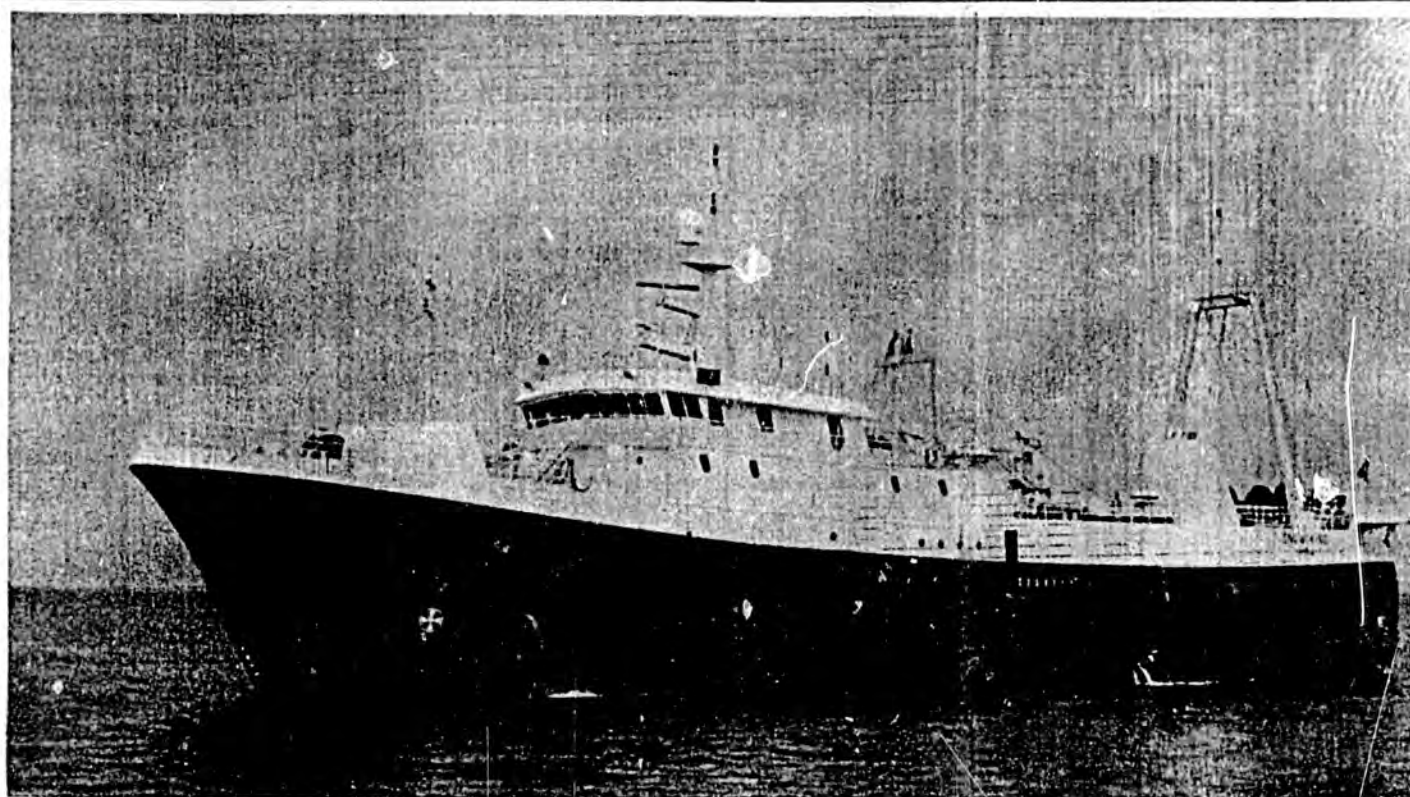
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\$1.25



F/V SNOW KING, catcher/processor, Shilshole Bay Seattle. (See story this issue)

—Photo by Paul D. Halvorson, Seattle

Renegade Norwegian farm salmon polluting wild runs

"Renegade" salmon from Norway's fish farms are destroying important characteristics and genetic differences between farm and river salmon, says Professor Harald Skjervold, following the discovery this autumn that up to 57 percent of the salmon stocks in some Norwegian rivers are of the farm variety.

If the genetic pollution continues at its present rate, the hereditary variations among some of the river species will be halved within seven years. Nature takes tens of thousands of years to fit the salmon to its special environment, and in the light of this fact, the present developments are alarming, says Skjervold.

The head of the Directorate for Nature Management, Helge Vikan, also finds the latest findings disquieting and stresses the vital importance of preserving the most valuable of the salmon species in the genes bank now being built up in Trondheim, incidentally the first of its kind in the world.

Sperm from 47 species of Norwegian river salmon were stored in the bank last year, and this number will be doubled by the end of 1987. Vikan blames the extensive genetic pollution in rivers on the import of smolt. This

import is not only responsible for spreading disease, it is also a major hazard for river salmon, says Vikan. He intends proposing to the Ministry of Environment that the Directorate be involved in the assessment of smolt import licenses.

Bridge, Locks radio foul-ups surveyed

Many believe that vessel safety is being compromised by heavy use of VHF Channel 13, the Bridge and Locks frequency. And a lot of people are working on the problem, local skippers, bridge tenders and lock-keepers, as well as regulatory, advisory and policing agency folks.

One skipper, Wayne R. Cesaro, a 5,000-ton master and frequent user of the Hiram M. Chittenden Locks, is conducting a survey on the use/mis-use of the commercial vessel frequency 13, results of which are to be forwarded to policy-makers. (ED: A survey blank is reproduced elsewhere in this issue, for those who are interested.)

Continued on page 13

WDF to answer management questions by the numbers

by Jim Lehde

Finally, somebody asked the question: What do you think — good or bad — of the way the Washington State Department of Fisheries is managing things?

And that raised a lot more questions — 144 of them to be exact — from commercial and sport fishermen attending early December meetings held in Western Washington by the Senate Environment and Natural Resources Committee. Sen. Jack Metcalf (R-Langley) was chairman.

He explained his committee's involvement in the public information gathering business as follows: "We talked it over with Department (WDF) people; 'how

about our taking all the questions, rather than putting you on the spot at the hearings, and then our collecting and distributing them?' And they agreed."

In announcing the series of five hearings, in Mt. Vernon, Port Angeles, Hoquiam, Olympia, and Longview, Metcalf stated that "over the past several months, a growing number of commercial and sports salmon fishermen have been voicing their concerns about the way the State Fisheries Department is managing the resource. We on the committee want to hear directly from those affected by the agency's decisions and actions."

Continued on page 3

Locks closure dates, early '88

The following schedule indicates dates and durations of Seattle Lock's closures for maintenance and repair work on the large lock.

Note: Closures noted in December 9 Local Notice to Mariners are incorrect. Further information may be obtained from the project engineer at 206/783-7001 or 764-3440.

January 30 through February 15,

1988 — 17 days closure for preparation work for re-installing seawater barrier.

March 11, through May 27, — 17 days closure for preparation work for re-installation of seawater barrier.

April 8, through April 14, — 7 days closure for completion of re-installation.

February Classified Deadline — Wednesday, January 20

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Approximate '87 Fraser River totals Panel to begin work in February on '88 season runs

Preliminary data on 1987 Fraser River sockeye and pink salmon catches — based on recorded sales — were released at the meetings of the Pacific Salmon Commission in Portland, Oregon, Nov. 17-20.

The Fraser River panel now estimates that the total 1987 run of Fraser River sockeye was 7.6 million fish, the second largest on this cycle since 1899.

The run was 46 percent above the parent year (1983) return and was only about 100,000 fish short of the record 1971 cycle year run. Catches totaled 5.7 million sockeye with a commercial harvest of 5.1½ million fish divided between fishermen of Canada (3,204,000) and the United

States (1,942,000). Early estimates of commercial values place returns to fishermen at approximately \$82,000,000 (Canadian), averaging almost \$16 (Canadian) per sockeye.

6.9 million pinks

The return of pink salmon was much less than forecast, the total running approximately 6.9 million fish, rather than the 11 million run expected. This was the lowest return since 1975 and only about 41 percent of the average return in the 1979-1985 period.

The commercial catch of Fraser River pinks is now estimated at

Continued on page 1

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Fraser River Sockeye Catches From the Fraser River Panel of the Pacific Salmon Commission — Estimated

CANADA:

	1975	1979	1983	1987
Season Total	869,000	2,947,000	3,441,000	3,204,000

UNITED STATES:

	1975	1979	1983	1987
Season Total	1,556,000	1,756,000	455,000	1,942,000

Fraser River Pink Salmon Catches

CANADA:

	1981	1983	1985	1987
Season Total	10,290,000	8,828,000	8,476,000	2,386,000

UNITED STATES:

	1981	1983	1985	1987
Season Total	3,851,000	1,802,000	3,825,000	1,256,000

The statistics for 1987 are the best estimates now available and may be changed without notice as discrepancies are found and corrections made. The catch is for all fisheries, Fraser River Panel Area and outside Fraser River Panel Area Waters.

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WDF to answer

Continued from page 1

Metcalfe, who knows bottomfishing, and gillnetted one season when he wasn't teaching (beach fishing for white perch between Camano and Whidbey Islands), is the son of John Metcalfe, a fisherman for many years and founder of Fish Unlimited during the 1940s. The senior Metcalfe also worked with Ken McLeod toward passage, in 1934, of Initiative 77, which led to the banning of fish traps on Puget Sound.

Combined attendance at the Committee meetings was approximately 650, Metcalfe stated in his letter of December 15 to

Fisheries Director Joe Blum.

"In order to eliminate confusion, I am requesting that the agency response correspond to the same numbering system used by the Committee (in answering the 144 questions)," Metcalfe's letter reads. "In addition, I am requesting that the Department respond to each question in a specific manner, that is, not with unorganized raw data, and that the Department respond to all questions in writing.

"The Committee would appreciate receiving the Department response by Jan. 6, 1988 so that it may be given full consideration," it concludes, copy closures being indicated to All Division in Fisheries.

Questions to be answered by the numbers by WDF as follows:

1. What percentage of compliance does the sport salmon fleet have for the barbless hooks rule?
2. A large number of the public that testified at the hearings stated that they believe that the hatchery system is not efficiently run. What do you plan to do to reestablish the public's faith in the salmon hatchery system?
3. Why are only 25 percent of the Skagit Hatchery coho salmon planted in the Skagit River?
4. What is the status of the designed but as yet unconstructed hatchery on the south fork of the Skykomish River at Sunset Falls?
5. Why was the proposed (legislatively mandated) spawning channel on the Skagit River never constructed?
6. Why was summer chinook production at the Skykomish hatchery reduced?
7. Can the Department aid the Swinomish tribe with fish culture consultation to prevent 100 percent mortality of coho smolts at their rearing facility?
8. Why can't the Department culture pink salmon the same way the

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OOPS!

On page 27 of the December 1987 issue, organizations other than Mill-Log Seattle, Inc. were identified under a photograph as being associated with distribution of Twin Disc products.

Mill-Log Seattle, Inc. is the only authorized distributor for Twin Disc in the Greater Puget Sound area and in Alaska, according to Dave Schwarz, Mill-Log Seattle, Inc. manager.

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Ike Svensson promoted



The Bird-Johnson Company of Walpole, Massachusetts, recently announced the promotion of Ike L. Svensson to the position of General Manager for their Seattle RDH and Coolidge Propeller facilities. Mr. Svensson replaces Robert DenHerdner who retired in late 1987. Svensson spent twenty years in the U.S. Navy where he served with commendation in several ship's propulsion equipment maintenance and engineering capacities. In 1981, following his retirement from the Navy, he joined Bird-Johnson as their Pacific Northwest service representative. He was appointed Plant Manager of the RDH small propeller repair and distribution facility in early 1987. In his new position, Mr. Svensson will oversee the daily management of all Bird-Johnson's sales, manufacturing, distribution and repair operations in Seattle.

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Telephone: (206) 282-7545

Editorial Department

Publisher: Walt Kisser
Editor: Jim Lehrs
Assistant Editor: Walt Venema

Kodak Editor: Mike Rostad
2610 Mill Bay Rd., A-18
Kodak, AK 99615

N. California Editor: Andrea Granahan
P.O. Box 250, Bodega, CA 94922
(707) 876-3320

Associate Editors: Don Crouch, A. K. Larsen

Circulation Department

Manager: Eleanor Gallagher

Accounting Department

Bookkeeping: Pat Otteson

Advertising Department

Director of Sales and Marketing: Charles "Buff" Kohler
Sales Representatives: Robert Blumhagen,
Walt Venema and Anna Gray
Eastern U.S. Representative: Frank X. Simonds
Box 67 Pennaquit, ME 04556
(207) 877-3582

Production Department

Art: Sandy Cotton
Production Manager: Carol Davis
Photography: Ron Gulvig

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IN THE MAILBAG



To the Editor:

Prior to 1976, the world salmon supply was harvested by the West Coast salmon fisherman.

In 1972, the National Marine Fisheries Service (NMFS) in joint venture with Dom Sea Farms (Union Carbide, Campbell Soup) introduced Atlantic Salmon into Puget Sound. The brood stock of Atlantic salmon was obtained from Oregon Department of Fish and Wildlife, Wizard Falls Hatchery — via Quebec, Canada.

In 1974 the first eggs from Washington (Washington Department of Fisheries) were sold to Ore Aqua (Weyerhaeuser) in Newport, Oregon, to supplement their ocean ranching.

During 1976, the U.S. Department of Commerce presented the Federal Aquaculture Policy to Congress. Sen. Warren G. Magnuson also presented the 200-mile bill to the Congress in 1976.

Coincidentally, the late Federal Judge George H. Boldt ruled in favor of Treaty Tribes, allowing them to harvest up to 50 percent of the salmon in Washington State, within the same time frame.

Washington Department of Fisheries began decreasing the numbers of hatchery releases of salmon at the very same time as the Boldt decision, the Aquaculture Policy, and the Magnuson Act.

Emphasis was also increased by the scientific community (NMFS, the Universities of Washington and Oregon, and the Washington Department of Fisheries) in joint-venture with Weyerhaeuser, Union Carbide, British Petroleum, Dom Sea, Campbell Soup and other corporations to create fish farms and ocean ranching in Washington and Oregon.

The sale of viable salmon eggs from WDF and ADF&W hatcheries to corporate giants increased dramatically during the 1976-77-78 period.

During 1977, the first heavy restrictions in the form of quotas were forced upon the salmon fishing community by the U.S. Department of Commerce (Pacific Fisheries Management Council).

Thus, the harvesting of Pacific salmon from the West Coast of the United States — and ultimately the supply to the world — decreased.

At the same time the Atlantic salmon sales to the United States increased.

