FRED Special Report

Alaska Department of Fish & Game
Division of Fisheries Rehabilitation,
Enhancement and Development

FRED
1988 REPORT TO THE ALASKA STATE LEGISLATURE ON THE FUNDING OF THE FISHERY ENHANCEMENT PROGRAM

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FRED 1988 REPORT TO THE ALASKA STATE LEGISLATURE ON THE FUNDING OF THE FISHERY ENHANCEMENT PROGRAM

ABSTRACT *(100 words maximum)*

This report has offered an overview of the legislative intent, stated in the FY 88 FRED Division budget, along with the results of the intent assignments. Solutions to the main task and analysis and implementation of innovative funding techniques have been included in the Results section of this report. The major conclusions include the following:

The present and projected fish catches, as well as the net benefits and impacts of the statewide fishery enhancement program, are very large. The program is ultimately projected to generate benefits of $90.0 million for the commercial fishery portion of the program. This results in an overall benefit-cost ratio of 1.4:1.

The FY 89 budget as proposed by FRED Division would generate approximately $35 million in personal resident income to Alaskans and 1,040 jobs. The analysis of the private nonprofit (PNP) enhancement program impacts project approximately $40 million in personal income and 1,100 resident Alaskan jobs. This personal income and employment is distributed into many sectors of the Alaska economy.

There was a clear consensus among fishermen user groups and in the Enhancement Funding Work Group that the FRED Division should receive full funding for hatcheries from the general fund as a first priority. A key issue in the funding discussions was whether primary users should pay a greater share of fishery enhancement than they do now. It is up to the Legislature to decide whether it wishes to continue to allow the benefits of the enhancement program to accrue to fishermen, or to encourage a greater user participation in the funding and decision making of state-sponsored enhancement.

Finally, FRED Division believes this report should not be the end point for the funding investigation process. The division intends to continue the work group effort in designing longer term solutions.

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- [X] NARRATIVE
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INTRODUCTION

At the end of the 1987 Alaska legislative session, lawmakers and fishermen became aware that the budget allocation for the Alaska Department of Fish and Game (ADF&G), Fisheries Rehabilitation, Enhancement and Development (FRED) Division would reduce funding for public hatcheries and cause the closure or "mothballing" of several others. To avoid the considerable economic dislocation that would result from such a major reduction in the ocean-ranching program, emergency-funding mechanisms were explored through a cooperative effort between the Legislature, FRED Division, and the private nonprofit (PNP) operators.

Further appropriations from the general fund were secured by the Legislature to operate some of the hatcheries scheduled for closure; however, FRED and the PNPs were encouraged to explore cooperative agreements that would provide supplemental funding for hatcheries lacking full general fund support. Because of this public-private aquaculture sector cooperation, all state hatcheries continued to operate for the short-term (FY 88) and a foundation was established for continuing the Alaska salmon enhancement program. The Legislature expressed its approval of this partnership and proposed eight intent statements:

> 1. It is the intent of the Legislature that the Fisheries Rehabilitation, Enhancement and Development Division, using up to $150,000 in interagency receipts, will work with the Department of Corrections to develop a correctional industries program at division hatcheries. The division shall enter into a cooperative agreement with correctional industries for the use of inmates for on site non-skilled labor and for the processing of non-saleable excess fish for animal food and industrial products. A report on this program shall be submitted to the Legislature on the tenth day of the 1988 session.
>
> 2. It is the intent of the Legislature that the department, the Governor's Office, the aquaculture associations, the public, and fishermen's groups meet to develop innovative policies for the generation of revenues to offset the decreasing availability of General Funds. The department shall report its recommendations to the Legislature by the tenth (10) day of the 1988 session.
>
> 3. The budgeted Hidden Falls net barrier contract reimbursement fees are intended for use at the Hidden Falls Hatchery.
>
> 4. It is the intent of the Legislature that the division will work with the Department of Commerce, Division of Tourism, to promote tours of FRED Division

hatcheries, and that fees will be charged for such tours.

5. It is the intent of the Legislature that the program receipts required of the department shall include but not be limited to funds derived from the following sources: egg sales, hatchery tours, rent receipts and rainbow trout fingerling sales. The department shall work to develop and expand these revenue-producing activities.

6. It is the intent of the Legislature that the division enter into agreements with Cook Inlet Aquaculture Association, the Prince William Sound Aquaculture Corporation, and the Kodiak Regional Aquaculture Association to provide assistance in the operation of Tutka, Cannery Creek, and Kitoi Bay Hatcheries, respectively, on a cooperative basis. A report of this effort will be provided to the Legislature by the tenth day of the 1988 session.

