HB

401

STATE OF ALASKA
House of Representatives
District 27

Representative Cliff Davidson
Chairman
House Resources Committee

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SPONSOR STATEMENT

Representative Cliff Davidson

HOUSE BILL 400 - "An Act relating to loans for the establishment of commercial fisheries development endowments; and providing for an effective date."

HOUSE BILL 401 - "An Act making an appropriation for a loan to the Alaska Fisheries Development Foundation for a commercial fisheries development endowment; and providing for an effective date."

- -

House Bill 400 and House Bill 401 are companion pieces of legislation that would provide a state endowment for the Alaska Fisheries Development Foundation (AFDF).

The endowment -- which will be in the form of a loan, to be repaid in 10 years - will provide AFDF with sufficient income for the next decade to continue with its mission of developing new fisheries and new seafood products in Alaska.

Since its founding in 1978, AFDF has compiled an impressive record of accomplishments, including the development of innovative new onshore processing techniques for surimi, flatfish, and arrowtooth flounder. Through a board of directors made up of experts in harvesting, processing, and product development, AFDF directs its research efforts toward practical projects with applied and direct economic returns. Due to AFDF's pioneering work, surimi production is now a major industry in Alaska.

Along with private memberships, AFDF has operated primarily on federal funds provided by the Saltonstall-Kennedy Act. (Saltonstall-Kennedy funds come from tariffs on imported fish products.) Due to changing federal budget priorities, however, those funds have

diminished and are increasingly unavailable. The very survival of AFDF is at stake today. Without a new source of funding, the Alaskan economy will not continue to enjoy the successes and benefits of an organization with a proven record of accomplishments; one that guides fisheries development projects that benefit all Alaskans.

House Bill 401 is the appropriation bill. Section 1, the Legislative Findings, explains the situation and the purpose of the funding. The $5 million appropriation is a loan that will be repaid in full, though without interest, in ten years. This will enable the legislature to reevaluate its goals for fisheries research and development.

House Bill 400 establishes the program -- the commercial fisheries development endowment loan -- under which the funds will be appropriated. The endowment loan will be administered by the Department of Commerce and Economic Development. The bill contains a sunset provision (Sec. 2) so the program will be automatically removed from the statute books when it is no longer needed.

ALASKA FISHERIES DEVELOPMENT FOUNDATION ENDOWMENT

What Is The Foundation And What Is Its Goal?

* The Alaska Fisheries Development Foundation (AFDF) is a private non-profit corporation formed in 1978 by the Alaska seafood industry to satisfy the research and development needs of Alaska's commercial fishing industry.

* The Foundation acts as a catalyst for all segments of the seafood industry, including the scientific and research communities, to demonstrate new technologies and ideas for the benefit of Alaskan seafood producers, users, consumers and fishery managers.

What Does The Foundation Do?

* AFDF conceptualizes and acquires funding for demonstration projects which allow the Alaskan seafood industry to test and apply new technologies in plants or aboard vessels that expand opportunities, increase yields and make better use of Alaska's fish resources. These are projects that few companies could afford or have the ability to conduct on their own.

* AFDF demonstration projects have helped Alaskan fishermen and processors develop new harvesting and processing techniques, create new markets for seafood products, experiment with new product forms, create economic opportunities for coastal communities, reduce fisheries waste, increase yields and pioneer technologies that return the maximum benefit to Alaskans and the people of the United States.

* In its first 14 years, AFDF brought over $13 million in federal Saltonstall-Kennedy research and development funds to Alaska, and conducted hundreds of successful projects--many of which brought multi-million-dollar benefits to the Alaska seafood industry and to seafood-dependent communities.

What Has AFDF Accomplished?

* In the past, AFDF projects have:
  - Pioneered surimi and pollock production technology on shore in Alaska, resulting in a $500 million/year industry in Alaska;
  - Developed a whole new fishery based on Alaskan flatfish species, a bountiful resource that was not commercially used before AFDF'S project. In the first three years since AFDF's flatfish development project, commercial flatfish fillet production has already brought $12 million/year into Alaska's economy and has not yet realized its full potential;
  - Led ground-breaking research into surimi production from arrowtooth flounder, a development that could lead to a second raw material source for surimi in Alaska;
  - Spearheaded the development of new, profitable uses for

seafood processing byproducts to help seafood producers turn waste into marketable products;

- AFDF demonstration projects have resulted in over 2,000 full-time year-round jobs, which are a permanent addition to the Alaska economy; and
- Identified and realized hundreds of opportunities for fishermen, processors and secondary processors to make fuller use of the protein from Alaska's fish, to reap more long-term, year-round benefits from Alaska's fisheries, and to return more benefits to the state of Alaska and the public.

Why is AFDF Pursuing A State-Funded Endowment?

* AFDF has obtained a vast majority of its project funding from the federal Saltonstall-Kennedy program, which was set-up to fund industry conceived and directed development projects.

* The Saltonstall-Kennedy program, like many federal programs, has suffered considerable funding cuts. These reductions accurately reflect the fully developed status of commercial fisheries opportunities in most of the United States. But, Alaska has only recently begun to develop its commercial fishing resources beyond traditional species such as salmon and crab, and these federal budget reductions are limiting one of the greatest economic development opportunities in the country.

* AFDF is now seeking a fisheries development endowment to ensure that Alaska can continue to reap economic benefit from successful research and development, and to ensure that such development projects remain within the control of Alaskan fishermen and processors, and the citizens of Alaska, and are not controlled by the whims of federal funding and/or national politics.

* Fisheries make up Alaska's second most important private industry, and its largest private employer. AFDF has contributed, directly and indirectly, to the growth, stability and competitiveness of this industry. Alaska cannot afford to allow such an effective force to be lost due to a lack of federal fisheries funding priorities.

Why Doesn't Industry Pay For The Endowment?

* Industry already provides more than $350,000 dollars each year to the operations and projects of the Foundation.

* The Foundation is also soliciting endowment funds from private industry and already has made a deposit to the endowment.

* The benefits of high risk industry research and development accrue to all sectors of Alaska and is therefore an investment within the purview of State expenditures.

FISCAL NOTE

STATE OF ALASKA
1992 LEGISLATIVE SESSION

BILL NO. HB 400

Revision Date: _____ Department Affected: Commerce & Econ. Dev.

Title: An Act relating to Fisheries Development Endowment Loans BRU: Investments

Component: _____

Sponsor: Representative Davidson

Requestor: Labor and Commerce **COMPONENT SERIAL NO.** 0 3 8 4

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 93	FY 94	FY 95	FY 96	FY 97	FY 98
PERSONAL SERVICES						
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE FUND RESOURCE:	0	0	0	0	0	0

FUNDING: (Thousands of Dollars)

GENERAL FUND	0	0	0	0	0	0
FEDERAL FUNDS						
OTHER FUND SOURCE:						
TOTAL						

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

Estimate of current year impact: _____

ANALYSIS (Attach a separate page if necessary.)

HB 400 creates a new loan program for nonprofit corporations that promote the development of commercial fisheries in the state. Companion bill, HB 401, would appropriate $5,000,000 for the purpose of making a loan to Alaska Fisheries Development Foundation. It is anticipated that this is the only loan that would be made in the near future and, thus, no new funds would be needed to implement this bill.