Countries that had been large importers of Pacific salmon started receiving Atlantic salmon from Norway as a substitute.

The world-wide distribution of Pacific salmon was at the same time being taken over by foreign countries; the same foreign countries that now have their own Pacific salmon, furnished them by WDF and ODF&W.

These foreign countries were paying WDF and ODF&W a pittance for salmon eggs, while West Coast salmon fishermen were fighting among themselves for what

"depressed" stocks were left.

New Zealand and Chile were gearing up to move into the world market, in particular Europe, Asia and even the Pacific Northwest; Washington State, too.

While all the conflict and lawsuits between user groups over what was left of West Coast salmon stocks happened, fish farmers were slowly bringing Atlantic salmon into Washington, Oregon and British Columbia.

Within Puget Sound, some farmers won pen-rearing sites and in some areas they were defeated. Strangely, most pen-rearing sites are located near federal military installations; again, part of the federal aquaculture policy.

All of the applications for permits that were turned down were for areas of Puget Sound owned by private citizens who fought diligently to protect their rights.

Through funding provided by the Department of Commerce (Sea Grant) to the U of W and OSU, with consulting services provided by private corporations, farming in Puget Sound and ocean ranching in Oregon is creating a void in the Pacific salmon supply to the world.

The federal government, state universities, and corporate giants almost succeeded in a total breakdown of the economic viability of the West Coast salmon resource. Their efforts in New Zealand, Chile, Puget Sound, and Oregon have opened the eyes of the professional fishing community.

Record catches in Alaska, Oregon and California during 1986-87, and record low catches in Washington led one to believe that misconduct is rampant within the federal government, state universities and fisheries departments — malfeasance?

In conclusion: The United States government has tried to take away the economically viable industry that supported tens of thousands of fishermen and related businessmen from the Arctic Circle to the Mexican border, and handed it over to the corporate giants to manipulate the protein of the world and supply a few hundred minimum-wage jobs.

Regards,
Don Stevens
Troller F/V Starlite
Port Angeles, WA

OOPS!

Senate Bill No. 5036 was mis-numbered on page one last issue.

The bill, aimed at preventing export of Washington State salmon eggs from "stock that are needed for salmon population rehabilitation and enhancement" within the state, had sailed through the senate during the 1987 session (37-0, with 12 absentees), and was returned to the body of origin when time to act thereon ran out.

Parties interested in the bill, which promises to see action during the 1988 session, may direct their desires to the Senate Environment and Natural Resources Committee, Olympia, WA 98504, or contact Sen. Jack Metcalf at 206/321-5483 or David Cutbirth at 786-7009.

'8C-10C not enough!

To the Editor:

Fellow tendermen, how long has it been since you've gotten a long overdue raise on your poundage or daily pay?

The fisherman keep getting their well due and just price raises; but where is ours?

The price of salmon has doubled in the past two years. The price of halibut has doubled, the price of black cod has doubled, the price of herring has doubled.

Has your tender fee doubled? No!
Has your tender fee gone up 50%? No!

Has your tender fee gone up 25%? No!

Has your tender fee gone up at all? No!

Why not? Good question! There are less tenders than ever, due to the high price of fish and continued increase of expense, including insurance.

When the price of salmon is jumped from \$1.35 to \$1.40 it's nothing! Everybody just matches it.

The Japanese just pay another 5 cents or in some cases 15, 20, or even 50 cents.

Look at Bristol Bay two years ago. The price went from 75 cents, on reds, to \$1.55 in one summer; or even take Puget Sound, this year, the price last year of dogs was 50 cents. This year it went to \$1.40. No big deal! But the processors were kicking all the way at having to pay their tenders; the same old ten cents a pound.

Maybe we should unite and strike. Where would these processors be without us? We do a hard and important job.

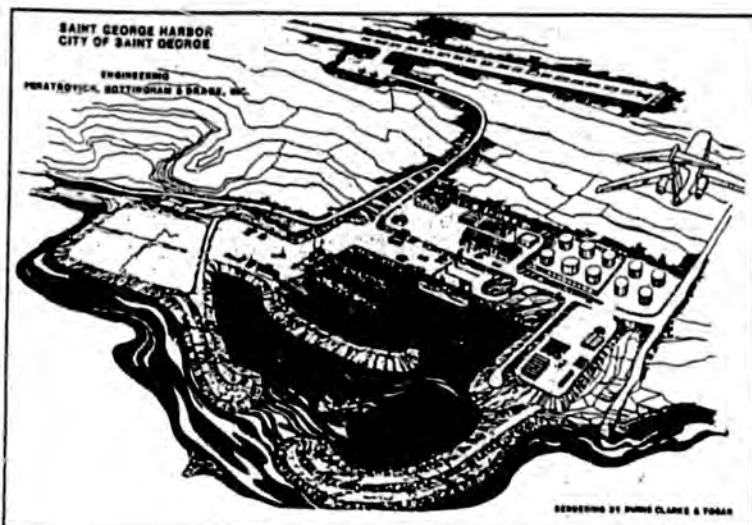
We just need more money to operate these days just like everyone else! How about just a cent a pound raise. What's a nickel guys, when you raise the price of fish 50 cents a pound and don't bring an eye?

We, the tendermen, have been getting 8 to 10 cents a pound for years and years, or if you're on daily it all reverts back to the same thing; the Japanese Yen versus the U.S. dollar situation is stronger than the Japanese this year than ever and the price of fish is going to be stronger than ever, again this year.

So remember, tendermen, either unite and strike or get that long overdue raise this year! If you've been getting \$200 to \$225 a ton of herring, you should get \$275 to \$300 a ton this year. If you've been getting \$2,000 a day on salmon, you should get \$2,500, at least! The only 2 1/2 to 3 cents a pound increase. If you have been getting that old 10 cents a pound packing salmon get 15 cents, don't go until you do!

Signed a tenderman
fisherman of 20 years
(Name withheld by request)

Pribilof trawler, processor facilities set for summer



by Steve Molnes

A diversified portfolio is the key to individual financial security, and the city of St. George, Alaska, is banking that a diversified economy is a key to community financial security by building a breakwater and industrial dock to serve trawlers and processing companies. The project is scheduled for completion next summer.

The project is as natural for St. George to undertake as gathering and separating saffron is for peasants in southern Spain. In other words, it's the only game in town: To survive, you have to play to your strengths.

For 200 years the major strength of the Pribilof Island economy has been the fur seal trade. It was begun by Russian explorers as a source of fur for the Tsar. But today, as Greenpeace continues to campaign against the harvest and as public support for the harvest deteriorates, the future of the fur trade is as rosy as selling exotic fruit from the already clear-cut rain forest of Borneo.

So it's natural, as the North Pacific's fisheries continue to grow, that St. George expand its port facilities. Either that, or, like Gary Hart re-entering the Democratic presidential primary, they can't figure out what else to do. And fish goes much better with rice.

The St. George project is being partially funded by federal grants. The city also is pursuing funding for a small boat harbor, a fuel tank farm, a commercial-sized airstrip for transportation of fish products, and support facilities for a seafood processing and cold storage plant that is also planned for the dock area.

"The harbor project is moving along real well," said Brent Drage, partner in Peratrovich, Nottingham & Drage, engineers. "The breakwater will be finished by mid-December, and the dock foundation will be installed."

The next step in the project will be to dredge the harbor to minus 20 feet, Drage said. "Once the harbor is finished, then the city will be able to attract private companies interested

in building the support facilities," he said.

And soon, St. George Harbor will be suitable for many things. Maybe even a Gary Hart campaign stop.

Sportsfisherman named to Alaska Board of Fisheries

Alaska Gov. Steve Cowper recently announced the appointment of Frederick "Bud" Hodson of Anchorage and Dillingham to a vacant seat on the Alaska Board of Fisheries.

Hodson, owner and operator of the Tikchik Narrows Lodge near Dillingham, fills the seat vacated by the resignation of Bix Bonney of Anchorage.

"Bud has been involved in Alaska fisheries issues for more than a decade and comes highly recommended for this position," Cowper said, adding that he is confident that he will do an excellent job of representing not only sportsfishing interests, but all Alaskans with a stake in our fisheries.

Hodson, 33, is a founding member of the Alaska Professional Sportfishing Association where he currently serves on the board. He has been involved in the Bristol Bay management and Rainbow Trout Management plans.

Summertime, Hodson operates his Tikchik Lodge, and lives in Anchorage in the winter. He is a member of the board of the Wildlife Federation of Alaska and a member of the Alaska Outdoor Council, as well as Trout Unlimited and the Federation of Flyfishermen.

He took up duties upon appointment for a term which continues through the coming year.

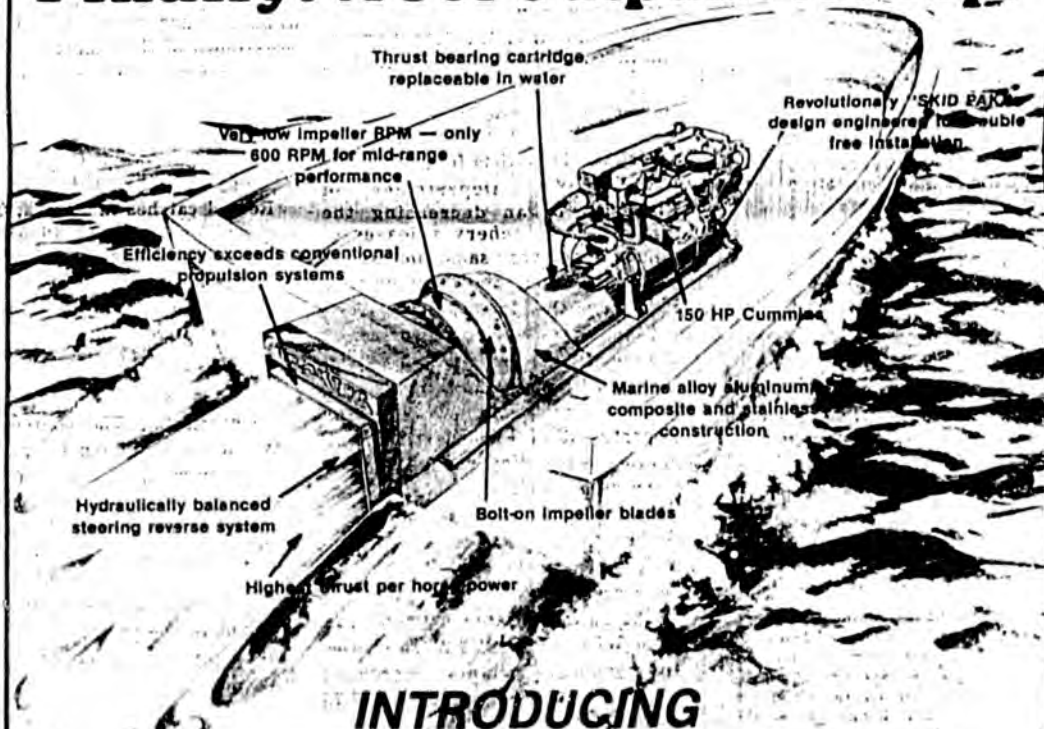


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North Pacific Council sets '88 Bering Sea and Gulf quotas

by Don Crouch

Anchorage—The North Pacific Fishery Management Council at its December meeting set the 1988 catch quotas for the Bering Sea, Aleutians and Gulf. A number of items and considerations were set-over to the January 20, 1988, meeting, including a rock sole proposal to allow by-catch only if roe bearing; delaying the black cod opening from April 1 to sometime in May, and to reduce the incidental by-catch of halibut.

The Council continued a recommendation to the Halibut Commission to regulate Areas 4C and 4E as per 1987, day on/day off and trip limits.

The scientific and statistical committees will meet on Jan 18, 1988, prior to the Council meeting set at Anchorage for January 20.

The North Pacific Council continues to permit foreign fishing in the Bering Sea and Aleutians.

The 1988 quotas in round numbers were met as follows: Bering Sea/Aleutians, two million metric tons. Reserve 15 percent (300,000 m.t.). DAP 614,000 m.t. JVP: 491,000 m.t.

Foreign Catch: 600,000 metric ton (77% Japan, 22% S.Korea, 1% China).

Gulf of Alaska: 270,000 m.t. DAP: 253,000 m.t. JVP: 17,000 m.t.

No foreign catch allocation (Second year in a row). A JVP pot fishery for flatfish was approved.

The breakdown by species was set

as follows:

Bering Sea: (1.3 million metric tons all species) / Aleutians (45,000 metric tons).

Pollock 657,000 m.t. cod 200,000 m.t. DAP 87,000 m.t. JVP 83,000 m.t.

Yellow Sole 254,000 m.t. DAP 26,000 m.t. JVP 190,000 m.t.

Y Turbot 11,200 m.t. DAP 9500 m.t. JVP 31 m.t.

Arrowtooth Sole 5500 m.t. DAP 3800 m.t. FVP 900 m.t.

Other flatfish 131,000 m.t. DAP 26,000 m.t. JVP 35,000 m.t.

Black cod 8,400 m.t. (Bering 3400 m.t./Aleut 5000 m.t.) DAP 100 percent.

Pacific Perch 11,000 m.t. (Bering 5000 m.t./Aleut 6000 m.t.) DAP 100 percent.

Atka mackerel 21,000 m.t. DAP none. JVP 100 percent.

Other rockfish 1400 m.t. (Bering 400 m.t./Aleut 1000 m.t.) DAP 100%.

Gulf of Alaska 270,000 m.t. (No foreign allocation). Pollock 93,000 m.t. (3000 Eastern/90,000 Central and Western).

Black cod 28,000 m.t. Easter 11,000 m.t. Central 12,500 m.t. Western 4,000 m.t.

PFMC sets whiting quota and ton policy

Although the bulk of testimony and business in the Groundfish meeting of the Pacific Fishery Management

Soviet deep sea fleet may work out of B.C. during '88

Expected to be stepping up West Coast activities during the coming season, the Soviet Deep Sea fleet -- five or six vessels -- may be based in Vancouver, B.C.

Carl Jacobson, vice president of Maritime Agencies, a division of Maritime Group (Canada), Inc., said such a fleet would be worth \$5 million Canadian to the B.C. economy.

Maritime Agencies was recently appointed agent in Western Canada for CanSov Marine Products of Dartmouth, Nova Scotia, which represents the Soviet fishing fleet in the Atlantic and Pacific regions.

A Polish factory fishing fleet of 38 vessels, represented by Maritime for

the past 12 years, contributed \$27 million to the Vancouver area economy, in shore repair, provisions, drydocking and other contracts, Jacobson said.

