Recovery World Leadership in Salmon

A Strategic and Tactical Plan for the State of Alaska

Prepared for
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STATE OF ALASKA

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Foreword

Alaskan salmon continues to lose global market share at an alarming rate. The loss of market share over the past four years has caused serious declines in ex-vessel prices paid to fishermen and wholesale prices paid to processors. Both these declines have caused raw fish and corporate income taxes paid to the state and raw fish and sales taxes paid to municipal governments to decrease substantially.

With record inventories of wild and farmed salmon in Japan and near record projections for Alaskan salmon in 1994, price trends are expected to continue downward and will have a corresponding negative impact on all sectors of the industry.

Because the Alaska seafood industry is the state's largest private employer and the second largest contributor to state revenues after oil, these losses will have an increasingly severe effect on the state's overall economy.

In an effort to follow-up on the recommendations of the Governor's Salmon Strategy Task Force, the Alaska Department of Commerce and Economic Development produced this report to help develop a strategy to revitalize this important industry. This report describes the causes of market share decline and makes recommendations for action that can be taken by the state and the Alaska salmon industry to help reclaim lost market share and foster an environment that encourages expansion into new markets.

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WHAT IS THE ALASKAN SALMON CRISIS?

The Alaskan salmon crisis is a crisis caused by lost market share. In a world where salmon supplies have doubled in the past decade, including an increase in Alaskan production of approximately 30%[1], world consumption has not increased accordingly.

Increasingly, Alaskan salmon has had to compete with farmed salmon which, during the past decade, has expanded its world market share from 3% to 31%. During the same period, Alaska, once the world's largest salmon producer, has seen its share of the world salmon market erode from 43% to 31%.

Losses in major markets are as follows:[2]

MARKET	1985	1992
JAPAN	88%	57%*
EUROPEAN	80%	10%
US	87%	59%

*Through Oct. 1992

Farmed salmon has set the standard for consistency of quality, availability and supply; standards often difficult to match in the short, intense fishing seasons required to harvest wild salmon. Increasingly, farmed salmon is displacing Alaska salmon in the world marketplace.

An inadequate mix of consistent quality, appropriate technology, product options and marketing efforts are the root cause for continuing market decline and price per pound of Alaska salmon.

[1]Alaska Dept. of Fish & Game
[2]Japanese Salmon Market - Alaska Department of Commerce & Economic Development Feb. 1993, Seafood Business Magazine - Sept./Oct. 1993, U.S. Fisheries Review - National Marine Fisheries Service

However by improving quality, technology, marketing and product mix, Alaskan salmon can better hold its own against farmed salmon and be better able to enter new market places where farmed salmon is less able to compete.

Alaska is primarily producing low value forms of salmon, such as headed & gutted whole sockeye, and canned pink salmon. Alaska's highest value salmon crop has long been sockeye, but due to recent international competition, the value of Alaska sockeye salmon has declined sharply. It has been displaced by higher quality Chilean, Canadian, and Norwegian salmon which have gained market share at premium prices. The sockeye situation is worst in Japan, which for a decade has taken almost all of Alaska's sockeyes. The 1993 ex-vessel Bristol Bay sockeye prices were 60¢, compared to an average of 90¢ through the 80s.

Similarly, the average ex-vessel value for Alaska pink salmon throughout the 80's was approximately 40¢.[3] For the past three years, this value has been 15¢, a price at which neither salmon fishermen nor Alaska's ranched salmon producers can survive.

In the past two years, the EEC has moved aggressively to establish quality standards for fresh and frozen salmon that Alaska producers simply are not able to meet with currently utilized harvesting and processing technology.

U.S. retailers and restaurants are less willing today to merchandise wild Alaska salmon for two months of the year, even at lower prices, when they can get fresh farmed salmon twelve months a year, with uniformly guaranteed quality standards, from several nations and suppliers.

From the State's viewpoint, Alaska is facing a continuing decline in salmon ex-vessel and total intrastate value, threatening the economic viability of many of Alaska's coastal towns. The state has a major stake in helping salmon harvesters and processors produce at the new global standards. Providing the salmon industry with the tools to more successfully compete with salmon producers from around the world will have a positive effect on the overall state economy.