Prepared By: Martin J. Richard, Director Phone: 465-2510

Division: Investments Date: 1/27/92

Approved by Commissioner: Glenn A. Olds Asst. Comm.

Agency: Department of Commerce & Economic Development Date: 1.29.92

Distribution (by preparer): Leg. Fin., Legislative Sponsor, Requestor, OMB/DBR, Gov. Legis. Ofc., and Impacted Agency(ies).

GWH:dg hb400D-1/012492a

Department of Commerce & Economic Development / POSITION PAPER

HB 400 (401): "An Act relating to Fisheries Development Endowment Loans."

HB 400 establishes a new program that allows the department to make loans to establish endowments for support of commercial fisheries development research projects in the state. The loans would be made to nonprofit corporations incorporated for the purpose of promoting the development of commercial fisheries in the state. The loans would be ten-year, zero interest, unsecured loans due in full at maturity. Recipients would be required to provide financial information relating to the endowment and would be subject to audit by the legislative auditor.

HB 401 would appropriate $5,000,000 to the department for the purpose of making a loan under this program to the Alaska Fisheries Development Foundation.

The department is neutral on this legislation.

for H. Hallaway Act. Comm.
Glenn A. Olds, Commissioner

Date: 1-29-92

GAO/GW/dgl1327D-2
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A Proposal
To Establish an Endowment to Perpetuate Industry-Directed Fisheries Development In Alaska

Submitted for Consideration to the
Alaska State Legislature
January 1992

by

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Abstract

The commercial seafood industry of Alaska proposes that the Alaska Legislature establish an endowment for commercial fisheries development in Alaska.

The Alaska Fisheries Development Foundation since 1978 has initiated and led seafood industry development projects that have helped create new fisheries in Alaska, have greatly expanded the state's seafood processing and exporting capacity, and have contributed significantly to Alaska's economic growth and diversification.

Alaska Fisheries development Foundation is the force behind the successful demonstration of large-scale shore-based groundfish processing, the nation's first surimi processing plant, and a full-scale flatfish filleting plant. Over the last 14 years, AFDF has brought nearly one million dollars per year of federal research funds into Alaska.

Now, budget restrictions and priority changes in the federal fisheries industry grants program have caused severe reductions in federal funding for fisheries development projects. These changes have closed at least four of the original seven industry-directed fisheries development foundations in the U.S.

But many of the commercial fisheries of Alaska remain dramatically underdeveloped. It is vitally important that the State of Alaska continue to pursue industry-directed fisheries development research focusing on new species and on new processing technologies. It is also crucial that these development efforts be directed by the seafood industry--and designed with resource concerns in mind--and remain independent of the caprices of the federal budgetary process. An endowment of five million dollars from the State of Alaska to be matched with industry contributions, is proposed as a means to perpetuate the administration and funding of crucial industry-directed seafood research and development in Alaska.

I. AFDF: A proven leader in fisheries development for Alaska

Alaska Fisheries Development Foundation (AFDF) opened in March 1978, after Alaskan fishermen and processors joined together to bring federal fisheries development grants to Alaska and apply them toward needed development projects. The Foundation was formed, along with other regional foundations across the U.S., to bring home research funds from the federal Saltonstall-Kennedy (S-K) program, which was set up by Congress to fund domestic seafood industry research and development activities.

The S-K grants program was created to strengthen the U.S. fishing industry in the face of increasing foreign competition and fluctuating resources. S-K funds come from a portion of tariffs on imported seafood and seafood products. These funds have been made available annually via a nationwide competitive process.

When the S-K program began, members of the Alaska seafood industry collectively decided that, to direct these funds toward projects with the broadest benefit and a realistic chance of success, it would be best to maximize the industry's control of the projects and minimize the government's. The Foundation was organized to represent the industry; its members include harvesters, processors, and support industry representatives. Every year AFDF members and the Board of Directors, with input from all levels of the industry, set the Foundation's priorities and the staff designs project proposals for the S-K funding competition based on these priorities. This combination of strong industry participation and the compelling seafood development opportunities in the North Pacific have produced an outstanding record of accomplishment for AFDF.

II. AFDF's fisheries development approach and accomplishments

Alaska Fisheries Development Foundation's projects, from salt cod to surimi to flatfish filleting to new byproducts processing techniques, laid the groundwork for a good part of Alaska's current groundfish industry. The success of these projects also demonstrates the foresight and efficiency that industry direction provides. The Foundation has pioneered new methods of groundfish processing and harvesting, byproduct utilization, and salmon product development. Nearly all of AFDF's projects have brought significant new opportunities to Alaskan businesses.

AFDF's projects are straightforward and involve private industry to a great degree. Most Foundation projects are technology demonstrations. The most dramatic example of this approach was the Foundation's five-year Surimi Industry Development Project, which began in the early 1980s. Troubled former crab harvesters and struggling shore-based processors began to focus on the bounty of pollock off Alaska's coast, which was not then harvested or processed domestically. Foreign fleets dominated the groundfish fisheries at the time, but much of their finished products--surimi

and pollock fillets--were being marketed successfully in the U.S. and abroad. It was apparent that the Alaska seafood industry was missing out on a huge opportunity, but no information--certainly no assistance--was available to aid the domestic industry in exploring the pollock opportunity. The Foundation stepped in to provide the information, guidance and opportunity for Alaska to prove to world markets that pollock-based surimi could be successfully produced on shore by Alaskan producers. AFDF designed a demonstration project to set up and operate the first U.S. surimi plant, which, after a competitive process, was sited at Alaska Pacific Seafoods in Kodiak. Through our international industry network, we built a surimi processing line and continued to improve it over the course of the project. We even introduced innovations to the Japanese, who invented surimi processing. So much improvement was made that for the first time the Japanese buyers, who previously contended that high-quality surimi could only be produced at sea, admitted that shoreside surimi production in Alaska could indeed be successful.

One of the most crucial elements of the Foundation's work is our production and distributing of usable information that results from our projects. During the surimi project the Alaska Pacific Seafoods plant was open to other processors, buyers and researchers to tour and observe. This gave the whole industry a chance to get first-hand information from the project. The Foundation also produced numerous reports containing hard data on production, yields, quality control, equipment, process improvements, economics and every other aspect related to the processing of surimi. This information was widely applied by the entire industry, and is a prime example of the benefit of the collective ability of the seafood industry when compared to the limited benefits of privately conceived and executed research and development efforts.

AFDF has also conducted other demonstration projects that have resulted in industry innovations now widely accepted. Many of them also have brought widespread benefits to the state of Alaska by improving the industry's year-round stability, employment base, industry profitability and responsible use of fisheries resources. Examples of such projects are:

1. Refrigerated sea water for storing pollock and cod before processing. During the surimi project, studies documented that sea water storage allowed round fish to be held for several days, on board or in the plant, without loss of quality. This knowledge was key to the establishment of the shore-based surimi processing in Alaska, and provided a crucial method to improve product quality and decrease waste.

2. The Baader 182 pollock filleting machine. This then-new technology was demonstrated in a production situation for the first time during the surimi project. Its ability to automatically and quickly handle pollock of varying sizes dramatically enhanced the feasibility of both pollock fillet and surimi production in Alaska. These machines are now used by virtually every pollock producer.