His organization has also been appointed agent for Hansung Enterprises, Ltd., of Seoul, Korea, which operated one vessel off the West Coast last season in a joint venture with the Canadian Department of Fisheries and Oceans and the B.C. Hake Consortium.

The ROK operators are anxious to step up activity, Jacobson said, and may, depending upon government hake allocations.

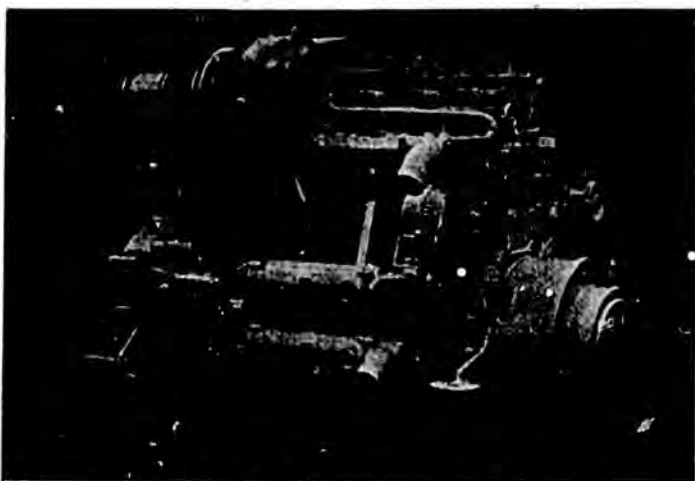
Council's late November meeting in Portland, OR., dealt with black cod (sable fish), sufficient testimony from commercial fishing groups was introduced regarding hake to convince the Council for need of a quota and policy change regarding that "underused" specie (Pacific whiting.)

Most whiting is sold to foreign processing ships in joint-venture arrangements involving U.S. boats selling to factory ships from the Soviet Union and Poland, at sea. Chinese and South Korean factory trawlers operated off the West Coast this year, and may be joined by

Japanese ships in 1988.

Increased interest in whiting has prompted the NMFS to take the first step in limiting foreign processors and ensuring more of the available whiting is caught by American boats, for sale to the foreign "factory trawlers," according to a wire service report in the Seattle daily paper.

Quota for the 1988 whiting harvest was set by PFMC at 232,000 metric tons. And a change in its policy requires that for every ton of whiting caught by the foreign boats, they have to buy a ton from American vessels.



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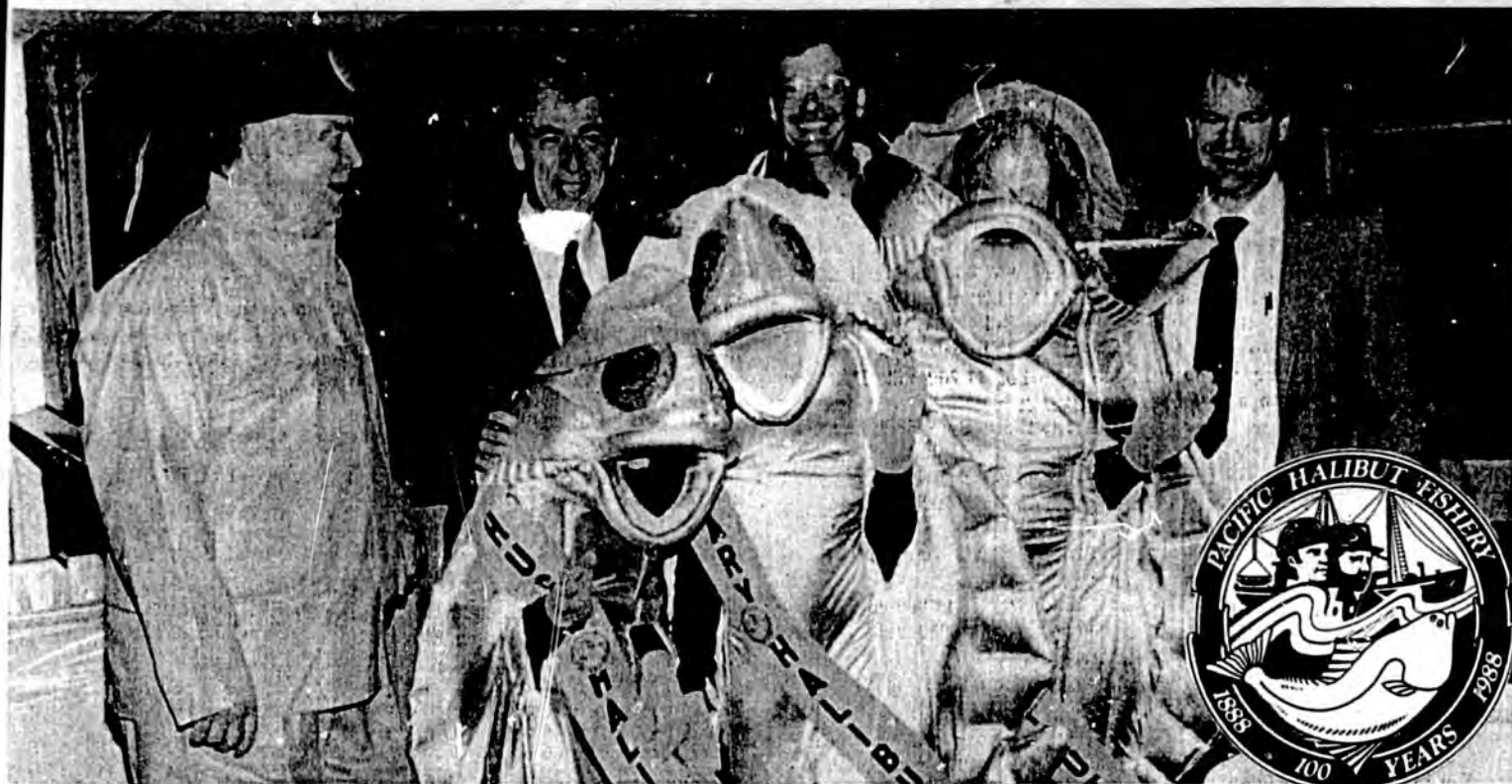
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Prince Rupert 'Halibut' attends Fish Expo as Centennial 'Spokefish'

At the invitation of the Pacific Halibut Fishery Centennial Committee the Prince Rupert, British Columbia Visitor Bureau sent their famous Halibut Family to this year's Fish Expo in Seattle.

The delegation of Herbie, Hilary, his wife, and their son Hugo was accompanied by spokesman, Fisherman Foster (Husoy), past Chairman of The International Pacific Halibut Commission Conference Board. The 'fish' were made slightly nervous at

first arrival, when the Fishing Vessel Owners' Association hosted a Welcome Home Halibut Fleet Cruise along the Seattle waterfront...but although being in a boat is usually a threat to the Halibuts, they soon found they were among friends and, in fact, the hit of the party.

Port of Seattle Commission President Henry Aronson, opened the activities with his welcoming comments and reflections on his visits as

a youth to Fishermen's Terminal, home then and today to a large number of the Pacific Halibut Fleet. Bob Alverson, F.V.O.A. manager, followed with the reading of Charles Royer's Mayoral Proclamation of the official start of the Pacific Halibut Centennial Celebration Year (enclosed photo: L to R-Foster Husoy, Henery Aronson, Hugo, Hilary, Rick Malsed-Centennial committee chairman, and Bob Alverson).

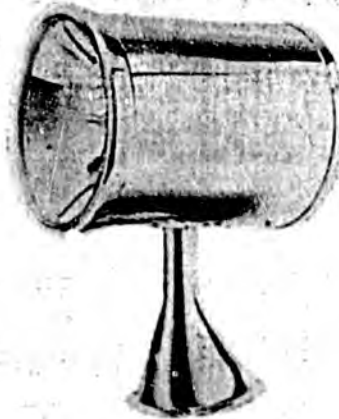
The next day (Oct. 28th), the

Halibut Family and Fisherman Foster appeared at Fish Expo in the F.V.O.A. centennial Celebration booth and they were even occasionally found playing near the waters of the International Fountain. This was their first visit to Seattle, but judging from the response of the many camera and video recorder fans following the Prides of Prince Rupert, they will most likely be making a command performance at Fish Expo '89, too!

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Alaska aquaculture conferees fear...another fish trap era, foreign and big business take-overs



by Marilyn E. George

No subject is being debated as much as the pros and cons of mariculture in Alaska. The University of Alaska's Sea Grant Program

held a three day aquaculture conference in Sitka from Nov. 19-21. Its climax was an eight member panel on the subject. They each gave 10-15 minute presentations, a rebuttal, and then opened for questions and statements from the audience. Over 210 registered for the conference.

having one pen as a part-time business. His group has four acres of traps in the very busy Port Angeles commercial harbor. Alaska has a big advantage over foreign countries because it has free access to U.S. markets, he stated.

Don Nicholson, an oyster farmer located south of Wrangell, reported he was finally making a profit after starting in 1980. He said, "For \$20,000, I can make a profit raising salmon in three years."

The worry that the oyster farmers will use the permits as a means to be on the ground floor if salmon farming is allowed, was expressed by Marilyn George. She applauded Jacobs for she, too, sees pen-rearing becoming the 21st Century fish trap with only a few having permits. She worried that SE Alaska would be carved into special harvest areas.

Robert Ellis, Sitka, pointed out that an important segment was not represented on the panel—the sport-fishermen, hunters and others who use these bays. They may be losing their public access to these public lands. He wanted them to address this issue in any of their deliberations.

Forster saw no reason to shut off bays for exclusive use. He felt the salmon farming could co-exist with other fisheries.

Ann Lowe, Sitka, pointed out that no one has solved the local hire problem.

And Sen. Eliason echoed her feelings with examples on what happened at the Red Dog Mine, the state paying for a road to provide local villagers a means to get to work there. It turns out that few of the villagers are working there, only Canadians.

Painter said that the current bill, which the Attorney General says is constitutional, limits permits to Alaskan residents. He felt pen-rearing would be a way to add to the success of ocean ranching: "The market is there and Alaska should pursue it."

In an exchange, it was pointed out that the reason the Alaskan trollers are getting high prices is that the Norwegians killed so many of their pen-reared, diseased fish that they couldn't fulfill their markets. Graham said the Norwegians are going into ocean ranching because they've found it is cheaper than feeding them in pens.

It is evident that mariculture debates will continue because feelings are running high on both sides. One came away feeling that those favoring it were trying to wear down the opposition.

Taking part in the Saturday night panel were: State Senators Dick Eliason, Sitka; Fred Zharoff, Kodiak; Brian Allee, head Fisheries Rehabilitation and Enhancement Development division of Alaska Department of Fish & Game, Juneau; Bill Heard from National Marine Fishery Service, (NMFS), Auke Bay; John Forster, SeaFarms of Norway, Port Angeles, WA; Kate Graham, United Fishermen of Alaska (UFA), Juneau, and Eric King, Alaska Trollers Assn. (ATA), Juneau.

Sen. Eliason stated that Alaska was doing a disservice to the other mariculture operators by holding up a decision. "Would the Mariculture Association support a bill from which pen-rearing of salmon was removed?" he asked Painter?

"Yes," Painter replied, and then he said he "wasn't sure until he consulted his Board of Directors." Eliason predicted the legislation would face little opposition if rearing of salmon were removed.

The first speaker in the question period was Mark Jacobs, Jr., Sitka. He reported that the Alaska Native Brotherhood (ANB) at their Haines convention opposed mariculture because they were fearful of creating another fish trap era. They also feared foreign investment.

"I think they are using the small operator to get their foot in the door," Jacobs warned. "Do you think big business is going to tolerate the little fellow? I've seen Jippo loggers go down the drain as well as family crab canneries. It's been the history of government to side with big business."

Sen. Zharoff as well as Dolly Garza, chairman of Shaan-Seet Village Corp. and also on the Sea Grant staff, hoped "that pen-rearing would provide jobs in rural Alaskan communities."

Graham and Eliason felt it would take \$300,000-\$2.5 million to have a successful pen-rearing operation. Graham pointed out that "if a person had this kind of money, he would be ahead to buy a permit and boat and go into salmon fishing."

Zharoff favored local control and non-transferable permits.

Forster, from SeaFarms of Norway, said that Alaska has the best area of any state for salmon farms. Alaska with its availability of waste fish for food and smolt supply from existing hatcheries makes it possible to run a small scale operation without megabucks. He saw a person



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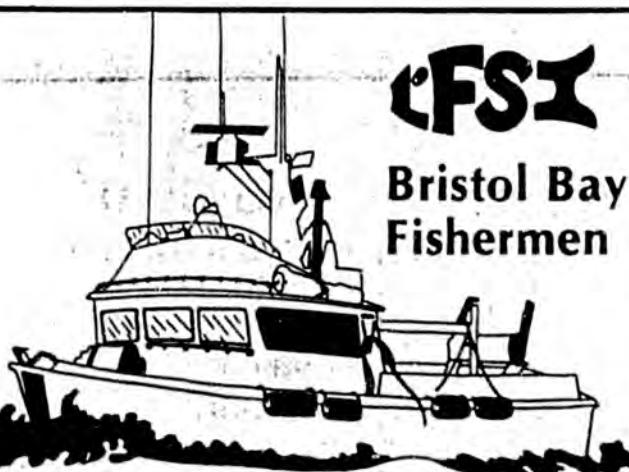


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WDF to answer

Continued from page 3

- cooperative project in Prince William Sound in Alaska operates?
9. Why can the Indians fish during the daylight hours with gillnets while the non-Indians cannot?
 10. Why has the Department refused to consider using private industry under contract to produce salmon for planting in public waters?
 11. How does the Fisheries Department plan to implement the moderate living standard that is stated in the Supreme Court decision in *U.S. v. Washington*? How will the Indian catch be reduced below the 50 percent maximum level to accommodate the moderate living standard?
 12. Has the Department developed a working plan to allow for payback (equitable adjustment) to non-Indian fishermen for species that are overharvested by the tribal fishery?
 13. Please provide the committee with a complete summary of all litigation filed against the Department in the last 12-month period including a list of the litigants.
 14. Please provide a list of the American representatives on the Pacific Salmon Commission (U.S./Canada treaty) and a background resume of each member. In addition provide a schedule of meetings over the period of time since the Commission was founded and an attendance roster for each meeting.
 15. Does the Department authorize Indian commercial gillnet fisheries on the salmon spawning grounds while the salmon are actively spawning? Do any tribes authorize such a fishery?
 16. What does the Department intend to do to improve the hotline program?
 17. Are the salmon caught by the Makah Tribe net and troll fishery counted on the Indian share?
 18. Why is region 6A closed to commercial gill netting?
 19. Why cannot the Department adjust seasons so that commercial fishermen are not forced to fish in severe weather conditions, and are given extra compensatory time to fish during good weather periods?
 20. Are Indian commercial fishing boats required to be marked in a legible manner? Does the Department have a current list of individuals and boats licensed by the tribes to fish commercially? If not, why not?
 21. Is the Department secretly negotiating with the Indian tribes or any other groups in such a way that it could effect the rights and privileges of other groups that are not a party to the negotiations?
 22. Do the Indians have rights to harvest shellfish? Has the federal courts affirmed the rights of Indians to harvest shellfish on private property? Is it the Department's policy to allow Indians to take shellfish on public lands for commercial use?
 23. What are the Department's plans to allow the small boat fishermen a chance to fish in inshore waters on the coastal fisheries?
 24. Why are the Department's personnel negative about considering the removal of the Elwha River dams?
 25. What does the Department intend to do to solve the problem of sea mammal predation of salmon?
 26. Can the Department substantiate the annual 350,000 escapement goal for the Cedar River Sockeye?
 27. How many Canadian trollers have been cited for fishing in Washington waters?
 28. Is it true that the Indian harvest exceeds their quota by almost 1 million salmon in the 1987 fishery in Puget Sound?
 29. If the Buoy 10 fishery is counted in the outside quota, how much will this reduce coastal sport fisheries?
 30. Can the purse seine and gill net fleets be separated by giving each their "own" days to fish, thus avoiding some conflicts?
 31. To what degree have the numbers of salmon sportfishermen been reduced in recent years? Why has this reduction occurred?
 32. Can some commercial fishing areas be rezoned to help avoid conflicts with other water users (Edmonds/Kingston ferry lane, etc.)?
 33. Has the Department considered individual season quotas of salmon for sport fishermen?
 34. Does the Department use professional commercial fishermen as consultants?
 35. Does the Department consider tidal cycles when setting salmon commercial openings?
 36. Why does the Department sell salmon eggs when streams are below full capacity?
 37. Did Atlantic salmon or coho salmon escape from Department permitted private aquaculture projects on Cypress Island?
 38. Is the Department allowing salmon pen culture site operators to

Continued on page 12

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JOHN SABELLA, shown here as the 1986 recipient of the Ballard Business Man of the Year in the Marine Division Category award.