7. It is the intent of the Legislature that the revenue producing activities ongoing at Tutka, Kitoi, and Cannery Creek will be evaluated as models for additional revenue generating activities with the intent of maintaining the state's continuing ownership, management and operation of FRED Division hatcheries. A report will be submitted to the Legislature by the tenth day of the 1988 session.

8. It is the intent of the Legislature that the division will increase its activities associated with maintenance of natural fish runs and will work with the Sport Fish, Commercial Fish, and Habitat Divisions to identify needs and develop projects.

This report is based on the following interpretations of the intent statements; however, the interpretations do not necessarily conform to their numerical sequence.

1. Form a more efficient statewide ocean-ranching program by sharing existing resources and functions with private non-profit agencies that will make the best use of limited investment resources;

2. Explore and evaluate the resources and potential of the state and PNP aquaculture programs;

3. Explore financing mechanisms for the FRED program that involve the users who are the primary beneficiaries of enhancement in the funding of worthwhile enhancement activities, now mostly supported by the general fund;

4. Develop mutually beneficial, programmatic, and economic arrangements between FRED Division and other agencies, within and outside ADF&G involved in ocean ranching and fishery development;

5. Where possible and over time, reduce the proportion of general fund expenditures into the program, but not at the expense of salmon harvests or the economic benefits of the program;

6. Ensure that program receipts generated by cooperative efforts at state agencies be directed towards maintenance or enhancement efforts of those facilities;

7. Maintain the economic net benefits of the existing enhancement programs by ensuring the continued existence of an effective and viable hatchery system owned and managed by the state; and

8. Expand the scope of cooperation between FRED Division and other ADF&G divisions in enhancing, rehabilitating, and developing new salmon runs.

The cooperative efforts of the Legislature, FRED Division, and PNP sectors have resulted in a commitment to maintain and maximize both public and private aquaculture in Alaska. To comprehend the full value of the aquaculture program to the Alaska economy, an understanding of the background and current status of the program is imperative.

THE BIOLOGICAL RATIONALE FOR OCEAN RANCHING IN ALASKA

Since the early 1900s, the dependence of salmon on favorable environmental conditions has led to dramatic fluctuations in fishing harvests that have produced an economically unstable fishing industry. The bust portion of the "boom-and-bust" cycle that has brought total salmon harvests to less than 30 million fish could be repeated in the future (Figure 1).

The FRED Division was formed in 1971 to carry out a program for improving opportunities for people involved in the salmon fishing industry. In 1974 the PNP hatchery program was created by the Legislature, allowing fishing groups and regional aquaculture associations to participate in ocean salmon ranching. Moreover, from 1974 to 1980, Alaska voters overwhelmingly passed general obligation bonds totaling $63.4 million to fund construction and operation of FRED enhancement facilities.

Spawning and rearing habitat are subject to significant environmental fluctuations (e.g., floods, droughts, lethal temperatures, and water diversions) that negatively impact salmon survivals. The FRED and PNP programs were started because there