3. Objective surimi quality measurements. The Japanese system of determining surimi quality was based on broad categories such as vessel versus shore-based production and producer experience. AFDF pioneered objective quality and functional measurements that have allowed domestic producers to compete in the worldwide, especially in the large Japanese market.

4. USDA approval for fish in meat products. The microbiology of surimi, data generated in an AFDF study, was documented and incorporated into the first U.S. Department of Agriculture-approved Hazard Analysis and Critical Control Point (HACCP) plan for seafood. This breakthrough resulted in the first USDA-approved processed food product containing a blend of seafood and red meat. The potential of surimi to expand into the processed meat industry represents a tremendous domestic market for Alaska's fish products, especially with the recent focus on reduced fat and cholesterol in the diet. The potential of fish materials to be used in blended meat products represents an unmeasurable opportunity in the future.

5. The first documented demonstration of sole and flounder fillet production in Alaska introduced Alaskan product to a market starving for high-quality product. The Alaska flatfish resource is nearly untouched, and AFDF's project applying North Atlantic proacessing equipment to Alaskan flatfish has focused worldwide attention on Alaska as a source for quality flatfish. Since the start of AFDF's flatfish demonstration project, Alaska has increased flatfish production fourfold.

6. Innovative uses of fish byproducts. AFDF has demonstrated the use of Alaska's first automated, continuous-flow seafood waste hydrolyzer. The hydrolyzed product is already being tested for food for Alaska's salmon hatcheries, food for livestock, and fertilizer/insecticide on tree fruit crops. If fully successful, this process has the potential to greatly reduce processing wastes and increase industry profitability.

7. Conversion of a small salmon vessel to a cod longliner, and production of salt cod at remote sites. Information from this project has been used by many coastal communities to help expand economic development, and has led to the use of many small salmon vessels as longliners.

8. Spearheaded two efforts to find ways to process arrowtooth flounder, a species known for its flesh softening problems. Both efforts are producing positive results, which may lead to successful processing methods. This is especially important when one considers the size of the resource, which is expected to support annual harvests of nearly 500,000 metric tons.

9. Spearheaded demonstration of poultry deboning technology on pink salmon frames. This demonstration produced usable salmon mince from previously discarded frames, a product that is valuable and in high demand. This mincing technology may someday be applied to recover edible protein from the increasing number of spawned-out

carcasses at our private-non-profit hatcheries.

10. Development and testing of a prototype salmon head splitter to recover salmon flesh from the collars usually discarded with the heads. This high quality salmon "chunk" has an immediate application in salmon canning, and perhaps could be developed into a specialty product with a high value similar to halibut cheeks.

These brief project descriptions give just a small idea of the benefits the State of Alaska has received from Foundation activities. The complete chart of projects is considerably longer and can only be fully appreciated after reviewing the more than seventy-five project-related reports the Foundation distributes.

III. Why An Endowment?

The Foundation has been able to accomplish these development projects because of the Saltonstall-Kennedy program and its mandate for industry-directed research and development. Although this program is still in effect, its funding and intent have been severely compromised over the past two to three years.

Because of the considerable stress on the federal budget and the funding of vital programs, the industry-directed portion of the Saltonstall-Kennedy program has been steadily reduced. The funding level in 1992 is only $500,000.00 for the entire country, nearly $7.0 million below the annual average for the last decade. The rest of the S-K funds have been redirected to fund general government operations. From the Alaska seafood industry's perspective, this reduction in Saltonstall-Kennedy funding reflects the fact that in most other areas of the United States the commercial fishing industry is much more developed--in most cases to the point of diminished resources. Our situation in Alaska is considerably different.

With the relatively recent development of most of our fisheries, opportunities, (especially groundfish) and with the rapid changes in established fisheries, (increasing pink salmon supplies and farmed salmon competition) we have before us dramatic opportunities to turn small investments in research and development into large benefits for the commercial fishing industry and the people of Alaska.

As with many other areas of endeavor, Alaska finds itself in a dramatically different stage than the rest of the country when it comes to fisheries developement needs. We cannot afford to lose the opportunities that are now available because of a reduction in the Saltonstall-Kennedy Program. The Alaska Fisheries Development Foundation's Board of Directors has responded to this challenge by initiating an endowment to fund the operations of the organization. This endowment would allow the Foundation to operate independently of the reductions in federal industry grants, and continue to provide the fisheries development breakthroughs that foster

industry success.

The Foundation is pursuing private and public sources of funding for the endowment. The endowment revenues will be applied toward long-term funding of the Foundation so it may continue its integrated, cooperative approach toward fisheries development research. The total amount of funding needed to keep AFDF's efforts going is ten million dollars. Our request for State of Alaska funds is five million dollars. We are seeking matching funds from the food and seafood industry.

This level of endowment funding will allow the Foundation to maintain the optimum organizational structure, and to continue its tradition of gleaning maximum benefits from minimal administrative costs. The return on this investment for the people of Alaska can only be projected based on the past 14 years of accomplishments at the Foundation. These include bringing in more than $13 million in federal grant funds and initiating demonstration projects that have increased Alaska's fisheries wholesale value by at least $240 million annually.

The endowment is a small investment when one considers the benefit it will bring to Alaska.

FISHERIES DEVELOPMENT PROJECTS

OF THE

ALASKA FISHERIES DEVELOPMENT FOUNDATION

1. Analysis of Factors That Affect Groundfish Quality

This project produced the first solid baseline of data on the quality characteristics of Alaska groundfish through the entire year. This information allows processors to structure their production to achieve the highest quality product, and to respond with factual information to speculation about how intrinsic characteristics of Alaskan species compare to North Atlantic species. AFDF worked with International Seafoods of Alaska, National Marine Fisheries Service (NMFS), All Alaskan Seafoods and Oregon State University to analyze groundfish product samples for an entire annual cycle. Samples were analyzed for moisture content, yield, taste acceptability, storage stability, and enzyme activity. The resulting data on quality and flesh characteristics is available in both a poster and a full report.

2. Development of Improved Techniques for Bone and Parasite Removal

In a project involving many shore-based cod processors, the Foundation has been working with the University of Alaska Fishery Industrial Technology Center (FITC) to improve current methods of bone and parasite removal, and to develop new, better methods. First, we studied the use of light filters and how variations in light intensity affect candling efficiency. Other studies involved mechanical vision systems, and may include testing bioelectrical methods as well. The goal is to develop a less labor-intensive, more accurate way to remove fish parasites. This may eventually lead to completely automated parasite detection and removal.

3. Development of Surimi Process Quality Assurance

This project has given surimi producers better quality information and expanded market opportunities. It also helped pave the way for U.S. Department of Agriculture approval for HACCP-produced surimi to be used in processed meats--<u>a first for any seafood product</u>. AFDF, Alaska Pacific Seafoods and the FITC together introduced a cutting-edge Hazard Analysis and Critical Control Point (HACCP) program, a quality assurance technique at the food industry forefront. A complete multi-seasonal microbiological analysis of production samples was done, and critical control points in the surimi process were identified. This effort has resulted in much better quality control. USDA approval for HACCP-produced surimi in processed meats, a direct result of this program, has created a

multi-million-dollar opportunity for surimi producers. We are applying the HACCP concept into other Alaska seafood processing lines so that broader microbiological data will be available to industry. This information will help prepare the Alaska seafood industry for the expected mandatory federal seafood inspection program.