Sabella praises pollock in State of Fisheries talk

by Walt Venema

With praise for the pollock, compliments to the cod and confidence in the crab, John Sabella shared a realistic look at the state of the North Pacific fishing industry.

Sabella, who heads Seattle's John Sabella and Associates, Communications Specialists, spoke to those attending a special breakfast session at the recent Seattle FISH EXPO.

apparent."

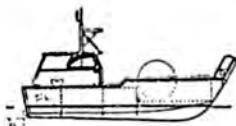
Substantial growth in domestic demand for seafood didn't hurt, as Americans became increasingly a-

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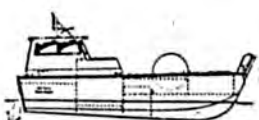
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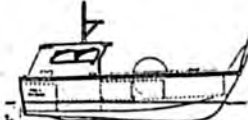
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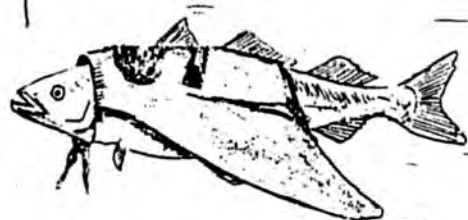
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In doing so, as an accompaniment to an impressive color slide presentation, Sabella also acknowledged the significance of salmon, halibut and other species of whitefish.

But it was the pollock that, as Sabella put it, "came to the rescue" when declining cod stocks jeopardized a hard-won market niche.

"The Alaska pollock was a good fish with a bad name by virtue of its association in the marketplace with the Atlantic pollock, a dark-fleshed species that does not command the premium stature accorded cod," he said. "As worldwide cod stocks declined and the market faced a serious whitefish shortage, the vast pollock resource provided a stable harvest."

"For another, steady marketing efforts gradually won a spot for Alaska pollock in the domestic diet, as its similarity to cod became

ware of the nutritional and culinary advantages of fish, Sabella pointed out.

Thus, with the current acceleration of the Americanization of the whitefish industry, it's understandable that a corresponding growth in the fleet of domestic factory trawlers is taking place.

"By the end of 1987, the factory trawler fleet will number 20 vessels ranging from 130' to 350'," Sabella predicted.

Additional observations by Sabella included these:

Alaska king crab stocks are rebuilding slowly.

Landings of opilio crab, known as snow crab in the marketplace, have been at record levels recently.

After stocks reached record lows in the early 1970s, salmon abundance has been rebuilt.

Like salmon, Alaska halibut stocks have gone from record lows to record highs in little more than a decade as conservative management has paid dramatic benefits.

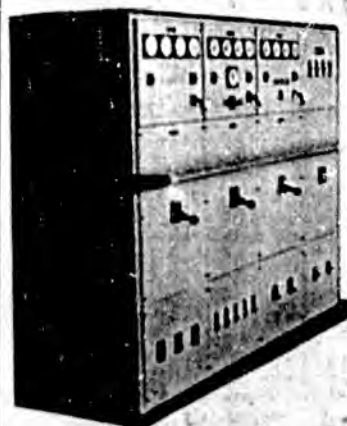
As the halibut resource has grown, so has the value of the blackcod harvest as American control of the fishing grounds has translated into new market opportunities.

"Whatever cycles nature provides, the events of recent years leave no doubt that Alaska seafood production has reached much higher plateaus of volume and value than ever before," said Sabella.

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Coast Guard detains seven foreign conversions

by Don Crouch

Alaska—The U.S. Coast Guard has detained seven oil supply "mud boat" vessels that were converted to trawler/processors in foreign yards. The *AmAlaska No. 1* & No. 2, *Norpac No. 1*, No. 2 and No. 3, *Bering No. 1* and *Uyak No. 1* were boarded and cited for noted violations of U.S. law. The Coast Guard will seek civil penalties for the violations. Hearings on the civil penalties will be held at Alameda, California, at the Coast Guard's Terminal Island facility.

All seven vessels were fishing and operating with invalid documents. The vessels will remain tied up until valid documents are issued. The violations stem from the failure of the owner/operators to surrender the vessel documents and have new documents issued after conversion and prior to putting the vessels back in service.

The Code of Federal Regulations [CFR], Title 46, Shipping, Section 67, requires a vessel's document to be surrendered when "... any considerable part of its hull or superstructure is built upon or is substantially altered ... [and] The vessel is altered outside the United States ...". When such occurs, as it did in the case of the seven catcher/processor conversions cited, a "... rebuild determination ..." is required.

Under the code, 46 CFR SubSec. 67.27-3, among other things, a certificate and accurate blueprints of the work performed must be submitted. Since May 1987, the ABS (American Bureau of Shipping) has taken over admeasurement functions. Accordingly, the blueprints and other information must be reviewed by ABS prior to the issuance of a new document. Generally, ABS rebuild admeasurement will result in a change in the tonnage of the vessel. In the case of "mud boats," which by statute are entitled to a number of favorable tonnage exemptions, conversion results in increased vessel tonnage.

Catcher vessels exceeding 200 tons can be a costly experience. In the case of packer or processors, staying under 500 tons is prudent. With 100 cubic feet equal to 1 ton, it is not difficult to see how the 200 and 500 ton exceptions can be exceeded by vessel conversion. What is not clear, is how the tonnage exceptions apply to dual function, catcher/processor vessels. Are they talking about 500 gross tons, or 200 gross tons? The statutes and code are not clear on how tonnage exceptions apply to this new breed of vessel. The outcome of the Coast Guard civil penalty hearings may shed some light on this dilemma.



IMMERSION SUIT Winner Karl Kaldestad, left, receives prize from Gunnar Guddal, inventor of the survival suit. And Bill Christensen, Interstate Production Credit Association loan officer, shows the winning ticket, one of approximately 2,000 filled out at the PCA booth during Fish Expo '87. Appropriately enough, the Norwegian-printed instructions side is up, both Guddal and Kaldestad having grown up in the community of Sundhordaland, Norway. Kaldestad owns the F/V ALEUTIAN MARINER and F/V PACIFIC MARINER.
—TFN photo

Mildred Nicholas to receive special tribute

The "Founding Parent" of the Pacific Coast Fishermen's Wives Coalition, Mildred Nicholas, who has been active in the commercial fishing industry for more than 20 years, is to be honored during the banquet portion of that organization's annual meeting, January 16-17, at the Thunderbird Red Lion Inn in Astoria, OR.

No stranger to the Oregon State Legislature, Nicholas also was active

in formation of the West Coast Fisheries Development Foundation.

Marcel Makela, publicist, notes that it is necessary to contact Harriet Engbloom (503-458-6351) for reservations, as soon as possible. Membership in PCFWC is not required to attend the banquet, and those desiring to reserve accommodations may do so directly with the Thunderbird, 1-800-547-8010.



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For more information contact: Clare Vanderbeek, Director of Promotions and Public Relations, National Fisheries Institute, 2000 M St., N.W., Suite 580, Washington, D.C. 20036 or call (202)296-3428.

NFI Surimi committee to meet

The National Fisheries Institute has scheduled a Surimi Committee

Meeting during Seafare '88 in Long Beach, CA. The meeting is planned for Feb. 18, at 10 a.m. in the Catalina Room at the Long Beach Convention Center.

NFI members as well as non-members are encouraged to attend the meeting. The issues that will be discussed will cover: 1) standardized testing methods for product specifications; 2) mixed specie labeling guidelines; and, 3) initiation of a publicity education campaign for food editors.

Anyone involved in the production of surimi or surimi based products, distribution or allied industries, such as flavor or ingredient suppliers is invited and encouraged to attend the meeting.

For more information contact Roy Martin, vice president of Science & Technology at NFI (202)296-5170 or Bill Mitchell at SeaFest Products (612)340-3854.

WDF to answer

Continued from page 9

- mitigate their projects by giving the Department money for geoduck mitigation?
39. Will there be a payback (equitable adjustment) for the Indian overfishing of salmon on the Quillayute River this year to the sports fishermen next year?
 40. What has the Department done to make certain that the non-Indian and Indian commercial harvest data are accurate for purposes of catch sharing?
 41. Did any Indian tribes receive salmon eggs from the state and then subsequently sell them for private aquaculture purposes?
 42. What is the Department doing to reduce the tensions between user groups and prevent gear wars?
 43. What has been done to involve the regional user groups in formulating fisheries management decisions?
 44. There are reports that some sport crab and shrimp fishermen are selling their catch, what is being done to apprehend and punish these violations.
 45. What is the amount and source of federal funds received by the Department? What are these monies used for, are any fish actually produced with this money?
 46. Some have asserted that the watershed management plan for the Queets River will result in \$678.00 cost/fish produced - is this true?
 47. What economic assessments or cost-benefit analyses have been made on watershed management plan projects?
 48. Why are the Department salmon hatcheries not at full roaring capacity?
 49. Identify the number of Department employees in the following categories: total, field, planning, administration. Why can't the Department cut its administrators and have more employees in the field actually working with the fish resource?
 50. Why has the Department ignored the enhancement of Morse Creek?
 51. Why can't the Department plant more native stock salmon fry in streams to help out Mother Nature?
 52. What has the Department done to recognize the needs of the sports halibut fishery? Will the halibut resource be enhanced? Managed? Does the Department have the authority to manage the fishery?
 53. What is the Department's position on the commercial harvest of bull kelp in the straits, as proposed by DNR?
 54. Can the trollers expect more than a 10 day season next year?

Continued on page 20

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Bridge, Locks radio foul-ups surveyed

Continued from page 1

Pleasurecraft are to stand clear of Channel-13, except in emergencies. They don't, contributing to unnecessary (and illegal) clutter. One-watt only of power output is to be used when transmitting on Channel-13. Pleasurecraft and some fishing boats are using 25W; more problems, such as disruption in communications for commercial vessels navigating the locks area or Duwamish Waterway by a high-power transmission from the vicinity of the Evergreen Floating Bridge.

With the number of larger craft heading north from Seattle, and the locks closed occasionally for maintenance, use of a landline is recommended. Arrangements may be made directly with the locks tower, (206) 793-7000.

Fishing boats use the frequency a lot. Most, being professionals, monitor rather than call. The usual tug traffic presents little problem.

Traffic is particularly heavy during the summer. But an FCC monitor -- "we listen to everything" -- reports having logged 13 calls over 156.650 (VHF Channel-13) during a recent rainy Monday morning one-half hour period.

Primary use of Channel-13, according to FCC regulations, is to be inter-ship. Secondary availability is for coast-to-ship.

Fishboat frequencies are VHF Channels 1, 7, 8, 9, 10, 11, 18, 19, 63, 67, 79 and 80 (Channels 8, 67 and 88 are for ship-to-ship only, with exceptions), Channel-88, formerly for commercial inter-ship, is now reserved for use by ships' stations in communications with public coast stations only, within 75 miles of the U.S.-Canada border, in the area of Puget Sound and Strait of Juan de Fuca and its approaches. Designated as VHF Channel-88, 157.425 Mhz (one-half of duplex pair), is available for inter-ship and commercial communications in the territory more than 75 miles from the U.S.-Canada border, in those areas of Puget Sound and the Strait of Juan de Fuca and its approaches. Outside the Sound and Great Lakes, Channel-88 is also available for communications between commercial fish vessels and associated aircraft while engaged in commercial fishing activities, i.e. fish-spotting.

As far as pleasurecraft channels and the bridges/locks, Ken Walker of the FCC district office advises that

channels designated for particular uses are listed in a pair of publications available from his office, **VHF Marine Information for Recreational Boaters**, and **How to Use Your VHF Marine Radio**.

For larger vessels, processors and cannery supply boats, another publication should prove a big help, particularly on inspection-related matters. Walker stated FO Bulletin No. 11, **Inspection Checklist for Radio Installations aboard Passenger-carrying and Other Required Vessels**.

Publications may be ordered over the phone, (206) 764-3324. Requests for non-urgent information may be directed to: Federal Communications Commission, Seattle District Office, 1 Newport Bldg., Rm. 414/3605 132nd Ave. SE, Bellevue, WA 98006.

SE Alaska sets troll record

by Marilyn E. George

Southeast Alaska winter troll catch stood at 39,395 king salmon by Dec. 3, an all-time record according to Alaska Department of Fish & Game records. The estimated contribution from Alaska hatcheries was 6,573 or 15.5 percent of the total catch, approximately one-half of the fish landed having been checked for coded wire tags.

Projectors indicate that the Sitka area had the largest catch, of 11,383; followed by Frederick Sound, with more than 9,511; and Chatham, 6,381-plus.