[3]R. Van Brocklin - ADF&G

This report makes detailed recommendations for the catalytic role that the State must play in order to rejuvenate an industry that has been Alaska's most valuable fishery for more than 100 years, and to save the State government from the expense of providing ongoing financial aid to its coastal communities and their residents.

The needs for specific legislative assistance in the 1994 session include:

- Market research
- Technology development
- Regional infrastructure support
- Product Development
- Inventory loan program
- Review existing gear and regulations that impede efficiency
- Harvest management
- Ex-vessel pricing stability
- New processing capitalization
- New product marketing assistance
- Program to improve consistency of quality

SITUATION OVERVIEW

Since passage of the 200-mile limit, the Alaska seafood industry has been the world's single largest salmon producer. Through the early 1980s, the Alaska industry consistently harvested more than 40 percent of the world's supply, (see chart below) making Alaska the single most important supplier in the world.

Now, in spite of record wild harvests and successful resource enhancement programs, Alaska's share of world salmon production has declined to approximately 31 percent. During the same period, salmon farming production grew from approximately 2 percent of world production to 31 percent, equaling Alaska's output. Overall, world salmon production has nearly doubled since the early eighties.

WORLD SALMON PRODUCTION (MILLION POUNDS)

YEAR	WORLD	ALASKA	FARMED	AK %	FARMED %
1971	875	139	2	16	--
1976	878	245	4	28	--
1977	1029	307	5	30	1
1978	969	389	8	40	1
1979	1261	442	10	35	1
1980	1242	511	15	41	1
1981	1379	612	26	44	2
1982	1307	562	35	43	3
1983	1595	618	49	31	3
1984	1512	658	74	44	5
1985	1847	668	102	36	6
1986	1653	605	156	37	9
1987	1630	487	210	30	13
1988	1726	525	319	30	18
1989	2287	711	479	31	21
1990	2237	689	621	31	28
1991	2573	726	673	28	26
1992	2199	691	681	31	31

SOURCE: SALMON 2000 YEAR BOOK 1993, ALASKA SEAFOOD MARKETING INSTITUTE

This dramatic growth in salmon supplies has inevitably brought lower prices. In 1991 the ex-vessel value of Alaska salmon plummeted by nearly a quarter billion

dollars to $309 million. In 1992, the harvest value returned to $555 million dollars, only to see the bottom drop out once more in 1993 when a record harvest of more than 790 million pounds netted only $358 million, less than a $28,000 average gross income for Alaska's 13,000 permit holders.[4] Many fishermen reached into already depleted savings, or added additional debt, to cover their losses.

As a result of this decline in value, the State of Alaska lost nearly $6 million in raw fish taxes in the 1993 season alone.

Although Japanese salmon imports rose nearly 38 percent from approximately 110,698 metric tons in 1987 to 152,576 metric tons in 1991, the United States' share of the Japanese salmon import market declined from 85.4 percent to 59.6 percent during the same period. Most of the decline can be attributed to large increases in imports of high-quality Chilean farmed salmon and low-priced Russian salmon.

In 1992, Japanese harvests of ocean-ranched chum salmon exceeded 160,000 metric tons, making the local market largely self-sufficient in this specie. In addition to large salmon harvests at home, the Japanese have invested heavily in Chilean coho and Atlantic farming and, more recently, Russian pink ranching operations in the Kamchatka and Sakhalin areas.

In the mid 1980s, Alaska was by far the leader in the European salmon market with a share of 80 percent. Now, less than a decade later, the industry's share of the European market has dwindled to 10 percent primarily due to its inability to compete (even at sharply lowered prices) with the quality and availability of farmed salmon.

The low prices and oversupply of salmon have fostered the development of a number of new product forms, both finished food products and ingredients for further processing.

[4]ADF&G

Three years ago, Norway's oversupply of Atlantic salmon caused the development of a frozen block export program. This cleared their inventories, but was terminated as not sustainable at competitive fish block prices. As a result of that experiment, it is now clear that North American and European consumers will accept more salmon products, but they must be in forms other than whole, smoked or canned fish, and offered at lower prices than those traditionally obtained for farmed salmon.