4. Flatfish Processing Line Yield Improvements

During the AFDF flatfish project in 1988, we recognized the need to reduce waste and increase profits by improving yields during processing. This project demonstrated a process that would recover the flesh left on filleted flatfish frames. The process used available technology transferred from the poultry deboning industry to the Alaska seafood industry. Results indicate that we can increase recoveries and returns to processors and fishermen. We are also testing a similar process to increase yields from other groundfish, especially gray cod and pollock.

5. Development and Demonstration of Seafood By-Product Hydrolysis

The Foundation, working with North Pacific Processors and Advanced Hydrolyzing Systems, addressed the crucial question of seafood processing by-product utilization. Conventional meal and oil processing, though effective enough in large plants, offered little opportunity for most of Alaska's smaller or seasonal processors because of high capital costs. We tested a prototype 1,000/lb. per hour automated hydrolyzer machine and produced more than 12,000/lbs. of meal from material that would normally be discarded as waste. The hydrolyzed product was analyzed for use in piglet starter feeds at the University of Alaska Fairbanks, salmon fry feeds at the Fort Richardson State Hatchery, and as foliar feeder/insecticide for commercial fruit trees in Oregon. If successful, this hydrolyzing technology will allow processors to use more of the raw material they buy from harvesters, and to minimize problems with effluent regulations. This project has been continued for one more year to further explore the hydrolyzing options available to Alaska processors and the applications for hydrolyzed products.

6. Coordinate an International Seafood By-Product Conference

The Foundation, together with The University of Alaska Sea Grant Program, Icicle Seafoods, and several other members of the seafood industry hosted this international conference in 1990. The conference featured speakers from major fish by-product producers, researchers and buyers, and attendance topped 200 people from 13 countries. The purpose of the conference was to expose the Alaska industry to the worldwide demand and opportunities for seafood by-products, and to expose the international seafood by-products industry to growing opportunities in Alaska. In the past, dominance of Alaska's industry by salmon and crab producers had led to a widely held belief that Alaska had little to offer in the way of high quality whitefish by-products. The fact that our waste

streams had changed and our by-product handling facilities had been upgraded was not widely known. The conference was very successful in achieving these goals.

7. Testing an Automated Vision-Based Flatfish Sorting System

During our recently completed flatfish production demonstration project, we discovered that one obstacle to profitable flatfish filleting was the sorting problem caused by the large size range of flatfish species. Hand sorting is extremely time consuming and expensive, but is necessary to effectively machine fillet the fish. A prototype vision-based sorting machine from Eastern Canada is being tested at All Alaskan Seafoods for its ability to correctly sort Alaska flatfish species. If the machine is successful, as it is with Atlantic flatfish species, we will have solved a major problem for automated flatfish filleting in Alaska.

8. Developing a Flatfish Gutting Machine

A second obstacle to flatfish industry development the presence of rocks and grit in the gut cavity of Alaska flatfish, which damages the blades of automated filleting equipment. To solve this problem, we have begun to develop a prototype machine that would clean the belly cavity before the fish is filleted. If successful, this machine would increase efficiency, profitability, and feasibility of flatfish processing in Alaska.

9. Researching Feasibility of Producing Arrowtooth Flounder Surimi

Working with the National Marine Fisheries Service (NMFS), Eagle Fisheries, Alaska Draggers Association, Alaska Pacific Seafoods, and All Alaskan Seafoods, the Foundation is attempting to document the feasibility of commercial production of surimi from arrowtooth flounder. Arrowtooth flounder have an intrinsic flesh softening problem that renders them useless for seafood processors. The Gulf of Alaska population is at very high levels, and both harvesters and processors go to considerable trouble to avoid--or, when encountered, discard--this species. Dr. Diana Wasson, a scientist with NMFS, identified an additive which, when applied in the laboratory to arrowtooth flounder flesh, effectively eliminated the flesh softening problem. This incredible breakthrough led to a production test of the additive, which demonstrated successful application. The additive seems to retain its effectiveness through frozen storage. Final results from this project have been released. The next step will be a full-scale demonstration project in 1992 so that the industry will be able to collect the information required to make educated decisions about the feasibility of arrowtooth flounder surimi processing on an industrial scale.

10. Modification of Crab Pots to Harvest Pacific Cod

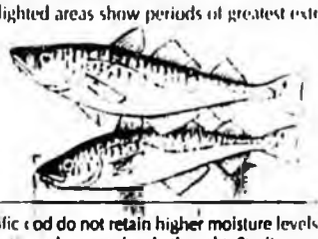
In response to the recent development of modified crab pots for the harvest of gray cod, the Foundation--together with the Alaska Department of Fish and Game, Neptune Trap and Trigger, Gotyas and the M/V Enterprise--completed research into the effectiveness of pot gear in harvesting cod and avoiding halibut. Both processors and harvesters have been hard hit by the closure of groundfish fisheries when halibut limits have been reached. The use of inclusion devices, together with vertical dividers in pot entrances, offers a logical method to continue the harvest of gray cod while eliminating most halibut. This harvesting method could also allow many small crab vessels to enter the groundfish fishery without large capital investments. The field research for this project has been completed and a final report is available. The results give harvesters an objective look at the production possibilities of this new gear type. We are also planning to study various modifications of bottom trawl gear in an effort to identify changes that will reduce trawlers' catches of halibut in 1992.

11. Ongoing Program Development

Each year the Foundation's program development committee, board of directors and staff complete an effort to identify and select projects for funding proposals. This year's effort is just beginning and will be completed in late March. At the present time the following ideas are under consideration: expanded arrowtooth flounder surimi studies, continued trawl bycatch reduction studies, pink salmon surimi, mince and secondary processing studies, squid surimi production demonstration, recovery of proteins from surimi wastewater, continued byproduct processing efforts, a bycatch workshop, and automated removal of cod pin bones.

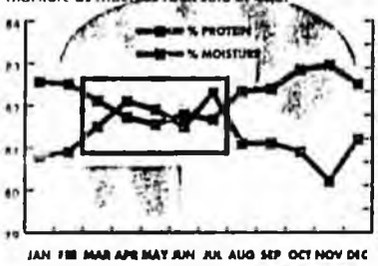
GROUNDFISH QUALITY CHART

What makes a high-quality fish? A year-long study of pollock, cod and rock sole shows how quality factors and conditions change through the seasons. Fish quality is a blend of variables – some are intrinsic and some can be controlled with careful handling and monitoring. Three major quality problems are: driploss, related to moisture; gaping, caused by seasonality and poor handling; and overall desirability. It's helpful for fish buyers, producers and managers to know how and when quality factors change, and what can be done to maximize the quality of Alaska's groundfish. In the graphs below, the highlighted areas show periods of greatest extremes.