If the Northern Inside areas, consisting of Frederick Sound, Chatham Straits, and Stephens Passage, are added together they show that 18,131 kings were landed, as compared to 16,182 in the Northwest Outside areas, which include Sitka, Cross Sound and Icy Straits.

Southeast inside areas, including north Clarence Straits, Sumner Straits, Ketchikan and the Stikine areas, caught just over 4,800. Only 255 kings were landed in the Southwest

area, which consists of Noyes Island and southern parts of Prince of Wales.

In the Northern Inside areas, 29 percent are Alaska hatchery fish. The Northern Inside areas have caught 23 percent hatchery kings, but only 6 percent are of Alaska hatchery origin, with Canada and lower 48 hatcheries each contributing 8 percent.

Of the 4,800 in the Northeast Quadrant, 3,160 or 42 percent are Crystal Lake hatchery fish and 13 percent are from Little Port Walter. While in the Northwest Quadrant, 244 or 7 percent are Crystal and 6 percent are from Little Port. In the Southeast Quadrant, 202, or 14 percent are from Southern Southeast Regional Aquaculture Association hatcheries at Neets Bay and Whitman Lake.

For all areas of SE Alaska, more than one-half, or 6,573, are from Alaska; 30 percent from Canadian and 18 percent from lower 48 hatcheries.

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Seafood buying convention set at Long Beach, California

Now in its fifth year, Sea Fare brings seafood suppliers and buyers together from all over the world. Sea Fare '88, to be held Feb. 17-19 at the Long Beach Convention Center, will feature more than 450 companies displaying seafood to

some 10,000 buyers from all levels of the food distribution chain.

If you're a seafood buyer no one has to tell you your job is more complicated than it used to be. Just try and get a line on some frozen salmon, for example. Two years ago nice silvers were plentiful at \$2 a

pound. This year they're twice that — if you can find any.

But on the other hand, there's more shrimp around than ever before because of spiraling production from farms in China and Ecuador; prices for many sizes are near all-time lows. Orange roughy, too, is a better buy than it was a year ago.

Record world demand and a constantly changing supply picture has made what was already a

complex business more dynamic than ever. Buyers have found they have to stay on top of the latest trends in seafood to stay competitive. Sea Fare, the annual Southern California-based international seafood exposition was established to do just that.

Seafood buyers wanting more information about Sea Fare '88 should contact Sea Fare Exposition at 3510 1st Ave. NW, Seattle, WA 98107. 206/547-6030. Telex: 298558 SFE UR.

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Bender reorganization confirmed

Navy and fishing help company out of Chapter 11

Bender Shipbuilding & Repair Company's reorganization plan was confirmed late in November by the U.S. Bankruptcy Court for the Southern District of Alabama. It took Bender a mere nine months to get out of Chapter 11, according to Bruce J. Croushore, spokesman for Bender.

Since January of 1987, Bender has delivered five vessels converted to fishery service in the Pacific Northwest. Among these were a 180' tender-trawler, a 190' trawler, and two 210' factory trawlers. Bender also completed major overhauls for the U.S. Navy and the Military Sealift Command as well as several repair jobs on commercial vessels.

"In terms of operating revenues, the company has had one of the best years it has had in the '80s," said Tom Bender, the company's president and chief executive officer. He expressed gratitude to the company's customers, employees and vendors for their support.

Bender was recently awarded a \$6.4 million contract for work on the U.S.N.S. Sirius and has four conversions in its yards, including two crabber-processors for Alaska. In addition, Bender is encouraged by the back-log in its order book for commercial repair work.

T H E
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Of the several species of scallops on the market, probably the most familiar are bay, calico, and sea scallops. Bay and 'ico varieties are similar in size (about 1/2-3/4 inches in diameter); sea scallops are much larger. Active swimmers, scallops propel themselves through the water by snapping their shells together, resulting in an overdeveloped adductor muscle. Although the entire scallop is edible (and the roe highly prized by some), usually we just eat the adductor muscle.

Fresh or thawed scallops should be ivory, light tan, or pinkish in color. Plan to use them within one or two days of purchase. Frozen scallops may be stored at 0 deg. for 3-4 months; thaw them in the refrigerator or in a sealed plastic bag under cold running water. Cook scallops just until they turn opaque throughout—overcooking causes toughness and shrinkage. The following recipe is great for holiday entertaining!

Bacon-Wrapped Scallops

1 lb. scallops
1 can (5 oz.) water chestnuts, drained
Marinade

15 slices bacon, cut in half
Thaw scallops if frozen; rinse with cold water; pat dry. Cut large scallops in half. Cut water chestnuts in thirds. Place scallops and water chestnuts in bowl; stir in marinade; cover; refrigerate 2 hours. Stir occasionally. Drain. Place scallop and piece of water chestnut on each piece of bacon. Wrap bacon around both and secure with toothpick. Place on a broiler pan, broil 4 inches from heat 6-8 minutes or until bacon is crisp. Turn, broil 2-4 minutes longer until bacon is crisp. Makes about 30 appetizers. Note: do not use thick sliced bacon.

Marinade

1/4 c. vegetable oil
1/4 c. soy sauce
2 Tbsp. catsup
1 Tbsp. vinegar
1/8 tsp. white pepper
2 cloves garlic, crushed

Combine all ingredients; mix well. Makes about 3/4 c. marinade.

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MARINER
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Coastal whales staging fine resurgence

by Dan Wickham

It's whaling season! This is when the Sonoma Coast comes alive with our annual influx of neo-whalers. Maybe we can begin to appreciate the fact that today's whalers are no longer in it for the proverbial pound of flesh, or should I say ton of flesh.

People who now ply the seas in pursuit of the great behemoths have discovered that whales are more valuable alive than dead.

Since the last grey whales were hauled ashore into the Richmond whaling station just 20 years ago, these great creatures have staged a remarkable resurgence. And it is no longer just the grey whales that pass our coast. The last few years have also seen the return of humpbacks and just last year, I finally saw my first blue whale.

I'll admit that I am no whale expert. I'm far more inclined to get excited about the little invertebrates the whales are eating. But even hard-bitten microscope freaks catch their breath in awe when one of our giant mammal friends breaches off-shore or surfaces under our noses as we tow plankton nets through the water, in competition for their food.

Those of us who collect plankton for study cannot help but be impressed by the talent displayed by whales as they crop for coastal plankton resource.

The grey whales focus on the *amphipods* and *mysids*, both little crustaceans that teem on our ocean bottom.

To do so, the whales literally take giant gulps of bottom mud. They then shoot this slurry out through their baleen plates, which are giant feather-like filters, and keep the crustaceans in their mouths. Aerial photos allow researchers to track the progress of greys as they leave little puffs of mud behind them.

Blue whales feed near the surface on *euphausiids*, better known as krill. These are shrimp-like crustaceans that, in the Arctic and Antarctic, swarm by the trillions. Actually, that estimate is probably far too low.

Krill swim in schools and blue whales take advantage of this. They circle the school, herding the krill into the center. They then dive down and come back up through the thickest part of the swarm with their mouths open.

Like the greys, blue whales spit all the water out through their baleen plates and swallow the krill that get filtered out. I read once that a blue whale can swallow up to two tons of krill in a single gulp.

When you are as big as these guys, you have to eat a lot.

Whales on our coast migrate north and south, taking advantage of the seasonal shifts in food abundance. The waters off Alaska hold some of the richest food supplies on earth during the short summer season. And whales can get good and fat during their summer Arctic sojourns.

Then, as winter comes, they head south to Baja. I've been in both of those places, and I think the whales are on the right track.

The only pause I have about our newfound sensitivity for our giant relatives is that our curiosity doesn't drive us to become such pests that the whales begin to avoid our coast. But from what I've seen to date, the people involved in this annual "hunt" have been remarkably responsible.

My only complaint is, when is the average citizen going to get equally interested in all the millions of other species on earth that aren't as spectacular as whales or as cute and furry as the otter?

Oh well, I guess we have to start somewhere.



DUPONT'S Textile Fibers Department consultant Larry T. Cleary and W. P. Stephenson explain the qualities of KEVLAR, super-light, super-tough fiber product introduced at Fish Expo '87. —TFN photo

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Sitka longliners restricted from rockfishing Sound

by Eric Jordan

Sitka longliners were unhappy with restrictions to close part of Sitka Sound to directed rockfishing by longliners, while planned restrictions for sport and subsistence fishermen were delayed by red tape.

The Sitka Fish & Game Advisory Committee had recommended the Alaska Department of Fish & Game take emergency action to close longlining for rockfish in Sitka Sound from Shoals Point to Biorka Island. Because approximately one-half the directed rockfish harvest comes from sport and subsistence users, the Advisory Committee also proposed a limit of 8 rockfish per day for sport

and subsistence users.

The area was closed at noon, December 1, by emergency order to the commercial directed fishery for Demersal Shelf Rockfish.

According to Art Schmidt, Sitka area sport fishing biologist, "The reason the sport fishery was not closed was due to a difference between an emergency order and an emergency regulation procedure. Because of the procedural differences and in view of the small sportfish harvest of rockfish in the winter, we elected to go with a procedure that will have the sportfish bag limit in place by the end of February."

Virgil Henke, chairman of the Sitka Fish & Game Advisory Com-

mittee, expressed disappointment over the delay. "I feel everyone should do their part. The present regulations leave a loophole for directed longlining for subsistence," said Henke. Tory O'Connell, Sitka area groundfish biologist, feels the emergency action is just a first step. "By itself," said O'Connell, "this will have a minimal effect. We're really going to have to look at a more comprehensive approach to conserve rockfish, including a look at by-catch in non-directed fisheries and non-traditional management approaches."

Trollers Support Winter Chinook Fishery

Sitka trollers expressed strong support for the winter fishery at an Alaska Trollers Association meeting in November. ATA representatives George Eliason and Charles Wilber had called the meeting to discuss Sitka positions for an ATA Board meeting early in December in Juneau.

Concern had been voiced about the unusually high catch rate of winter kings which, according to Allen Davis, Alaska Troll Biologist, had reached 45,000 by December 1. Usual winter catch from October 1 to April 15, is 20,000 to 30,000. Because the price for winter kings is higher, the percentage of Alaska hatchery contribution is higher. Most local residents participate in the popular winter fishery.

Alaskans Angered by Washington, Oregon... 'Year of Chinook'

At the same meeting, continued strong support for an increase in the Chinook quota was expressed. Reports of the "Year of the Chinook" in news magazines like *The Fishermen's News*, discussing catches by Oregon trollers, sport anglers and gillnetters, have enraged Alaska trollers. Releasing Chinook for others to benefit from Alaska's conservation has not been an easy task.

Bill Berger, member of the ATA board, feels Alaska needs to have a treaty team organized and coordinated out of the Governor's Office. He said, "Alaska has to realize the treaty negotiations are not genuine efforts by all the players to rebuild the stocks. Some of the players are maximizing their harvest at the expense of others. Alaska trollers are contributing more than their share to

the rebuilding effort while completely foregoing any harvest of the surplus from already rebuilt stocks... this has to change!"

Fishermen Proud of Tommy Thompson Alaskans Angered

Sitka was proud to see Tommy Thompson of Sitka Sound Seafoods awarded the Northwest Fisheries Association Man of the Year Award. Rick Lauber, lobbyist for Pacific Seafood Processors Association, summed it up best a couple of years ago, when he stated that Tommy was one of the few people who had made the whole industry better by his personal graciousness. Tommy and his family have been a great addition to Sitka. With Sitka Sound Seafoods running an expanded and improved operation, The Fresh Fish Co., and Claudia's Fisheries working at Fisherman's Quay, and both Seafood Producers Coop. and Ranier Seafoods working out of the North Pacific Cold Storage Plant, Sitka fishermen have a good choice of buyers.

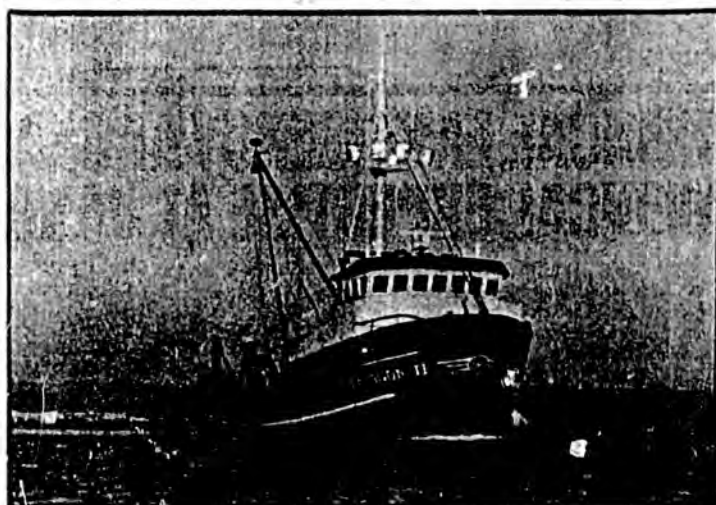
New Harbor Considered

Support for a new harbor was expressed by City Officials and fishermen at a meeting in November with the Army Corps of Engineers. The Corps is considering plans for a 225-slip harbor either in Jamestown Bay or as an extension to Thompson Harbor. There are presently 217 boats on the waiting list with the Sitka Harbor Master. There is also a problem with space for transient moorage from the middle of March through the summer season.

Tips for Grilling Fish Steaks

Brush steaks with sauce, marinade or oil and place in an oiled fish basket or directly on a well oiled grill 4 to 6 inches from heat.
Cook, uncovered, 1 to 2 minutes to sear fish, then close barbecue lid or cover fish with foil tent if desired.
Allow 10 minutes cooking time per inch of thickness. Fish is done when it just flakes when tested with a fork but is still moist & juicy.
Turn steaks and add grill half way through cooking time.

Sea Grant classes offered through Washington Sea Grant's Marine Advisory Office at Fishermen's Terminal. Contact Sarah Fisksen (206) 543-1225.



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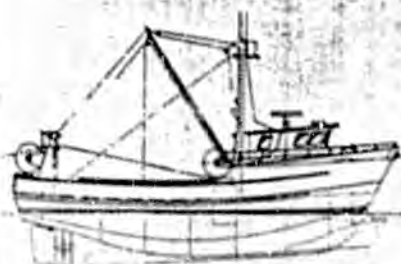
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Panel to meet

Continued from page 2

3,642,000 fish: 2,386,000 in Canada and 1,256,000 in the United States. Commercial value was approximately \$11,000,000 (Canadian) to fishermen. Accompanying tables present the current estimates of catch.

Figures on the allocation of catch between fishermen of Canada and the United States show that the United States was approximately 45,000 sockeye and 109,000 pinks short of catch goals.