U.S. salmon consumption is moving upward. Between 1987 and 1989, U.S. salmon consumption was flat and averaged just under a half pound per capita. In 1990, Americans consumed almost three-quarters of a pound, and by 1992, consumption reached 1.16 pounds.5 Unfortunately, most of this increase is in the fresh market, not an Alaskan strength. To satisfy the demand for fresh seafood, America's imports of fresh, farmed salmon more than tripled from 29,920 million pounds to 94,820 million pounds between 1987 and 1991. At the same time, Alaska's stronghold, the U.S. canned salmon market, remains flat in spite of sharp decreases in sockeye and pink prices.

The growing popularity of salmon in the U.S. has some industry experts predicting that per capita salmon consumption will continue upwards to 1.7 pounds by the year 2000.[6] Whether these increases in consumption will be supplied by Alaskan or foreign sources now depends on the state taking a lead role in stimulating the repositioning of its industry for the salmon markets of the future.

In order for Alaska to participate in further consumption growth around the world, it must move aggressively to provide boneless, skinless salmon meat products to the processed food industries, at values competitive with similar forms of beef, poultry and other seafoods. Customers around the world are ready to utilize high quality, low cost salmon products, provided they are consistently available. There are also significant new product opportunities, and the state must aggressively stimulate development in this area.

[5]Fisheries Statistics of the U.S. - NMFS

[6]Leading U.S. Seafood Species 1990-2000 - Seafood Management Corp.

Right now, Alaska has the fish, but lacks the infrastructure to produce new products at the quality level required for processed foods.

The handling, processing and cold storage infrastructure necessary to produce these products in Alaska must be put into appropriate places in the state quickly, or competitive products from Chile, Russia and Japan will further preempt additional market share around the world.

To develop these new generations of salmon products, the state of Alaska will need to stimulate the private sector to:

- Improve handling and processing technology, machinery and equipment;
- Upgrade proprietary market research and information;
- Upgrade product development through better utilization of food sciences and technology;
- Improve trade and consumer communications for new product introductions;
- Invest the working capital required to keep raw materials on hand in Alaska, and deliver finished products on the customers' schedule, not producers;

The stimulation required should be to provide investment incentives and financial assistance with sufficient force to produce new salmon processing investment on the order of $100 million to $200 million over the next five years.

In addition, the state can play a more direct role in providing:

- Public market information on a full time basis, communicated in
- business language;
- Public cold storage facilities in qualified locations, to be leased to the industry;
- Modification of harvest regulations to take product quality into account on an equal basis with escapement priorities;
- Phased in mandatory quality standards.

MARKET RESEARCH

For all of Alaska's competitors, excluding Chile, the primary markets for salmon are typically in proximity to their producing region (Norway, Scotland and Ireland all target Europe; B.C. farmers focus on the West Coast; etc.). Unfortunately, that is not the case with Alaska, which focuses on the Japanese market along with the Russians, Chileans, and domestic Japanese producers. Alaska needs to evaluate competitive programs and concentrate on building up its market share in the growing U.S. market.

The U.S. is the second largest salmon market in the world, and holds great promise for the Alaska industry. There are no trade barriers, transportation is cheaper, processed salmon products are just beginning to appear, and consumption has been rising for four consecutive years.

To tap into this market, the Alaska salmon industry will need the state to conduct significantly more market research than it has in the past. Economists will be needed to forecast trends, marketers will need to survey demographic groups, and product development specialists will need to discover what the consumer really wants and will buy. All of these experts must be working in concert with one another to optimize Alaska's position in the U.S. market.

Some of the research that will need to be conducted on a regular basis includes:

- consistently survey major retail and foodservice operations as to the types of products needed to increase sales;
- create regional demographic profiles for a variety of salmon products, not just canned;
- track consumption and distribution patterns by product category;
- provide consistent retail and wholesale price information;

- broaden seafood merchandising, and promotional campaigns to maximize effectiveness;
- provide annual market information on the size and scope of the fresh, frozen, smoked, canned and other markets;
- track species, volume and value of imports and supply trends;
- analyze processed beef, pork, poultry and seafood market trends;
- survey consumer attitudes and interest in salmon;
- track competitive marketing expenditures.