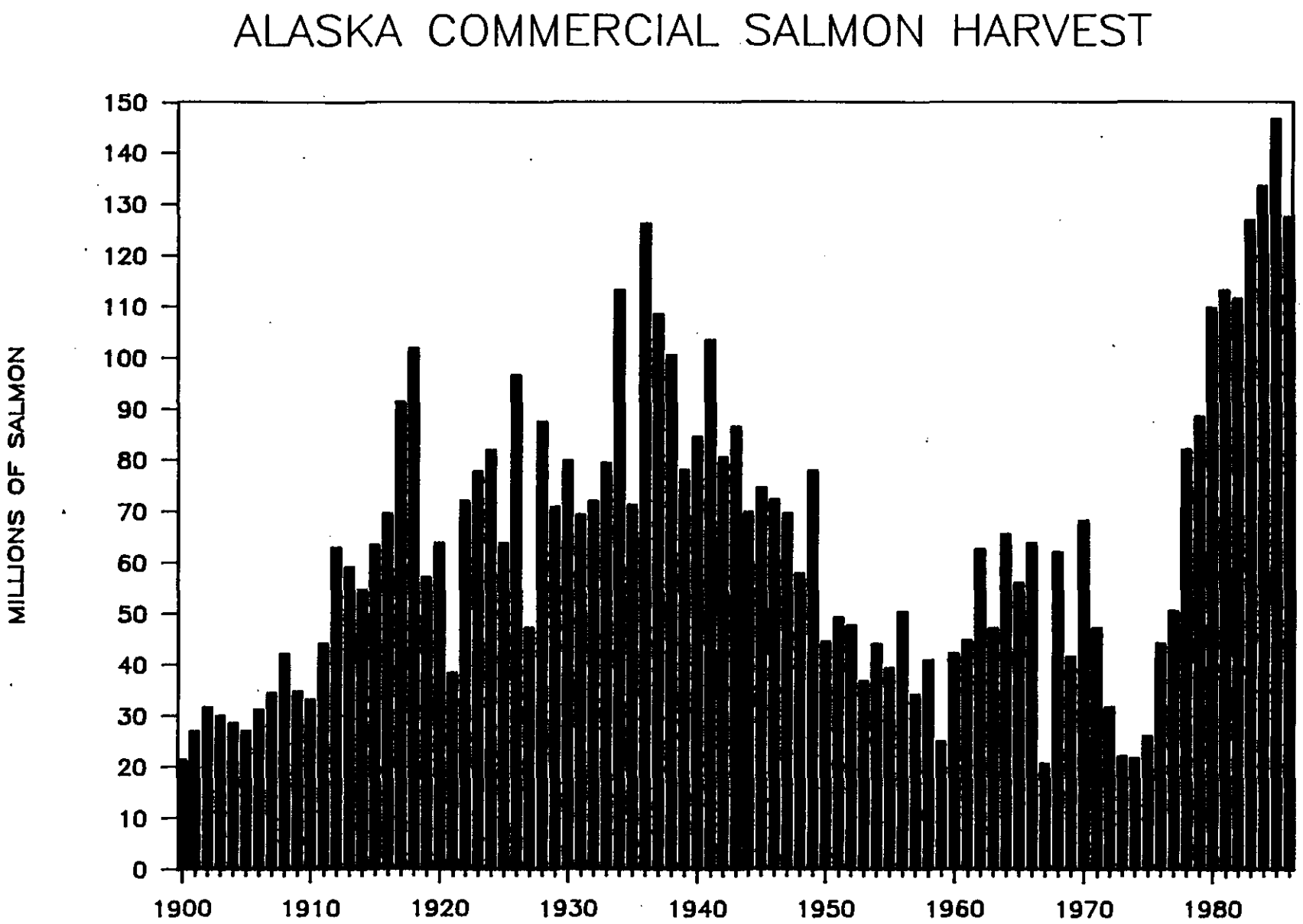

Figure 1. Alaska commercial salmon harvest from 1900 to 1986.