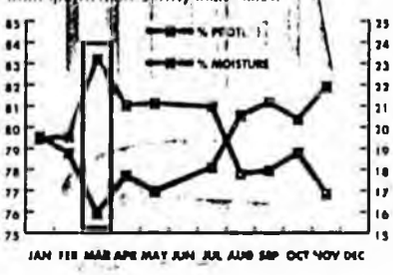


Protein and Moisture

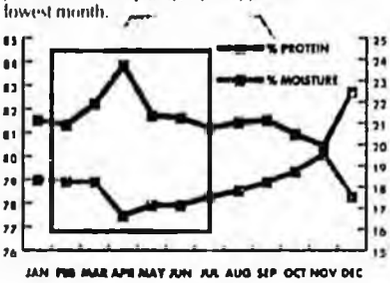
Protein and moisture levels indicate overall quality of the fish. In groundfish, protein and moisture seem to be inversely related. If you measure moisture content, you can accurately predict protein content. Note that pollock doesn't vary in protein and moisture as much as rock sole or cod.



Protein and moisture content vary with the season, particularly with rock sole and cod. Spawning appears to take its greatest toll on rock sole, but its flesh retains more protein during the recovery period than does pollock or cod. Females of all species recover from spawn more slowly than males.

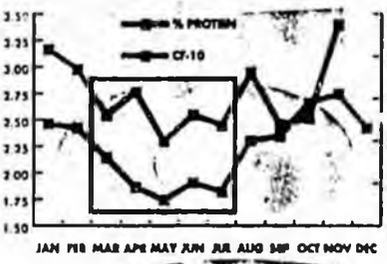


Pacific cod do not retain higher moisture levels than Atlantic cod, as previously thought. Studies reveal Pacific cod recover from spawning and regain their protein levels in mid-May instead of July. For pollock and cod quality, April appears to be the lowest month.

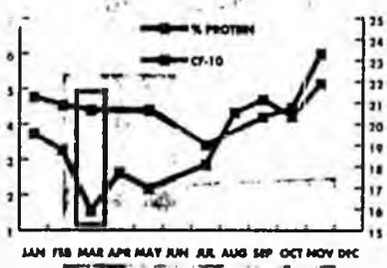


Protein and Condition Factor

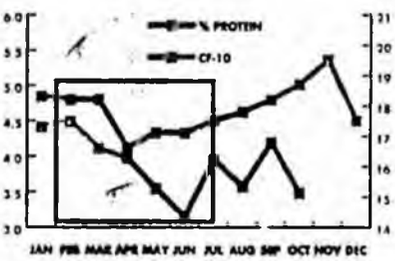
Condition factor is a measure of both health and sexual maturity of the fish. Higher condition factor scores indicate plumpness of fish, reflecting an adequate food supply. Lower scores can mean fish are not feeding, or are using body reserves for gonad production during spawn periods.



Gonad development takes the greatest toll on rock sole, the leanest of these three species. The condition factor correlates with changes in protein/moisture content and roe development.

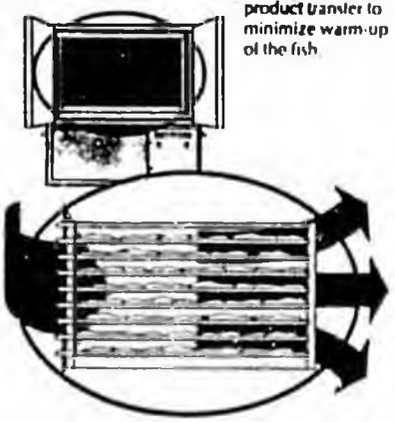


Condition factor of Pacific cod appears at its lowest in June, and recovers slightly more slowly than that of pollock or flatfish. Condition factor improvement seems related to decreases in core temperature through the fall.



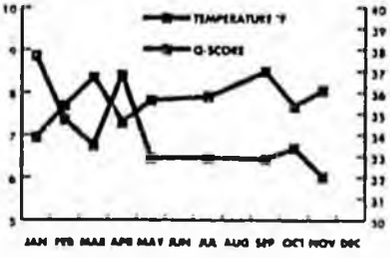
Cold storage is a critical factor in maintaining fish quality. Equipment to measure the efficiency of your freezer system is available and inexpensive. Here are some tips:

- Don't overload the freezer; it causes poor blast and spiral freezer performance.
- Be sure to maintain uniform velocity in your blast freezer, especially if you process a variety of products.
- Move your product into cold storage as quickly after processing as possible. Carefully time your product transfer to minimize warm-up of the fish.

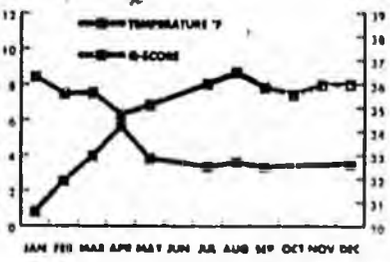


Temperature vs. Q-score for Flatfish and Round Fish

Q-score is a subjective measurement of fish odor, taste, appearance and overall freshness. These graphs, one for flatfish and one for round fish, show how Q-score corresponds with core temperature of the fish at the time of processing.



Temperature strongly affects growth of bacteria and the rate of enzymatic reactions. It takes cold-tolerant bacteria 60 min. to double in population at 68°F; 120 min. at 59°F, 180 min. at 50°F, 360 min. at 40°F and 1200 min. at 32°F.



Graphs reflect samples taken in 1989 and 1990. Year to year variations in the timing of natural events, such as spawning, may cause quality changes to occur somewhat earlier or later than shown above.

The information in this poster was adapted from the Groundfish Quality Project Final Report which is available from AFDF. For more information contact:

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This project was funded by the Department of Commerce, National Marine Fisheries Service, through the Saltonstall-Kennedy [illegible]

the LODESTAR

Charting the course of fisheries development today.

Alaska Fisheries Development Foundation, Inc. Volume VI Number 4, Autumn 1988

Special Issue: AFDF at ten

This special 10th Anniversary Celebration issue of The Lodestar tells the story of Alaska Fisheries Development Foundation.

It recalls the beginnings of AFDF, its first board of directors, its struggle for life, and its first projects. It tells the tale of efforts successful and frustrated, of people coming and people going. Even if The Lodestar were more than eight pages, there would not be enough room to tell all the stories, to introduce all the characters, and to remember all the moments that were turning points in the Foundation's history.

But this is a start. It will help acquaint newcomers to the Foundation and its beginnings. It will stir long-time associates to remember things they might have forgotten. It will possibly encourage more people to join the Foundation and be involved in its projects in the coming ten years.

This issue of The Lodestar not only celebrates the achievements of the Foundation; it also celebrates all the people who have been associated with AFDF through the past decade. There won't be room to mention them all, though their names and efforts are inscribed on the inner halls of the Foundation's collective memory.

And what a collective memory it is. Just for starters, we thank our 1988 board of directors:

President
Al Burch, Alaska Draggers Assoc.