IMPROVED PROCESSING TECHNOLOGY AND PROCESSING STANDARDS

The Alaska salmon industry is currently lacking the technology to successfully compete in the future. As major salmon farmers are receiving certification under HACCP, the new EEC Fish Product Directives and ISO 9000 standards (the strictest quality rating in the world which is awarded for "flawless production"), the Alaska salmon industry is still putting fish of inconsistent quality on the market.

To rectify some of the problems the state will need to develop mandatory quality standards that salmon must meet before it can go to market. Some of the standards that should be established are:

- an internationally accepted grading system to be employed for raw and/or headed-and-gutted fish;
- Quality and physical production standards need to be developed and put into place for both fillets and blocks;
- Bring the US GRADE A, HACCP and the EEC's Fish Products Directive standards into usage in Alaska;
- Move away from skin color standards to flesh quality standards, on pinks, chums and sockeyes.

These quality standards will include upgrading the current handling practices of harvesters and primary processors. Currently, refrigerated and unrefrigerated salmon are mixed together on a tender or at a plant, producing inconsistent Alaska salmon that are unable to meet the quality and consistency standards required for the shelf life of a frozen convenience food. Many of the inconsistencies can be alleviated through:

- bleeding the salmon at harvest;
- using non-marring brailers or pumps in transfer;

- requiring delivering of raw salmon either alive or at a maximum core temp of 35 degrees F.

In addition to quality standards, the state can play an essential role in the development of fillet and block product forms by mandating solutions to a number of problems as a condition of financial and marketing support. For example, the Alaska Science and Technology Foundation could solicit proposals that would provide solutions to those impediments. Those technical problems that can be solved early on include:

- color and textural consistency;
- utilization of preservatives;
- mince utilization in blocks.

PIN BONE REMOVAL A CRITICAL FACTOR

The most difficult barrier to the development of new salmon products is the absence of machinery to cost-effectively remove the pin-bones in a salmon fillet. Boneless salmon products are essential for further value-added salmon products .

To correct this problem the state should hold a Research and Development competition, funded at $250,000. In the competition the State would seek proposals for solving the problem of pin bone removal from fillets, and would award the best three proposals $50,000 each to assist in the development of a prototype machine, deliverable before a specified date for evaluation. From these three prototypes, and any others funded at private expense and made available by the deadline, a winner would be selected and awarded $100,000, upon the condition that the machine would be available for the following season.

Establishing a technical competition is a viable way to approach this problem. Using the Alaska Science and Technology Foundation, the Fishery Industrial Technology Center, and an advisory committee of processors already familiar with the problem, would be an effective way to evaluate the proposals .

The primary reason to upgrade the industry's processing technology is to make value added production more cost effective for the industry. Switching production lines over to one-step processing will not only yield savings in labor, energy and operating costs, but will also produce a higher quality product. Outdated two step processing wherein the salmon is headed and gutted, eggs removed, and frozen in one step, then thawed, filleted and frozen in another, must be replaced by in line high speed filleting, skinning and deboning equipment.

In order to optimize the quality, value and production cost of eggs, fillets, and byproducts, it is necessary to receive delivery of pre-rigor or immediately post-rigor salmon at the filleting lines. Salmon for blocks must be processed post-rigor To accomplish these objectives it is essential to have the industry's primary processing capabilities as close to the harvesting areas as possible, and to minimize the time between harvest and butchering.

In addition to conventional harvests, there are significant amounts of terminal harvest pink and chum salmon, that might be utilized in further processed products. The state needs to find ways to bring these salmon into the processing mainstream and include these fish in new strategies for value added products.

HARVEST MANAGEMENT CHANGES

The state could make harvest management changes to improve the quality and value of its salmon.

One change would be to give the Department of Fish and Game and the Board of Fish a mandate to manage salmon harvests giving an equal priority to quality and the health of fish stocks. This would have a positive effect on salmon value by:

- holding shorter, more frequent openings;
- managing escapement throughout the run, rather than as a precondition to harvest.