The sockeye shortfall occurred despite 19 days of nearly continuous fishing in the United States from August 16 to September 3, when high diversion of sockeye, via Johnstone Strait, caused the availability of fish to decline in U.S. waters, thus requiring more fishing time by the United States. During this time period, Canadian fishermen were permitted only four days of fishing in Area 20 (Strait of Juan de Fuca) to allow most of the sockeye migrating via the southern route to enter United States waters.

The U.S. catches of sockeye were nearly equal for Treaty Indians (969,000) and non-Indian fishermen (967,000). The Treaty Indian catch was, however, about 40,000 fish short of their goal which provided for the payback of a deficit stemming from the 1986 catch shortfall for Treaty Indian fishermen.

Canadian gear types

Canadian catch allocation between gear types showed that troll fishermen (both outside and inside and along the north coast) harvested 633,000 sockeye (19.8%), purse seines caught 1,550,000 (48.8%) and gillnets landed 1,021,000 (31.8%).

The troll-sector catch percentage was higher than the goal of the Minister's Advisory Council agreement for 1987, but purse seine and gill net fishermen divided the catch taken by the net gear, as per the agreement (i.e. approximately 60 percent purse seine and 40 percent gillnet).

Sockeye returns by stock were

dominated by the Adams (2.5 million), Chilko River and Lake (1.8 million), Birkenhead (1 million) and Stellako (700,000) runs. While these returns were not the largest for many individual stocks on the cycle, production levels were high in most stocks.

The Birkenhead run was the largest recorded on the cycle, due to the large return of 5-year-old salmon from the abundant and very successful spawning of this stock in 1982. Current estimates place the return of summer-run stocks at 3.6 million sockeye; late-running stocks totaling 4.0 million fish.

While all escapement calculations have not been completed, Canada Department of Fisheries and Oceans estimates that approximately 1,850,000 adult sockeye and 3,100,000 pink salmon reached the spawning grounds in the Fraser River watershed.

The sockeye escapement slightly exceeded the goal of 1,760,000 adult spawners established by Canada.

Escapements to individual sockeye spawning areas were near the targeted goals, with the Adams River, Chilko River and Lake, Stellako River, Birkenhead River and the Early Stuart streams collectively accounting for approximately 1,550,000 spawners. However, the small pink salmon return and the unavoidable incidental harvest of pinks during the late-season sockeye fisheries reduced the pink salmon escapement well below the 6,000,000 preseason goal. Final summaries for sockeye and pink salmon escapements are to be issued by Canada in February.

Despite the yet-unexplained poor return of pinks, the management of the complex fisheries and allocation targets was successful — most catch targets were achieved within a few percentage points.

The panel will meet in February 1988, to begin work on the fishery regime for the 1988 season once forecasts of abundance, escapement goals and catch allocation objectives are established. The 1988 cycle-year has traditionally been the year of lowest abundance for sockeye in the

Fraser River; additionally there are no Fraser River pink salmon on even years. Hence, the numbers of fish expected in 1988 would naturally be lower than the runs in the 1985 to 1987 period.

The chairmanship of the panel now alternates to the Canadian section of the Fraser River panel for 1988. The United States section chairman will serve as panel vice chair.

Collinsworth reappointed

On December 3, Alaska Gov. Steve Cowper announced reappointment of Don Collinsworth as commissioner of the State Department of Fish and Game. Collinsworth, 46, has been commissioner since February of 1983.

Among other accomplishments, he was the architect of the U.S.-Canada Pacific Salmon Treaty. Mid-November, Collinsworth was unanimously recommended as commissioner by the joint board of Fisheries and Game.

Annual salary is \$77,304. Between 1978-'83 he served as deputy commissioner.



'THANKS! FOLKS,' writes Jim Reed, of Eugene, OR, winner of the Stormy Seas inflatable sweater-jacket in THE FISHERMEN'S NEWS Fish Expo-'87 drawing. Shown with a 'small king taken off Noyes Island, from the F/V JACKIE BELL. Reed crews on SE Alaska seineboats summers, and is trying to establish a herring spawn on kelp fishery in Oregon winters.

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Converted tuna Seiner fishes pollock Snow King

by Don Crouch

The *Snow King* represents another addition to the growing fleet of U.S. factory trawlers gearing up to fish the Gulf of Alaska and Bering Sea. The 221-

foot vessel is being operated by Marine Management, Inc., Seattle, Washington and will produce individually quick frozen (IQF) fillets and frozen blocks of pollock for the U.S. domestic as well as other markets.

The vessel was built as a tuna seiner by Campbell Industries of San Diego, California and originally christened *Gemini* and later the *Island Princess* which she remained until tied up in Pango Pango, American Samoa in 1983. Acquired by the present owners in 1985, the conversion for her present service was started in 1986.

The conversion was accomplished by A/S Baathyg, at Maaloy, Norway, the same yard that earlier converted another large factory trawler, the *Royal Sea*.

The factory trawler/processor is equipped with three of Baader's new



Congressmen Don Bonker and John Miller of Washington at Fishermen's Terminal. Congressmen Bonker and Miller toured the *SNOW KING* — the most recent addition to the growing fleet of U.S. factory trawlers. The congressmen toured the vessel on November 6 when it was in Seattle enroute to Alaskan fishing grounds.

182 machines and has a capacity of 35 tons of IQF fillets and 15 tons of block per day. The vessel has a crew of 58.

The factory trawler represents an investment of \$10 million dollars and was on fishing grounds out of Dutch Harbor by late November.

On her first trip to the Bering Sea she caught and processed 800,000 pounds of first quality IQF fillets. The owners expressed satisfaction with the vessel's performance and processing of quality product. The *Snow King* is underway on her second fishing trip.

Three more converted supply vessels — the *Royal King*, *Royal Prince* and *Royal Princess*, are expected to be completed and fishing Alaskan grounds by April 1988, according to Marine Management.

The factory trawler *Snow King* will be marketing its products under Royal Seafoods label. For information about the IQF fillets contact Toby Cohen, Royal Seafoods, Seattle, 206/284-6101.



Left to right: Congressman John Miller, Republican; John Sjog, president of Marine Management, and Congressman Don Bonker, Democrat, on board the F/V *SNOW KING*.

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Vessel Safety Program

Training Program

Update Jan. 1988

The NPFVOA Safety Program offers a series of classes for the skippers and crews of fishing vessels. Openings exist in all classes. A minimum of 15 participants is required for each class. The Safety Program Office will attempt to accommodate companies or groups interested in scheduling special sessions. To register, call 206/283-0861.

Fire Fighting and Control. 1 day. \$150. Classes: Jan. 11, 25; Feb. 8, 22; March 7, 28.

Medical Emergencies At Sea. 1 day. \$65. Classes: Jan. 7; Feb. 9, 24; March 9; April 1.

Safety Equipment and Survival Procedures. 1 day. \$65. Classes: Jan. 8, 26; Feb. 9, 23; March 8, 29.

Navigation and Stability. 2 days. \$80. Classes: Jan. 9 and 10, Feb. 6 and 7; March 5 and 6.

Vessel Safety Orientation. 1 day. \$750.

Safety inspection and crew safety drills aboard participating vessel. Safety program personnel make confidential recommendations to the owner/operator. Call this office to schedule.

Intro. to Self-Contained Breathing Apparatus, SCBA. 1/2 day. \$40.

Learn to deal with hazardous atmospheric conditions caused by fire or chemical casualties. Hands-on training includes a variety of challenging field exercises.

One-half day classes (8:00-12:00; 12:30-4:30): Call the safety office 206/283-0861 to schedule session.

Read Tuition Policy carefully.

Payment should be made prior to the scheduled classes. Checks should be made payable to the Vessel Safety Program.

If you are unable to attend a class for which you have enrolled notify this office ASAP. Unless sufficient notice is given, the Vessel Safety Program cannot give refunds. We suggest that you arrange for a substitute if necessary.

To enroll, contact: Vessel Safety Program Room 207, C-3 Building, Fishermen's Terminal, Seattle, WA 98119. 206/283-0861.

ADFG's Malloy trying to maintain balance between over- and underharvesting

by Mike Rostad

Larry Malloy, area finfish management biologist for the Alaska Department of Fish and Game in Kodiak, sees the interaction between the state people and fishermen as a healthy sign that the two groups are "working together as a team," he says.

That interaction is one of many ways in which the state determines what strategies to take in managing the unpredictable fisheries.

"There's a lot of instability that's inherent in fishing," says Malloy. Most of that uncertainty comes from unexpected fluctuations and the surprises brought on by Mother Nature. It's up to Fish and Game to outguess Mother Nature and "create the potential for maximum production of a harvest" in an orderly fashion, Malloy explains.

Through the information it gets from fishermen and processors, escapement reports from weirs and ADFG aerial surveys and spotter pilots; and through historical data, Fish and Game implements an in-season management strategy. One of the main goals of this strategy is achieving an adequate escapement — the supply of fish that will spawn in the creeks.

"Without adequate escapement, the economic future would be bleak," says Malloy. The offspring of the 1987 returning pink salmon will provide the harvests and escapement for 1989. The reds spawned this year are expected to return between 1991 and 1993. This year the stage was set for the chum return in 1991 or 1992 and the silver return in 1990 and 1991.

"Escapement is always on our minds," says Malloy, "but also very important is preserving, as much as possible, the traditional fishing opportunities" that existed at the time when gear levels were established and limited entry was implemented.

At times, ADFG is just as concerned with excess escapements as it is with overharvesting. This summer when an unexpected build-up of excess pink salmon occurred in inner Uganik Bay on the west side of Kodiak Island, ADFG decided to "surgically remove" what appeared to be excess pinks bound for the major Uganik system, says Malloy.

An emergency "mop up" opening was then announced. However, it appeared that an excessive harvest occurred when much of the buildup backed out into legal waters. Some Uganik setnetters feared that in providing for this mop-up fishery, Fish and Game may have caused an overharvest of pinks for a major production system. When they came into town, some of the fishermen stopped at ADFG's office and questioned Larry and his crew for their decisions. However, "the air was cleared," says Larry, "after management strategies and eventual escapement levels were discussed. A mutual understanding of each other's problems and concerns was reached."

Larry admits that "misunderstandings (between ADFG and the user groups) do occur. I'm not saying we're always one big happy family. But we try very hard to avoid festering conflicts. Whenever we can establish communication, problems seem to get resolved and common sense prevails."

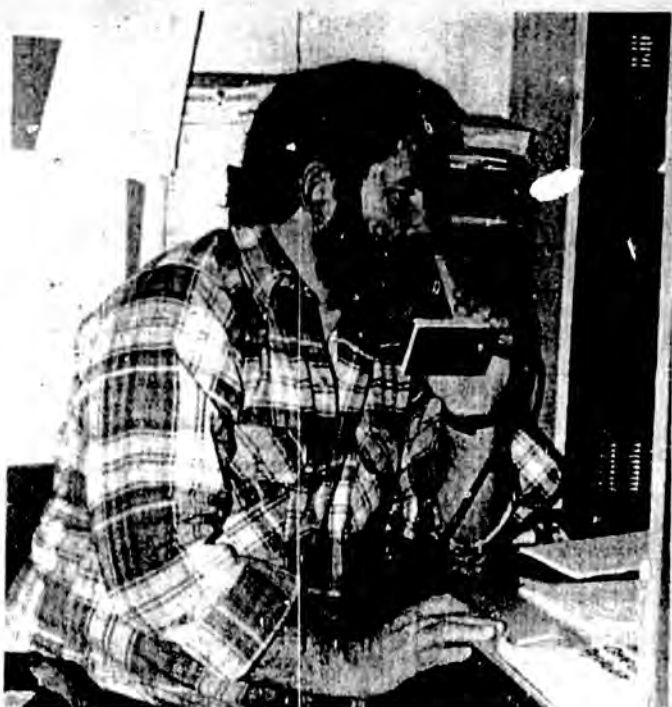
Larry also considers the working relationship he has with his crew as "teamwork." A "critical component" on that team, notes Larry, is assistant area biologist David Prokopowich.

"His in-season analysis and perspective is essential to providing for a smooth operation."

Larry has been with ADFG for 17 years. Before going into the army he was a seasonal employee working on a pink salmon forecasting crew

and at the Chignik weir. When he became a permanent employee, Larry worked in the salmon and herring fisheries; managed the Kitoi Bay hatchery when it was changing from red to pink salmon production

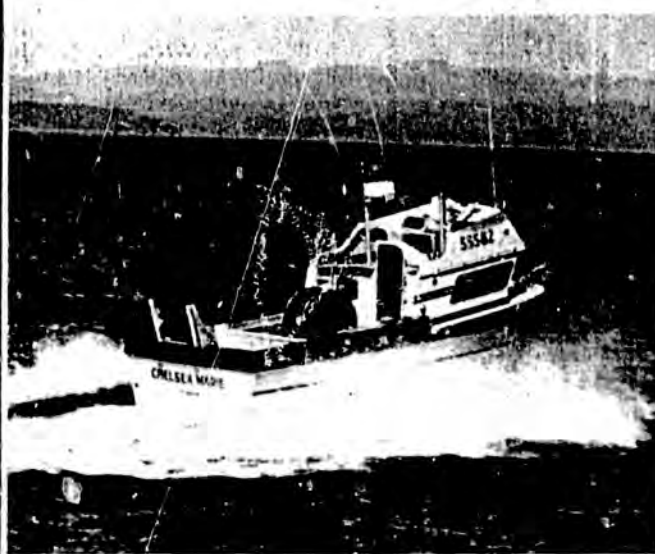
and also worked for a short period in king crab research. In 1973 he became the assistant area finfish management biologist and in 1981, the Westward region herring biologist.