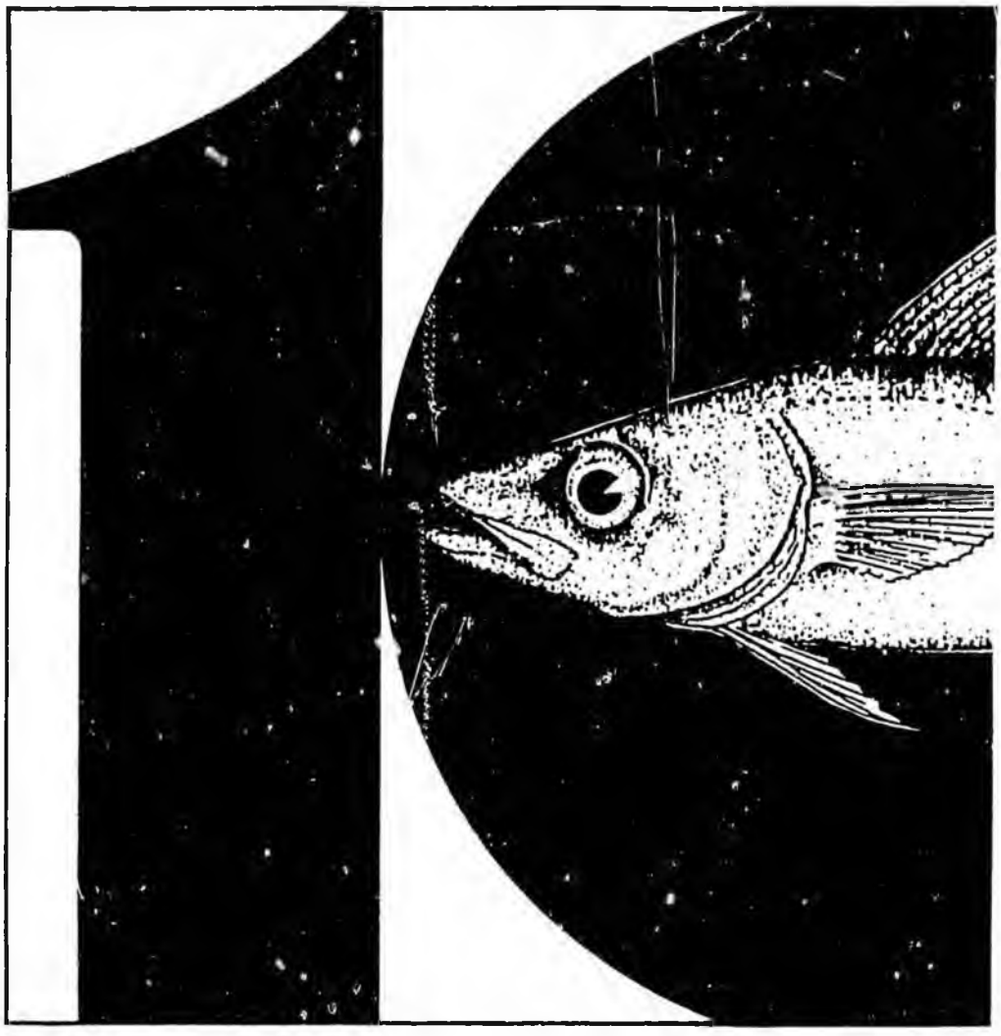
1st Vice President
Steve Smith, Kemp Pacific Fisheries

2nd Vice President
Phil Hanson, UniSea

Secretary/Treasurer
Rod McLachlan, Trident Seafoods

John Sevier, Alaska Pacific Seafoods
Oscar Dyson, All Alaskan Seafoods
Henry Mitchell, Bering Sea Fishermen's Association
Hank Eaton, F/V Skagit Bay
Phillip McCrudden, McCrudden Fishing Ventures
Rae McFarland, McFarland Foods
Gil Gunderson, Northern Fury Seafoods
William Reinke, Van Camp Seafood

In addition to the board of directors, AFDF relies on and gains much from the direction of Carl Rosier, Chief of Industry Services at National Marine Fisheries Service Alaska Region in Juneau.



A Decade of Development

By Krys Holmes

Looking back, the path Alaska Fisheries Development Foundation has taken in the last ten years seems direct, planned, almost inevitable. But from 1978 looking forward, it was a dubious, chaotic, and sometimes staggering path facing the new organization.

Like most things in the fishing business, it all started with a rumor. The way Sara Hemphill tells it, someone heard that National Marine Fisheries Service (NMFS) had got hold of $3 million of federal Saltonstall-Kennedy funds and was going to give part of it to New England Fish Co. (Nefco) for a white fish development project.

"In typical Alaskan style, the fishermen started screaming," Hemphill said. It seemed NMFS wanted to award the contract without bids, and Nefco would get a windfall of public money. NMFS called a meeting in December 1977, but expected only a few people. The room was full.

"What came out of that meeting was a concensus that NMFS couldn't let a $3 million sole source contract, and that we should set up some organization that could funnel the Saltonstall-Kennedy money to the industry," Hemphill said.

Almost twenty months later, the Alaska Fisheries Development Corporation, with $100,000 startup money from the state of Alaska and Sara Hemphill as executive director, embarked on its first white fish development project, a $1.475 million demonstration of the economical and technical feasibility of Alaskan fishing vessels and processing plants going after the foreign-controlled Alaskan white fish industry.

The Saltonstall-Kennedy fund was created by a 1954 act of Congress to devote one-third of all revenues from import tariffs on marine products, including coral, pearls and seafood products, to the U.S. seafood industry. The money was to be used for fisheries development projects, and its application was to be industry-directed.

"That first project had something for everybody," Hemphill said. The project was segmented to include activities from all parts of the state and to include fishing, processing

and marketing. It included shrimp boats, longliners, crew training programs and processing demonstrations. It touched on pollock, cod, sablefish, and black cod.

1978

Alaska Fisheries Development Corporation was formed, the first organization in Alaska to include both fishermen and processors, and to span all industry interests. Ron Jensen was the president of the board of directors. Other board members were: Patrick Pletnikoff, Pete Harris, Connie Taylor, Al Burch, Larry Painter, Jim Ferguson, John Enge Sr., Robert Morgan, and Jim Marr. Hemphill was Acting Executive Director, and was soliciting applications for the permanent post until the board convinced her to stop fooling around and apply for the job herself. She did; she was Executive Director until 1982.

> "After many months of careful planning and preparation, the public trust in fisheries development is now an active, tangible reality."
> —AFDF Bulletin August 1980

Through the first year of AFDC, members were most concerned with increased foreign allocations of bottomfish under the one-year-old 200-mile limit law. A November 10 AFDC newsletter quoted attorney Ed Furia speaking to a U.S. bottomfish workshop: "We found out this morning ... that the State Department is considering increasing the allocation of Alaska bottomfish to Korea and to Poland so that they can sell those bottomfish in the United States....We think this is incredible."

The goal seemed clear to membership: to capture the profitable fishing and processing activity that was then given to foreign companies. The methods seemed less clear. The Alaskan fishing industry was segmented, with many separate groups representing gear types, regions and activities.

The same AFDC newsletter of Nov. 10, 1978 tells a story of two boys trying to balance on railroad tracks. Neither could make it far, until they discover that by holding hands across the expanse they could keep each other balanced. "AFDC symbolizes the hands held across the track," wrote editor Connie Taylor.

1979

After riding a "rollercoaster on the funding issue" through the winter of 1978-79, Sara Hemphill announced in the spring of 1979 that Congress had finally approved $1.445 million, promised the year before. But it would take until September to see the first dollar of S-K money. In the meantime, the board updated its white fish development project proposal, and prepared for some smaller projects.