Another area for change are the existing regulations on vessel length and fishing gear, wish should be the subject of a separate analysis and public report.

PRICE STABILIZATION

Price stabilization is another key component in developing a broader market for Alaska salmon. In a recent survey of the top 100 restaurant companies, the survey respondents indicated that a large impediment to selling more salmon is inconsistent price. In a similar survey of the top 100 supermarkets, the respondents also indicated that price was their biggest impediment to sales.

Food processors and retailers cannot manage their costs when fish prices yo-yo up and down within a week or a month, and are highly aggravated by the fish industry's price gyrations. In an effort to reduce this problem, the state should provide the salmon industry with an anti-trust exemption which would enable processors and fishermen to engage in public discussions of price that would promote the stabilization the food industry needs .

The withdrawal of Hormel from canned salmon, and the first appearance of Chilean cohos in Japan were both due to record high Alaskan salmon prices in 1988. Processors and harvesters must understand that building Alaska's market share requires consistent pricing over an extended number of years.

UPGRADED INFRASTRUCTURE FOR FURTHER PROCESSING SALMON

While international markets heretofore not available to Alaska pinks and chums are now eager for intermediate products such as blocks, shatter packs, and other easily reprocessed forms, these products must be able to compete as ingredients with poultry, pork, beef and other seafood products.

Since the world food marketplace will not pay for production inefficiency, new levels of efficiency and productivity must be attained to streamline overall Alaska salmon costs at every possible point. Operating and corporate overheads on each processing step for the same fish are no longer sustainable. Alliances, joint ventures, vertical integration and efficiency oriented management are required.

Optimizing the quality of salmon requires fast chilling. Refrigeration should be encouraged at every level of the industry. Once through primary processing, the salmon should be frozen as quickly as possible to a core temperature of -10 degrees F and stored at -30 degrees F.

Deployment of cold storage facilities in key locations around the state is vital to the development of value added seafood processing in Alaska. The development of these facilities for salmon, will also stimulate secondary processing for other species of seafood indigenous to each location. Such an installation in Sitka recently has proven successful and is being expanded.

The state, through AIDEA, could establish cold storage in at least two primary salmon producing regions, along with space for further processing of frozen blocks and fillets. The facilities must have the capability to store not less than 6 million pounds. They can be leased to Boroughs and/or private industry.

ON BOARD REFRIGERATION MANDATED

To preserve quality, fish must be iced immediately upon harvest. FITC could assist in testing and evaluating equipment for making or distributing saltwater ice, and AIDEA could enhance credit for loans to establish this capability aboard all salmon permit holding boats.

In addition to long-term cold storage and post harvest chilling equipment, the state needs to encourage the development of at least two primary processing lines in strategic locations. These lines should be able to convert at least 300,000 round pounds of salmon per day into fillet blocks, IQF or shatterpack fillets, and/or finished products. Equipment should work for chum, pink or sockeyes.

PRIVATE SECTOR INVESTMENT INCENTIVES

In order to stimulate the investments required to manufacture value added salmon in Alaska, a very aggressive investment incentive program should be enacted immediately, and expanded as markets expand.

Alaska's salmon producing communities are faced with greater competitive challenge than ever before, but also a greater opportunity to produce more valuable product forms than ever before. The state's challenge is to make the transition happen before more market is lost to others and salmon producing communities become welfare cost centers for the state, instead of revenue producers.

To accomplish this task, the state will need to solicit private sector proposals from a list of eligible salmon producing regions, for the creation of both fillet processing and cold storage capacity within that region. Any facility under proposal must have the minimum capabilities stated above.