LARRY MALLOY

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WDF to answer

Continued from page 13

55. What is the Department doing to emphasize enhancement in streams that originate in Olympic National Park and which have excellent undisturbed headwater habitat?
56. Has the Department allowed non-Indian trollers to target on Canadian chinook stocks near the border area? Why not?
57. Why do the new marine fish license fees go into the general fund? Why don't they go into recreational fisheries programs?
58. Is the Department planning to institute a 7/8" mesh shrimp pot regulation in the Port Angeles area? Why?
59. In recent years has the state experienced "scouring" type floods that have seriously harmed naturally spawning fish in streams? How many times has this occurred? Which rivers?
60. Where does the policy of co-management come from? What authority does the Department have to give up management authority to the Indian tribes?
61. What happened to the buyback program?
62. What is the status of Indian fishing rights for bottomfish (halibut), herring, shellfish, squid and other nonsalmonid food fish?
63. Why is there no longer an area 7 fall chinook commercial fishery?
64. Are efforts being made to limit fishermen to one commercial fishery rather than allowing some tribal fishermen to fish both Indian and non-Indian fisheries?
65. What is the Department's definition of salmon enhancement?
66. How many Department employees have ever commercially fished for foodfish?
67. Are crab populations controlled by fishing or by parasite infestation?
68. Specifically, what is the Department position on the "all-citizen" lawsuit, and does this position vary from the position of the Attorney General's office?
69. Are there agreements with Indian tribes that prevent non-Indians from fishing even if there are harvestable surpluses available for the non-Indians to harvest?
70. Do non-Indians catch 50 percent of all species of salmon that originate in the Quinault River? Queets River, Quillayute River?
71. What is the Department's position on the salmon species aggregation principle? Has the Department requested a court ruling on this principle?
72. Why did the Department deny applications for chinook egg box cooperative projects when the Naselle hatchery has taken over 13 million chinook eggs?
73. Why are coho reared at the Skokumchuck hatchery planted outside of their parent watershed (Chehalis River) into Puget Sound?
74. Why did the Department close the Humptulips River sport fishery before the harvestable quota of 600 chinook was met?
75. The Department has consistently resisted efforts to establish a salmon hatchery on the Wynoochee River; Why?
76. What is the catch ratio of chinook to sturgeon in the Grays Harbor "sturgeon gillnet" fishery?
77. Has the Department ever considered the planting of salmon carcasses into streams that are also fry planted for purposes of boosting stream productivity?
78. What is being done to reduce the catch of adult and immature salmon by foreign vessels fishing within the 200 mile limit?
79. Would the Department please provide the Committee with a copy of the Hoh vs. Baldrige agreement that was signed with the tribes?
80. Does the Department support the spraying of ghost shrimp with sevin pesticide in Grays Harbor and Willapa Harbor? How many acres were sprayed annually over the past several years?
81. What percentage budget cut has the Governor directed the Fisheries Department be prepared to make?
82. What programs were cut in these proposed budget cuts?
83. If the Canadian troll fishery overharvested 200,000 coho off the West Coast of Vancouver Island, does the Department have plans to seek payback for these salmon? Why didn't the Department seek a conservation closure on the Canadian troll fishery?
84. Have the salmon hatcheries ever left adult racks in the river after the egg take quota has been filled? Why would this be done?
85. Many people perceive that the Department has a public relations problem. What do you plan to do to improve relations with the public in general and the user groups in particular?
86. Are there any enhancement facilities in the state which have been closed? Why?
87. The Tsimi Tribe has a operational shellfish enhancement facility; what is the Department doing to enhance oyster and clam populations?

88. What is the status of the Jamestown net pen project? Where will they get their eggs?
89. What is the Department's position on marina development in Elliot Bay which would effect fishing rights of the Muckleshoot and Suquamish tribes?
90. What are the existing enhancement programs on the Nisqually River and what is planned in the future?
91. Can the Department provide the Committee with the standards for "moderate living" which have been defined for social and health purposes in federal register?
92. Has the Department acquired the documentation of tribal income (income tax records) in order to apply the moderate living standard?
93. Explain the Buoy 10 ruling and its significance on coastal recreational fisheries.

(ED: And the questions go on, to No. 144. We will publish the more pertinent answers as they become available.)



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Sea Mar's Kodiak store

The largest supply of commercial fishing gear in Kodiak — and run entirely by women.

by Anita Venema

Where is this marine supply company, staffed entirely by women who know the area, the people, the business? In the convenient location directly across from the boat harbor in Kodiak. That's where.

Managed by Geneva Hartman Macinko, born and raised in Kodiak where several generations of her family have pursued careers in the fishing industry, this thriving business stocks the most complete supply of commercial fishing gear in the area. In the three years it has been operating, Kodiak Marine has twice increased in size.

Macinko and her assistant, Debra Davis, listen to the needs of their customers and stock the items desired. Davis and the other employees of Kodiak Marine have commercial fishing experience, which allows them to relate to the needs of their customers.

This northern most branch of Seattle Marine & Fishing Supply maintains stock for longlining, crabbing, trawling, gillnet and seine fishing, and has supplies for the processors including knives, boots, gloves and raingear.

Bob Crump, marine buyer at Sea-Mar, says, "We are continually adding

new items to Kodiak Marine's inventory to meet the demands of the industry. But, on the other hand, the women will go out of their way to get for their customer items that are not normal stock."

In accommodating their customers, Macinko and Davis "wear their Kodiak Marine hats" off hours. Bill Lee, Sea-Mar secretary/treasurer, says, "They maintain traditional office hours but never hesitate to stay open late or open up on Sundays or holidays for a fishing opening. In addition, we feel it is very important to have this operation managed by local residents."

There is no sign of a cracker barrel or pot bellied stove in the store, but the atmosphere is "down home." The women are respected by their customers. Customers help to uncoil rope and carry heavy objects, and will even help longshore when freight arrives from Seattle. There is a "No Puffin" sign posted in the store, and the women have no problem enforcing it.

Crump noted, "We have received letters from Sea-Mar customers who complimented us on the Kodiak operation and hoped we did not mind that they were now going to do business with Kodiak Marine. That's the kind of loss we like to take."



Geneva Hartman Macinko (left) and Debra Davis.

"The future of this largest Alaska port seems bright," commented Lee. "Though it has hit a few low spots in the past, it's a port that had to come back. It has, and it will continue to do so. And we feel that the growth of Kodiak Marine Supply will coincide with the comeback of Kodiak itself."

It would seem apparent that this new operation, though many miles to the north, is following the lead of the parent company, Sea-Mar, whose operating guidelines have always been to offer service and quality products and to listen to the needs of the customer.

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- 500 kw CAT D-398 1200 rpm, radiator cooled, 277/480 V. \$31,000
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- 365 kw CUMMINS KTA 1130, 1800 rpm, 277/480 V, skid mounted radiator cooled. \$18,000
- 275 kw CAT 3408, 1800 rpm 277/480 volt, skid mounted radiator cooled. \$15,500

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South Point coalition formed, claiming, Hood Canal salmon farm would obstruct fishery

by Gina McMath

The South Point Coalition, an alliance of commercial fishermen and Jefferson County property owners, celebrated its first anniversary in October, 1987.

I'm not sure "celebrated" is the right word, however, to describe a year of intense frustration. A grass roots organization of "little guys," we're still battling the corporate aquaculture interests who want to

place a huge salmon pen complex at South Point in the Hood Canal.

The major beef of the gillnetters and purse seiners in the organization is simple — the pens would create a dangerous obstacle that would displace fishing operations in a heavily fished area. At the peak of the fall season, Area 12, just south of the Hood Canal Bridge, has frequently been described by local residents as "a city of boats." The guys on the water are constantly jockeying for room to lay their gear and trying to avoid running over each other's nets. This is where they want to put a fish farm!

The first permit request Olympic Sea Farm, Inc. brought to Jefferson County showed 22 pens, each 49'x49',

to be attached to the old South Point ferry dock, about two miles below the Hood Canal Bridge on the west side. The complex would have extended 700 feet out into the canal.

Frank Fletcher, president of the local PSGA chapter, estimated as many as 30 percent of the customary drift gillnet sets between Hood Canal Bridge and the U.S. Navy installation at Bangor would be obstructed. For seiners it would mean the loss of the customary South Point set.

It never occurred to county officials the proposal might impact fishing operations. The project had already passed through the preliminary hoops in the county permitting process before fishermen even learned about it. (We became aware of the

proposal because something possessed me to read the legal notices in the local paper the week it was to go before the shorelines advisory committee.)

When we did raise our voices, we found we had little effect. County shorelines advisors and the county commissioners had little understanding of fishing operations. Why one spot might be better fishing than another or why we couldn't just "go around it" was a mystery to them. Besides, the local shorelines management plan didn't address the possibility of a conflict with fishing operations — so such a conflict "must be a problem some other agency should deal with."

It was true, the local management plan was no help. It had been adopted when aquaculture was generally meant to mean oyster-growing. The fact that the commissioners' meetings were held on days that conflicted with fishing openings in Area 12 also made it difficult to convey the depth of our concern.

John Pitts, an outspoken proponent of aquaculture, resigned from the county commission only several months previously to accept the post of Director of Aquaculture by appointment from Governor Booth Gardner. His influence on the board was still evident.

The two remaining commissioners approved the Olympic Sea Farm, Inc. permit.

Enter the South Point Coalition!

When the commissioners approved the request, the frustrated opponents of the project milled in the high-ceilinged, Victorian hallways of the Jefferson County courthouse. One indefatigable, middle-aged woman who owned property near South Point, approached one of the fishermen. What could we do now? She wanted to know.

What happened next was the founding of the South Point Coalition and the forging of an alliance between property owners and fishermen. We hired a lawyer, and recruited members. We raised money, and we appealed the county's decision to the state Shorelines Hearings Board.

It was a real grass roots effort. We have no millionaires — at least that we know of — among our members, who can step forward to pick up the tab for legal fees. Often it has been a week-to-week struggle to keep up with the legal bills, telephone and postage. Except for our attorney, all labor is volunteer.

Peter Eglir, an ecology issue lawyer, built our case and detailed our objections. At a pre-hearing conference in December, 1986, both sides laid their cards on the table. The Washington Department of Fisheries and the Department of Ecology joined as appellant-intervenor on the side of the Coalition, although their objections to the proposal did not exactly coincide with ours.

The Department of Natural Resources, who would be leasing state tidelands to Olympic Sea Farm, Inc., took the fish farmers side — as did

Continued on following page

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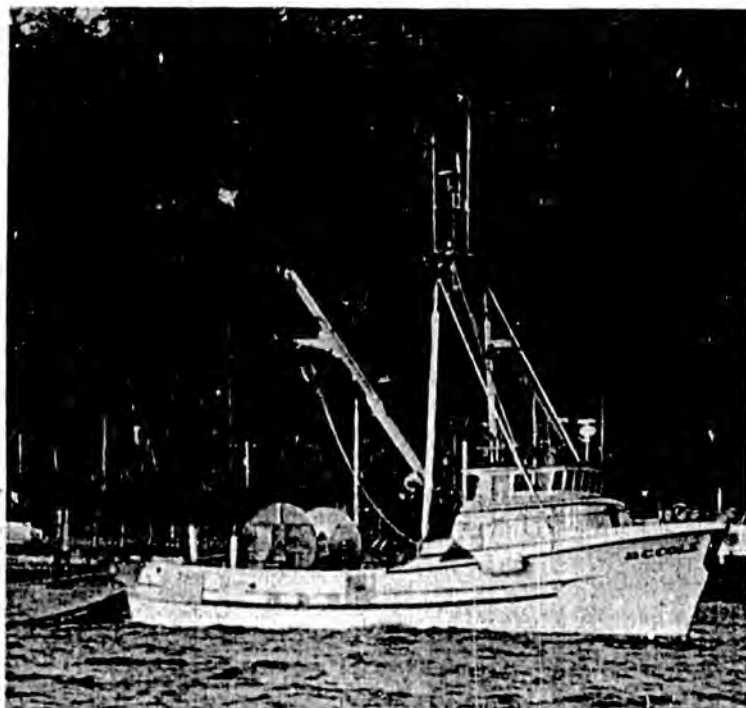
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SETTING OFF SOUTH POINT Ferry Dock, during fall Area 12 opening, Ralph Cole's F/V D.C. COLE, out of Anacortes, Wa. A 20-pen net complex for rearing of Atlantic salmon is proposed by Olympic Sea Farms, Inc., just off the ferry dock. Property owners of the area are joining with commercial fishermen in the South Point Coalition in objecting to the operation.

—Gina McMath photos



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SHORE ATTACHMENT is indicated by arrow, of the 700-foot dock to outermost pen of 20-net pen complex proposed by Olympic Sea Farm, Inc. The proposed salmon farm would stretch out into 80-to 100-foot water from former South Point ferry terminal.

Jefferson County, which had approved the permit.

Each side drew up its list of witnesses who would be called upon to testify and noted the exhibits they planned to present. The Shorelines Hearings Board scheduled a final hearing for June 1988, and estimated it would take at least twelve days for all parties to have their say. The projected expense of such a long hearing was staggering.

Only a matter of weeks before the hearing, the Shorelines Hearings Board considered a pre-hearing motion our attorney had filed. Based on his brief, the board decided that the county had committed a procedural error. The county had failed to notify the affected Indian tribes of this proposed project, as the county is specifically required by law to do. The shorelines hearings board therefore negated the county's permit and cancelled the hearing.

While the appeal was in the works, the Jefferson County Commissioners

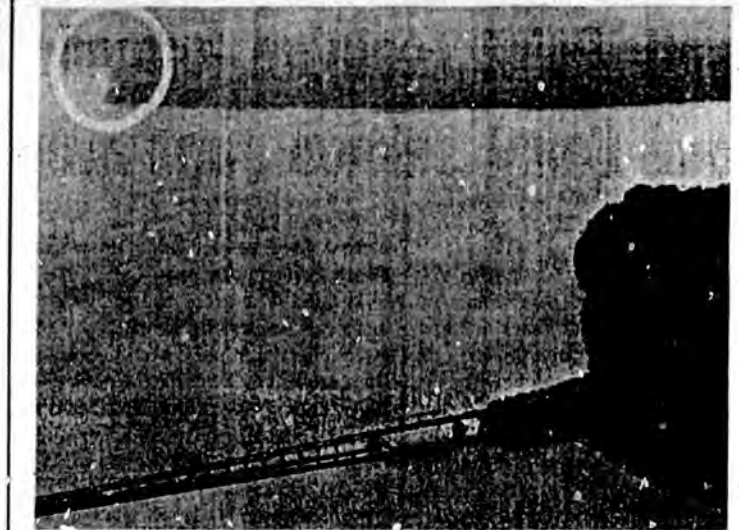
were persuaded to enact a moratorium on fish pens until such time as the county management plan is brought up to date. All new permit applications were put on hold.

Olympic Sea Farm returned with their new proposal (Fall 1987), with an application looking much like their old one. The only significant difference is that the two shoremost pens were eliminated in an attempt to counter the DOE's previous objection that the shoremost pens were sited in water too shallow.

This time, we were ready for them. Their "environmental checklist" submitted with their proposal did not deal adequately with all the probable impacts -- especially the conflict with the pre-existing commercial fishery, we argued.

This time, someone was listening. A new commissioner had taken John Pitts' vacant seat and he has expressed skepticism about unrestricted fish pen development.

The other two commissioners now



CIRCLE THIS. — South Point is the closer, in circled area, about two miles south of the Hood Canal Bridge, which forms the northernmost boundary of Area 12. Olympic Sea Farm, Inc. permit to set up salmon-farming operation just off the former South Point ferry dock was approved by Jefferson County, then held-up, due to combined efforts of commercial fishermen and county property owners.

seem to be convinced that evaluating the conflict with the commercial fishery is part of the county's responsibility. The commissioners wanted Olympic Sea Farm to return with more information about possible impacts the project might have.