> "Government must recognize that its agencies are not experts; the expertise resides in the private sector. Government must assist without interfering, challenge without destroying and encourage without building a false foundation."
> –The Lodestar Autumn 1983

In October, bids were solicited for a bottomfish trawler, a shrimp trawler and a longline vessel, and for shore-based or floating processors who would handle the product harvested by the project's boats. It was a small step toward Americanization of Alaska's bottomfish resource.

Also in 1979, the board of directors decided one change had to be made to ensure the organization of its non-profit status, and to underline the philanthropic purpose that characterizes the organization: they changed its name to Alaska Fisheries Development Foundation.

1980

"Working to meet the diverse self-identified needs of the Alaskan industry is a monumental task," wrote Sara Hemphill in February 1980. As a first step, the AFDF board drafted a mission statement, affirming that the Foundation's purpose was "to encourage the full and viable domestic utilization of all Alaskan fisheries consistent with wise resource management and healthy development of Alaska's fishing communities."

By this time AFDF had developed a reputation as the only arena in which fishermen and processors, on-shore and off-shore, Southeast to the Bering Sea, could communicate needs and cooperate in solutions.

AFDF's 1980 projects included helping create a shore-based white fish processing plant, originally sited at Alaska Food Company at Gibson Cove, in Kodiak; and equipping a 124-foot combination crabber/longliner called the *Aleutian Mistress* with a Mustad auto longlining system. Both projects would see plenty of changes before they were finished. The *Aleutian Mistress* was the first of many projects in which Baader North America contributed technology, time and expertise to an AFDF project.

AFDF also arranged to place U.S. observers aboard the German factory trawler *Friedriche Busse* to collect harvesting, processing and economic data. Participants confirmed that the North Pacific bottomfish learning curve was indeed very long, and that the market had no patience for those who were still on it.

Ron Jensen resigned from the board in 1980 and was replaced by Bob Anderson. AFDF hired Sharon Gwinn as assistant executive director; she was with the Foundation until 1985 and returned in 1986 as acting executive director. Betttymae Jones was hired as office manager.

1981

"U.S. development of an Alaska pollock fishery will probably not beviable until we develop successful methods of using minced pollock either as an export commodity or in products acceptable for domestic consumption," said Dick Nelson of NMFS in 1981. His comment solidified ideas AFDF had been tossing around that fisheries development would not depend solely on fishing and processing Alaska's bottomfish, but on developing new, marketable products from Alaska's most abundant raw material.

A huge slate of 17 projects received $1.9 million in S-K funds for fiscal year 1981-82. They included shore-based and at-sea cod, salt cod and pollock processing, demonstrations of longline gear, baiting systems and fishing, a fish waste recovery project, several small fishery studies, a fishing vessel safety project, a study of cold storage and transportation needs in Alaska, and several marketing and informational projects.

In November 1981, AFDF sponsored a conference entitled, "Alaska Pollock: Is it a Red Herring?" The meeting would finally set fire to Alaska's bottomfish development.

The AFDF board of directors in 1981 included Bob Anderson (as president), Al Burch, Jesse Foster, Greg Favretto, John Enge, Hank Eaton, Dan Flynn, Richard Pace, Ken Allread, and Jake Phillips. Charlene Wilson and Michael Broili joined the staff in this year.

1982

Greg Cushing and Bill Woods joined the AFDF board of directors; Sara Hemphill resigned, citing a need for "new blood"—she may have felt she'd already spilled enough of her own—and Christopher K. Mitchell was hired as AFDF's second executive director. In an *Anchorage Times* interview, Hemphill said she favored hiring Mitchell because "he asked harder questions of us than we asked of him."

In 1982 the Model White Fish Processing Demonstration Project was moved from Kodiak to Akutan, on the Aleutian Chain 700 miles west of Anchorage. There Trident Seafoods had built a 100,000 square foot plant dedicated solely to white fish processing. The Trident plant, the first of its kind ever built in Alaska, could handle more fish than Oregon's entire annual harvest. The project would begin with a target production of split, salted Pacific cod in March, and frozen fillets later.

AFDF circulated 400 questionnaires to Alaskan fishermen and processors to help identify future projects that might have a significant impact on the future of Alaska's fisheries economy. The Foundation received 42 project proposals that year.

"Our most important mission," reads a newsletter from early 1982, "is to accelerate the growth and diversification of Alaska's seafood industry." With that goal in mind, the AFDF staff applied another year of S-K funds toward enhancing shore-based white fish processing at Akutan, completing the *Aleutian Mistress* project, demonstrating the quality and preservation of Alaskan groundfish, and exploring the feasibility of several new fisheries targeting on pollock, Atka mackerel, razor clams, sablefish and octopus.

By 1982 it was clear that developing the pollock fishery would depend on developing products to make from pollock—primarily surimi. A May/June AFDF Bulletin brings surimi to the Foundation forefront for the first time. "Seafood Alchemy: Turning croaker into crab legs" reads the headline; the story told of Nichibei Fisheries in Alabama.

the company where AFDF would later find surimi technician Billy Thrash, who aided AFDF in its first tentative months of surimi production.

By 1982 the Foundation staff had increased to include Anita Murphy, Sharon Tyone, Linda Allen and Florence Scott. Late in the year, Ellen Wilson was hired as secretary. And on March 1, a day that will live in infamy for both AFDF and the pyrotechnics industry nationwide, (he once set fire to a stack of old Wall Street Journals on his desk while negotiating fantasy stock deals with Doug Humes) Chris Riley joined the staff as project manager.

1983

Throughout the history of AFDF run several common themes: creating opportunities for fishermen, filling the gaps in U.S. seafood processing technology, and exploring new uses for Alaska's seafood products. But in 1983, under the direction of Chris Mitchell and the nervously supportive eye of Carl Rosier of NMFS, AFDF took a dramatic turn: the Foundation moved away from its "scattershot" projects, planted most of its resources behind one concentrated, multi-year project, and dedicated itself to discovering and developing new methods of producing surimi from Alaska pollock.

"We're looking for a few greedy people," read a brochure AFDF produced that year. To succeed in a risky project like the surimi program—going against the political tides and certainly against the Japanese interests now very powerful in the Alaskan seafood industry—it would be necessary to make sure everyone had something to gain from the project. In 1983, AFDF submitted its surimi project proposal to NMFS, and began to lay groundwork for the project that would put AFDF on the map.

The staff contacted 500 U.S. companies—suppliers of ingredients, equipment, materials and knowledge—and sent out samples of Japanese surimi for product development purposes. Within months, companies across the country were twisting, poking, flavoring, coloring and tasting surimi.

The staff, hoping that at least some of these companies would find surimi profitable, pumped out as many samples and as much information as they could get hold of. And in the interests of better communications, The Lodestar was born.

In December 1983, AFDF selected from among five bidders one plant to conduct its surimi production project. After hours of proposal review, analyses and deliberation, a specially-selected board of advisors awarded the project to Royal Alaskan Seafoods in Dutch Harbor. The plant would be shut down within a year; and the deliberations would have to be repeated the following year. But, Chris Mitchell was quoted as saying, the level of knowledge demonstrated by the companies proposing for the project indicated "a growing strength of knowledge and commitment" to building an Alaskan surimi industry.