Any proposals submitted for consideration should be accompanied by the following information:

- a full and complete business plan for the enterprise in a form satisfactory for direct comparison between proposals;
- firm commitments from buyers outside Alaska to purchase at least 75 percent of the projected production, including prices, terms and all specifications for at least the first year;
- a commitment letter for participation from the municipality involved;
- commitments from fishermen, processors and any others within the region involved with the project;
- a commitment letter for all equity capital required by the project, subject to the incentives outlined below being made available,

- the commitment of at least one person from outside the company and the region to serve as an advisor, whose business and seafood industry experience, references and credentials are sufficient to establish expert status,

The two best proposals, as determined by an independent review committee appointed by the Commerce Department Commissioner, would receive the benefit of a special assistance program from the state, similar in affect to the CDQ program now in place in groundfish communities including but not limited to:

- AIDEA loan guarantees for 80 percent of the total project value;

- ASFT or BIDCO subordinated long-term accruing loans for 10 percent of the project value. Each project would receive credits against the subordinated loan, based on the employment value and tax revenues added to the region by the project, so that these loans would diminish and finally be extinguished as the new values grow;

- AIDEA or other asset based working capital loans, to support the manufacturing cost (raw materials inventory, work in progress and finished goods inventory) of the products up to 85 percent of the projected selling value for each year;

- In order to raise the remaining equity required for new projects, the state would offer direct and transferable state income and business tax credits, amounting to 50 percent of the investor's total investment, usable for not more than 10 percent of that investment annually, or more than 50 percent of the investor's annual tax liability. This would be matched by similar credits from the municipality involved in the project, so as to provide complete loss protection to the equity investor. These credits should attract new partners to Alaska's salmon industry, and increase the project's chances for success.

PRODUCT DEVELOPMENT

Beyond the increased value of primary processing through technological upgrades, there are a host of further processed products that might be economically produced in Alaska. This activity requires that primary processed product remain in Alaska, creating a need for new working capital to hold these products, and substantial additions to the State's cold storage capacities. Some of the new salmon products that might hold promise for the industry, and can be competitively manufactured in Alaska, include:

- chowder
- nuggets
- burgers
- fillets
- blocks
- Smoked, sliced fillets
- sausages
- marinated loins
- boneless steaks
- lunch and salad meats

All of these products need development to a quality level high enough to compete in international frozen food markets.

At this time, there are projects related to product development underway at AFDF, FITC, ASMI, and PWSAC.

The Alaska Fisheries Development Foundation is developing block specifications in accordance with food industry recommendations.

The Fisheries Industrial Technology Center is experimenting with minced and fillet mixed block forms and will be able to provide guidance to the industry on optimum specifications for this form.

The Alaska Seafood Marketing Institute has contracted with FITC to develop products using late harvest salmon. Once completed the prototypes and formulations will be made available for any interested companies. Prince William Sound Aquaculture Corporation has undertaken a product and market demonstration project, based on its ranched pink salmon

Although these projects are important to the development of a secondary processing industry in Alaska, much more work will need to be done. What is needed to get a full program of this nature underway is funding. A salmon product development endowment large enough to provide $3 to 5 million in income annually to fund new product and industry development may be the answer. The program could be managed by the applicable state agencies (e.g. AFDF, ASMI, DCED, FITC, etc.) who must work on parts of the problem as a team, not as competitors. State funding for such an endowment should be matched or replaced with industry funds after a ten year period.

MARKETING NEW ALASKA SALMON PRODUCTS AROUND THE WORLD

Special assistance for the manufacturers of new salmon products in Alaska, and for initial marketing of these foods in the U.S., should accelerate overall economic development from value added salmon. If the product can meet the criteria outlined for production proposals, its fixed asset requirements can be included in those proposals. The final program through which the state can stimulate the "new" salmon industry provides marketing assistance to Alaska food product manufacturers who are undertaking a new marketing effort to US foodservice and retail outlets.

Approximately eight out of ten new products fail, seven of them within the first year of introduction. Most failures occur from inadequate or incorrect market analysis and inadequate capital to successfully launch the project.

In order to assist the industry in marketing new products once they have been developed, the state will need to create a loan program that enables processors to more effectively market the new products. The loans should be a low-interest, medium-term matching loan which could be administered through the Division of Investments.

If the subjects qualify for marketing assistance, the state would match the producer's marketing expenditures, up to $200,000 annually, for the first three years of the product's life.