At the time of this writing, that is where the project stands. We expect Olympic Sea Farm, Inc., to return before the county commissioners after the first of the year, armed with a fuller defense of the project.

We need to convince the commissioners that our concerns are not only valid but of such magnitude, that the county should require the proponents to prepare an environmental impact study before proceeding further.

That is the step the law requires if the commissioners feel the project would have significant adverse impacts to the environment -- which includes any commercial fishing operations which occur at the site.

Then finally, if we succeed to that point, we need to convince the commissioners that *salmon pens should not be allowed to displace the traditional fishery.*

In the light of the governor's whole-hearted support of any and all aquaculture, it may require courage on the commissioners' parts to arrive at a conclusion that departs from the governor's political agenda.

It appears we may have been the

Continued on page 24

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News from Kodiak

by Mike Rostad



Within a two-week period, residents of Kodiak got unexpected and unwelcome interruptions to their daily routines when the chilling tsunami warning siren wailed through the city. The first warning resounded close to midnight, Nov. 16. It was triggered by a National Warning System announcement that a 6.9 earthquake

had jarred the ocean floor south of Cape Yagataga.

Those in low lying areas were swiftly evacuated to points of safety. Many of the fishermen wiped sleep from their eyes as they went down to the boat harbor to take their boats to high grounds. A little over an hour past the initial warning, the tsunami was "called off."

On Nov. 30, a 7.4 earthquake struck in the same vicinity and once again, the city and borough emergency team mobilized the people. The quake occurred close to noon.

City manager, Sam Gesko told me that at 1:07 the National Warning System had issued an "All

Clear' signal. However, deciding it's better to "err on the side of caution," Gesko did not call off the warning for Kodiak until 1:16 p.m.

Later a fisherman told Gesko that as he was returning to the harbor he noticed a "boiling effect" at the breakwater. Three to five minutes later, the activity occurred again. Apparently this movement was caused by the wave.

Gesko commended the emergency team and the people of Kodiak for their cooperation.

Gibson Cove

In less "earth shaking" news, Gesko reports that the city is preparing a property description of Gibson Cove properties to be advertised for lease. One section includes the ferry, *Kalakala*, the processing plant and the ice house and dock. The other area to be leased is the bunkhouse and surrounding property.

An immediate, temporary option for the four-acre plot that formerly was a crab pot storage area, is for a camp site for summer workers. If this plan is approved, the area would be equipped with showers and restrooms.

The city has been working on an agreement with Kodiak Reduction for operation of the fish reduction

plant at Gibson Cove. Kodiak Reduction, a private firm, has been operating the facility for the past 18 months. Gesko says the city, and the federal and state Commerce Departments which put money into the project, hope to recover those costs.

According to the agreement, which will be signed for a 10-year period, Kodiak Reduction will operate and manage the plant for the city.

North Pacific Council meets

Al Burch of the Alaska Dragger's says that the North Pacific Fisheries Management Council's early December meetings in Anchorage were some of "the toughest set of (NPFMC) meetings" he's ever been to. Al, who is on the Advisory Panel to the Council, represented the minority committee which recommended that 2.5 million metric tons of groundfish be allocated in the Bering Sea/Aleutians, with a large majority going to joint ventures.

The Council voted to cap the total allowable catch at 2 million metric tons, with an initial 792,520 metric tons going to domestic annual processed catch and 908,347 metric tons going to JVs. The TAC for the Gulf of Alaska was set at 260,936 metric tons, with 239,936 going to

Continued on page 26

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South Point coalition

Continued from page 23

first group to raise the issue of site conflicts between aquaculture projects and commercial fisheries. We certainly won't be the last!

In fact, Sea Farms of Norway has just changed their name to Sea Farm Washington and has applied for offshore sites along the Strait of Juan de Fuca.

Another project is proposed for the big it between Hood and Tekiu Points in the Hood Canal in salmon management Area 12B.

Sometimes it seems like we are fighting a series of flash fires and can't stop passing the water buckets to deal with the long term problem.

But there is hope. The SPC has

been providing input into a new, revised county shorelines management plan, which we hope will address the problem of conflict with commercial fisheries, and presents the potential for fish escapement and transmission of disease to wild stocks, along with concerns raised by property owners.

The SPC has joined a collection of other citizen groups around Puget Sound who are trying to get the state legislature to regulate the aquaculture industry more stringently in regard to fish pen culture.

So far, the SPC is the only group among the dozen or so comprising the Marine Environment Consortium

which represents a sizeable number of fishermen.

The MEC this year is supporting a lobbyist in Olympia to counteract the efforts of the heavily financed salmon growers lobby.

With our second year of effort underway, it begins to appear that "we've only just begun..."

(Ed.: Gina McMath is crew on the gillnet boat *F/V Howjan*, and serves as president of the South Point Coalition. She urges fishermen interested in joining or contributing to the SPC, to contact her at (206)385-2602, or write The South Point Coalition, P.O. Box 506, Port Townsend, WA 98368. The SPC is endorsed by the Puget Sound Gillnetters' Association and the Purse Seine Vessel Owners' Association and has members from all over Puget Sound and as far away as Alaska and California.)

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Kvichak 12-hour meeting airs Board of Fisheries proposals

Establishing a super-exclusive Togiak herring fishery and separate seine and gillnet Togiak fishing districts was considered last month by the Kvichak Advisory Council. Its topics were among many proposals made to the Alaska Board of Fish.

A super-exclusive Togiak fishery could reduce total fishing effort there by prohibiting fishermen from fishing a district other than Togiak, if they fished Togiak.

"We're supportive of (separate seine and gillnet) fishing districts," Stosh Anderson, council chairman, said. "But we didn't decide where each gear type should fish."

"We're also supporting a super-exclusive fishery," he said. Similar consensus had been obtained earlier by Dillingham seiners and gillnetters.

The council also sought to revise drift-and-set-net fishing schedules so that openings are based on tide levels, not times.

"We didn't favor high-to-high and low-to-low," Anderson said, with different gear type openings at different times. The council wants openings to start as early as possible on the flood tide.

Other State Board of Fish proposals supported by the council include:

-- Maintaining the 48-hour transfer rule;

-- Changing the south boundary in Egegik to Loran line 130, rather than LC 125 as it was last year, and from LC 130 in to the beach;

-- Having four-day seasons for Egegik and Ugashik before and after the emergency order period;

-- Terminal rather than intercept fisheries and reducing the scope of intercept fisheries on the Alaska Peninsula;

-- On the north peninsula, the council spoke in favor of fishing terminal streams rather than allow fishing along the coast and three miles out between False Pass and Ugashik;

-- Ending the food and bait fishery out of Dutch Harbor, because it was established before herring stock separations were known;

-- Allowing a subsistence halibut fishery in Bristol Bay. No harvest area was defined, the catch would be 10 fish or 1,000 pounds;

-- Closing areas to yellowfin sole draggers when they are picking up early kings and herring;

-- Maintaining the status quo on setnet zones;

-- Reducing sportfishing limits on king salmon throughout the Bay;

-- Legalizing six-filament salmon web beginning in 1989.

Sea Grant schedules two workshops for boaters

Washington Sea Grant Marine Advisory Services has scheduled two workshops for commercial fishermen and recreational boaters in February. A Marine Refrigeration class will be offered on Monday, Tuesday and Wednesday nights, February 8, 9, and 10 from 6:30 p.m. to 9:30 p.m. at the Maritime Training Center of Seattle Central Community College, 4455 Shilshole Ave. N.W. in Ballard. Fee for the workshop is \$10.

A workshop on Loran C will be held on Thursday, February 18, also at the Maritime Training Center. Fee for the workshop is \$5. Preregistration for both workshops is advised because of limited space. Checks for the registration fee(s) should be made payable to the University of Washington and mailed to Sarah Fiskien, Bldg. C-3, Rm. 124, Fishermen's Terminal, Seattle, WA 98119.

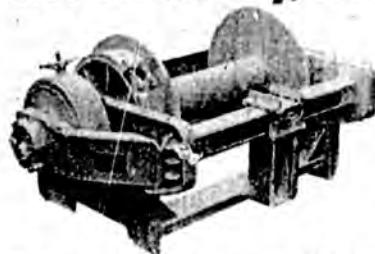
The Marine Refrigeration Workshop will cover components, installation, and troubleshooting of plate systems, blast freezers and chillers. Quality Control on board vessels will also be discussed.

The Loran C workshop will discuss programming way points, errors in readout, differences between Loran C and St/Nav, how to phase in with

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Ed Luttrell heads Petro Marine's Seattle office

by Walt Venema

"Not only am I learning more about fishing, an endeavor I was active in for ten years; I'm having fun learning about the petroleum products industry," said Ed Luttrell, Petro Marine's general manager for the Northwest.

Luttrell, 35, took occupancy of Canal Place Office Park's Suite 308 in the 180 Nickerson Street, Seattle, building in August.

There, he is in a position to be accessible, by phone or in person, to Seattle area clientele in need of Petro's services.

"And these services now call for more than a phone call to Alaska or a chance visit from one of our people up north," said Luttrell. "When we had only one office, that in Seward, there was no need for another down here."

Now, however, Petro Marine functions additionally from Kodiak, Anchorage, Nikiski and Dutch Harbor.

"In Dutch Harbor alone we have three sites," noted Luttrell. "We feel fortunate that one of these is a

distribution point at Offshore Systems in Captain's Bay.

"Offshore Systems, incidentally, provides full logistical support to the fishing industry at this particular facility."

Petro's concept for opening the Seattle office came from the firm's own expansion and growth, plus the fact that so much of the Alaska fleet is based in Washington State.

"Here in Seattle, we can keep a finger on the pulse of the industry and react to our customer's needs. And, of course, a lot of our customers are from this area," Luttrell pointed out. "You might say that customer service and contact are our reasons for having a Seattle office."

Service to and contact with other fuel firms also have places among Petro's priorities.

"We enjoy working with Mason Williams of Chevron's Covich-Williams and with Warren Aakervik of Mobil's Ballard Oil," Luttrell acknowledged. "We can help them; they can help us."

Petro's is also a service that goes beyond the dissemination of

information. It includes planning and coordinating seminars, a need for which came about through questions posed by customers and Petro's resolve to respond to issues of importance to the industry.

"I came to Petro because it stood for quality people and quality organization," said Luttrell. "Also, I had a desire to branch out into something new while still making use of my fisheries background."

Armed with a degree in political science and a graduate degree in business administration, Luttrell entered the fishing industry "right out of school in '77" as a foreman trainee with Pan Alaska.

From there he went to the plant managership aboard the *ROYAL SEA*, then a crab and salmon processor. In all, he spent eight plus years with Pan Alaska, seven of them on factory ships. Before joining Petro, he worked a year and a half with Golden Alaska Seafoods and a "short stint" with Trident Seafoods.

That he's having fun in his new assignment should work to his advantage. That he's able to combine his fisheries background with his business training is another factor in his favor.

And his obvious grasp of Petro Marine's positive approach to competition should hurt him not at all.

Gourock gets nets contract

Gourock has signed a contract to deliver fishing nets to the *F/T Northern Eagle*, owned by Ocean Trawl, Inc. The vessel is 341 feet long, with over 6000 hp from two Bergen Diesel BRM 8 engines. Propulsion system specifications include Ulstien Controllable pitch propellers in Kort nozzles. The *Northern Eagle* is the largest factory trawler in the U.S.

Bottom nets will be 850 M 3-Bridle High lift trawls, for Alaska pollock. The trawls have a footrope length of 207' 8", and achieve mouth openings of 44' high by 82' headline spread at 3.5 knots. This type of trawl is also used by T/T's *Northern Glacier* and *Arctic Trawler*.

A "Short Bridle" semi-pelagic trawl is currently being designed for the *Northern Eagle* by Gourock and is scheduled for tank testing at the new facility in St. John's, Newfoundland in January, 1988.

Captain John Auders travelled to Denmark's North Sea Centre to study the Gourock trawls in the flume tank in November.

The trawling gear is scheduled for delivery in March, 1988.

NEWS FROM KODIAK

Continued from page 24

DAP and 21,000 to JVs.

The Council also elected to eliminate the Dec. 31, 1987, cut-off date. However, what might have appeared to be a victory for limited entry opponents, could conceivably spell their defeat. It is possible that in the future the NPFMC could arbitrarily select a cut-off date that precedes December 1987, and make that date retroactive, just as the state did with limited entry in the salmon fisheries.

The possibility of some other type of limited access in groundfish, halibut and crab, continues to be a going concern among Kodiak fishermen.

Burch president of Foundation

Al Burch, member of numerous fisheries boards and committees and manager of Alaska Druggers based in Kodiak, was elected to the presidency of the Alaska Fisheries Development Foundation, which determines how Saltsonstall-Kennedy funds are expended. The agency focuses on underutilized species, such as flounders. Burch has been a member of the Foundation's board of directors. The next AFDF meeting is to be held in Anchorage during March.

Board of Fish to meet in March

The Alaska State Board of Fisheries, which was scheduled to take up Kodiak, Chignik and other salmon proposals in town early next year, has re-scheduled its meeting to early March in Anchorage. The Board has not acted on Kodiak proposals to changes in fisheries regulations since 1984.

Mike Haggren, Kodiak board member, was found guilty this fall by a jury trial for allegedly fishing within 600 feet of a set net salmon site in Cook Inlet. He was charged to pay a \$4,000 fine. Governor Steve Cowper has called for Haggren's resignation.

Mining Permit granted

The Kodiak Island Borough granted Gary Peterson of Homer a preliminary permit to mine on Tugidak Island, which is part of the Kodiak archipelago. Tugidak has been lauded as a pristine wildlife habitat, which supports a large number of birds and is a nursery and mating grounds for seals.

Peterson's request had been opposed by the Kodiak Audubon Society, fishermen who were concerned that the operation might be harmful to dungeness crab in the area, and other individuals.

According to Kodiak Island Borough mayor, Jerome Selby, Peterson must go through 14 permits before he "turns over his first shovel of dirt on Tugidak."

Johanna Meyburg dies

Johanna Meyburg, owner and manager of Johanna's Travel Service in Kodiak, died suddenly while in Mexico. Johanna was known for her friendly smile, vivacious personality and interest in fishing affairs. She will be sorely missed on the Emerald Isle.

Sea-Land Kodiak christened

The *M/V Sea-Land Kodiak* was christened shortly after its arrival to its namesake's port. The 710-foot container ship was greeted by a display of fireworks set off from Near Island.

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