In early 1983, Barbara Culver joined the AFDF staff as accountant.

Also in 1983, the Trident Seafoods plant in Akutan—after only one year of operation—burned to the ground.

1984

If 1983 was AFDF's Year of the Pollock, 1984 was the Year for Surimi. AFDF published "Hooked on Surimi," a directory of companies offering services and equipment to the surimi industry. The staff continued to investigate uses for surimi. The Foundation and National Food Processors Assoc. held a surimi conference in Washington, D.C. that drew 200 people and seemed to set fire under each of them.

But primarily, the energy of AFDF and its associated companies was toward building the first commercial surimi plant in Alaska. With Bob Ryan as chief engineer and Billy Thrash as surimi consultant, Royal Alaskan began small-scale surimi production on May 4. The quality was low, but excitement was high. Despite much talk to the contrary, Alaska had proved that it could make good surimi..

That summer, Royal Alaskan was shut down, the surimi project halted, and AFDF issued a second RFP for shore-based surimi production. This time, rather than a pilot-scale plant, AFDF went for full-scale commercial production of surimi. Alaska Pacific Seafoods of Kodiak was the winner this time, and late in the year all the surimi equipment was moved to Kodiak.

1985

"Surimi: It's American Now," announced The Lodestar in January 1985, under an illustration of the Norman Rockwell Thanksgiving table spread with surimi-based products. The illustration has become one of AFDF's trademarks. The message was twofold: Not only was it proven than Americans could make high-quality surimi on shore in Alaska, but the surimi was made with a combination of traditional Japanese and modern American and European technology.

Two hundred people came to "White Gold," a grand opening of the surimi plant, to get their shoes wet and see American surimi made. Once onshore, surimi began to capture the imagination of food executives and technologists. One company experimented with a surimi-based cheese log; another with surimi in cake mix; another with baby food. The potential value of an Alaska pollock industry profiting from waste, mince, meal, oil and surimi was estimated above $6 billion per year.

Knowledge about the pollock market coincided with the opening of the rebuilt Trident Seafoods plant. Owner Chuck Bundrant had turned disaster into an opportunity, and had included in his rebuilt plant design for pollock and cod processing equipment. With the new plant, Bundrant was set up to process 52,000 lbs. of pollock per day, worth over $1 million per month, which at capacity would pay fishermen about $260,000 per month.

In 1985 the pollock biomass seemed unending. Yet it became clear, from a standpoint of economics, efficiency, and resource management, that a successful pollock plant would have to fully use every ounce of protein an Alaska pollock has to offer.

With nearly a million pounds of surimi on their hands, the AFDF staff turned their attention to market development. How to create entirely new marke and uses for a material few knew very much about? A few analog plants were springing up in the Lower 48. AFDF concentrated on working with food developers, those who would create products beyond the imitation seafood market. It was the beginning of an endeavor still continuing, though today the effort centers not only on surimi but on all seafood forms.

1986

A good year for the product development effort for surimi at AFDF. The year dawned with a new line of health food products including a granola bar and a powdered protein drink, all using surimi.. Next, Lynda Nestelle created a moisturizing cream using surimi as the binder. The trend continued with AFDF's first visit to the Western States Meat Association convention, where the little fisheries booth was nearly bowled over by eager meat packers who were either checking out the opportunity or the competition—even they may not have been sure which.

AFDF had achieved three important goals in its surimi project: it had successfully produced surimi in the U.S.; it had proven that existing technology could be improved upon using existing American equipment and techniques; and it had marketed the surimi in the U.S. and Japan.

And so, AFDF began the process of stepping back from the forefront of surimi industry development. By this time there were two other surimi plants on shore in Alaska and several floating processors being built. Work was being done independently of the AFDF project that indicated the surimi industry was on strong footing. It was time to start looking to the future.

In the spring of 1986, Chris Riley left AFDF and the surimi project he had devoted himself to. In the fall, Chris Mitchell resigned to start his own company in Seattle. In September Sharon Gwinn, who had left in 1985 to start a business with Richard Rhoda, returned to fill in as acting executive director.

1987

Ten years after that first December meeting that sowed the seeds that would become AFDF, foreign fishermen harvested Alaskan white fish in U.S. waters for the last time.

The new year brought high prices for U.S. pollock fillets and blocks, and doubled production of surimi for Alaska Pacific Seafoods. The economy of Alaska was deep in a recession but Kodiak boomed from bottomfish activity. AFDF started a project to enhance fish waste processing technology, and focused on gaining USDA approval for surimi as an ingredient in meats.

In March, AFDF published *Surimi: It's American Now*, the first compendium of surimi knowledge in the U.S.

On April 1, Mel Monsen joined the staff as executive director. Soon after, he hired Loretta Lure and Peter Moore, who had been temporary contractors to AFDF during the transitional period.

The effort to move AFDF from its surimi project toward the future began with a flatfish demonstration project, a new seafood product development contest, and a study of pollock liver oil and its potential uses. The Foundation had moved from the uncertainty of its start, through the process of proving itself by aiding different segments of the industry, into a very focused project that was planned to benefit the entire Alaskan seafood industry directly or indirectly—and now began broadening its vision again to encompass the areas that still needed the unique kind of activity only the Foundation can conduct.

1988

In its tenth year, the Alaska Fisheries Development Foundation enjoys the stability that comes with having a history. Not everyone has supported AFDF or its projects, or agrees with the directions it has taken. Many agree the Foundation has been a force of change and growth in the industry; some think it hasn't done enough to benefit small Alaskan operators.

There were a few successes in 1988: Surimi gained approval from the USDA as a processed meats ingredient; The tenth U.S. surimi factory ship has been launched; a salmon chili that resulted from the Foundation's new product contest is entering commercial production; Koriak Reduction, Inc. added a dryer to its meal plant and the flatfish project at Eagle Fisheries is moving piecemeal toward profitability.

AFDF celebrates its tenth anniversary with a taste of uncertainty flavoring the punch. The S-K Program funneled less money to fisheries development projects this year than ever before. Some member companies are beginning to question if the priorities outlined by NMFS speak to the needs of the industry. But a few things are clear: AFDF was set up as a catalyst for public funds directed toward private industry, to benefit the greatest number of people with the smallest amount of bureaucracy. Members agree that, whatever direction the Foundation takes in the future, its role as high-risk catalyst will continue.

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AFDF Publications List 1991

Alaska Fisheries Development Foundation, Inc. 508 West Second Avenue Suite 212, Anchorage, Alaska 99501
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January 23, 1992

Representative David Finkelstein
Alaska State Legislature
Post Office Box V
Juneau, Alaska 99811

Dear Representative Finkelstein,

This is to express strong personal and institutional support for the substance and purpose of House Bill 400 (and related HB 401). The Alaska Fisheries Development Foundation seems to be one of the most highly regarded and widely respected organizations in and around the Alaska seafood industry. Although there has never been occasion for a direct relationship between CFAB and AFDF, we have had many opportunities to observe the relevance of its efforts, the professionalism of its staff and structure, and the broad and positive impacts of its results. We believe it is an effective and efficient organization. Please advise us if there is an opportunity to assist your efforts in connection with this legislation.

Very truly yours,

Edward E. Crane
President

EEC:dmv