Projects seeking to qualify for marketing loans should include a number of items necessary to evaluate the potential success of the project. Some of the minimum qualifications for consideration are:

- a list of all raw materials required to manufacture the product, by value and origin. Priority should be given to those proposals utilizing raw materials from Alaska;

- an independent study of the market for the product;

- an analysis of the value to be added in Alaska by the product, per pound and for projected volumes, in comparison to the ex-vessel value for the same species, size and quality grade;
- production capabilities and value of the equipment required to manufacture the product;
- labor utilization;
- environmental impact of product packaging;
- Sales and distribution plan with cost estimates;
- other assets or support required for manufacture;
- purchasing commitments from customers.

The state will need to appoint an expert committee to evaluate the proposals for marketing assistance. Included in this group should be representatives of Alaska's supermarket and foodservice industries.

In determining the viability of a proposal, the committee must be satisfied that every reasonable attempt to reduce the risk of failure has been taken, that the product has a good chance to succeed in its target markets, and that the long-term potential value to the state is sufficient to justify the risk of marketing assistance.

A well managed program of this nature can make a tremendous difference in the industry's future. Additional salmon products can be developed that will, taken together, provide new economic value to the state, comparable to Alaska's salmon canning industry.

PROGRAM MANAGEMENT

A comprehensive program such as this needs full time guidance, and someone to keep it on track. This should come from the State Commerce Department, because of the stake that the State has in this program's outcome.

A skilled and experienced manager is needed to coordinate this program's activities at Sea Grant University, FITC, ASMI, AIDEA, AFDF, the Investment Divisions of the Commerce Department, external agencies, such as NMFS, USDA, NIH, SBA, DOD and the entire private sector.

LEGISLATIVE ISSUES RAISED BY INDUSTRY GROUPS

Mandatory Quality Standards and/or Handling Practices

Without improved quality and product consistency, Alaska salmon is ill-suited to compete with farmed salmon on the whole fish market and unable to meet the quality and consistency standards required for long shelf-life as convenience-form frozen food products.

Mechanical Pin Bone Removal

The state should immediately authorize a $250,000 technology competition for construction of machinery capable of removing pin bones from at least 100 pink or 30 chum and sockeye salmon per minute. Without this needed technology, the salmon industry is unable to cost-effectively produce boneless salmon products necessary for improved market share for salmon consumption.

Statutory Authority to Manage Fisheries for Quality and Market Conditions

When it does not negatively impact the health of fish stocks, the Alaska Department of Fish and Game and the Board of Fish should be authorized to manage fisheries in a way to maximize their value. The timing of openings often determines whether bright or water marked fish are delivered. Holding shorter more frequent openings would increase salmon quality significantly. Vessel length and gear restrictions also have detrimental affects on quality. Escapement should be accomplished throughout the run, not prior to harvest.

Anti-Trust Exemption

This was recommended by the Attorney General's office in its report on Bristol Bay Salmon Price Fixing. This would enable fishermen and processors to engage in public discussions that would promote the price stabilization required by food manufacturers.

Raw Fish Tax Credit and Corporate Income Tax Credit Transfer Program

This program is designed to assist the industry in purchasing equipment that would increase the value of the fish. secondary processing equipment, increased ice production and cold storage capacity.

Inventory Loan Program

Short-term financing guaranteed by AIDEA that would allow processors to secure commercial bank loans or lines of credit that would enable them to hold onto inventories long enough to add value to the product. Each extension of credit would have to be paid back by in full annually before a new line of credit could be issued.

Funding of a Seafood Product Development Endowment

A $50 million endowment whose income would fund essential product development projects could be managed by the Alaska Fisheries Development Foundation in concert with the Fisheries Industrial Technology Center, the Alaska Seafood Marketing Institute and other appropriate agencies or programs. State funding of the endowment would be replaced or matched with industry funds after a ten-year period.

Marketing Matching Loan Program

A low-interest, medium term matching loan program administered by the Division of Investments that will enable processors to more effectively market new branded salmon products.

CONCLUSION

Nothing less than a comprehensive program undertaken by the state will produce a renaissance or prevent further failure of Alaska's salmon industry. Action by the legislature in the 1994 session is of critical importance to the state.