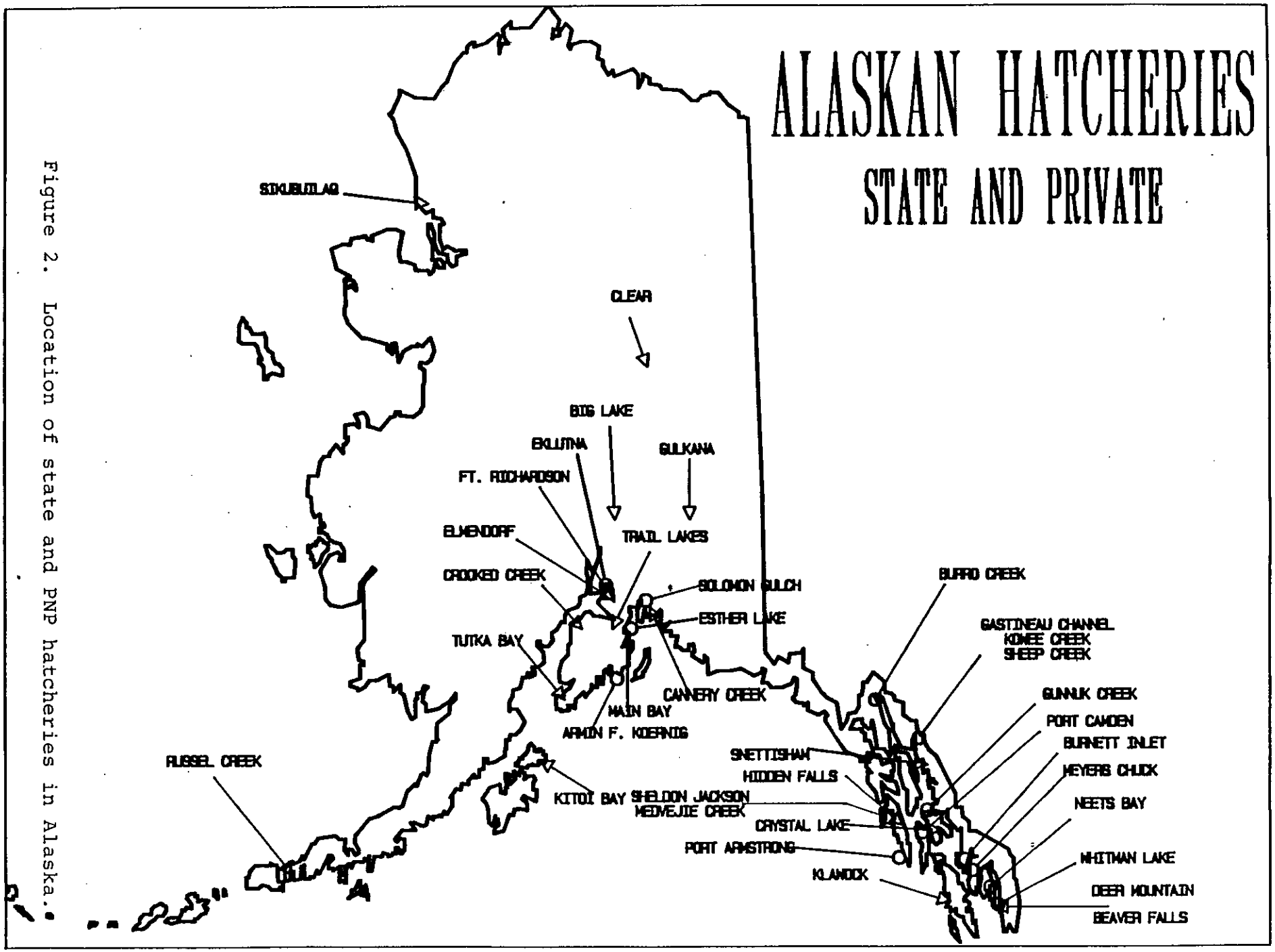

Figure 2. Location of state and PNP hatcheries in Alaska.

were alternative means of circumventing the problems associated with the dependence of salmon on streams, lakes, and nearshore estuaries. The economic opportunities for ocean ranching[1] depend on the unique ability of anadromous fish to eventually return to their natal streams. This natural phenomenon allows salmon populations to be efficiently enhanced by means such as fish hatcheries, fish ladders, and lake fertilization projects.

The enhancement program produces all five species of anadromous Pacific salmon, steelhead trout, and five species of resident fish, all of which contribute to commercial, sport, subsistence, and personal-use fisheries. The current enhancement portfolio includes 19 public hatcheries, 23 fish ladders, two spawning channels, and numerous enhancement projects that extend from the Noatak River in the Arctic to the City of Ketchikan in Southeast (Figure 2). The technical-services component to the statewide enhancement program is provided by the pathology, limnology, genetics, and coded-wire tag recovery laboratories within FRED Division.

In order to understand the magnitude of the Alaskan enhancement program, it is necessary to put it into a worldwide perspective. In 1987, Alaskan hatcheries took over 1.3 billion Pacific salmon eggs and over 10 million trout eggs. This makes Alaska's salmon ocean-ranching program the largest in North America; it is approximately one-half the size of Japan's program and roughly equal to the Russian program. The sockeye salmon enhancement program is the largest in the world; over 100 million eggs were taken in 1987. It is also the most technologically advanced program in the world.

The statewide production strategy for the ocean-ranching program has involved higher valued species being produced by FRED facilities, and lower valued species being produced by the PNP program. The distribution of these releases by species is depicted in Figure 3. The fishery enhancement program in Alaska has been a tremendous biological success. In some years the number of harvested salmon resulting from Alaskan fishery enhancement has exceeded both the natural and enhanced catch produced by the State of Washington, which is the nation's second-largest salmon producer after Alaska. Officials of ADF&G have estimated the returning adults from FRED hatcheries in 1987 totaled more than 6 million fish. Operators of PNP hatcheries estimated their total returns at more than 19 million fish in 1987. The combined state and PNP catch estimates equal approximately 26 million salmon in 1987 (Figure 4).

In FY 89 (brood year 1988) more than 600 million salmon, steelhead, and trout eggs will be taken at state-owned

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[1] Salmon ocean ranching should not be confused with salmon farming, which is the captive or controlled culture of salmon in freshwater, estuarine, or marine environments.

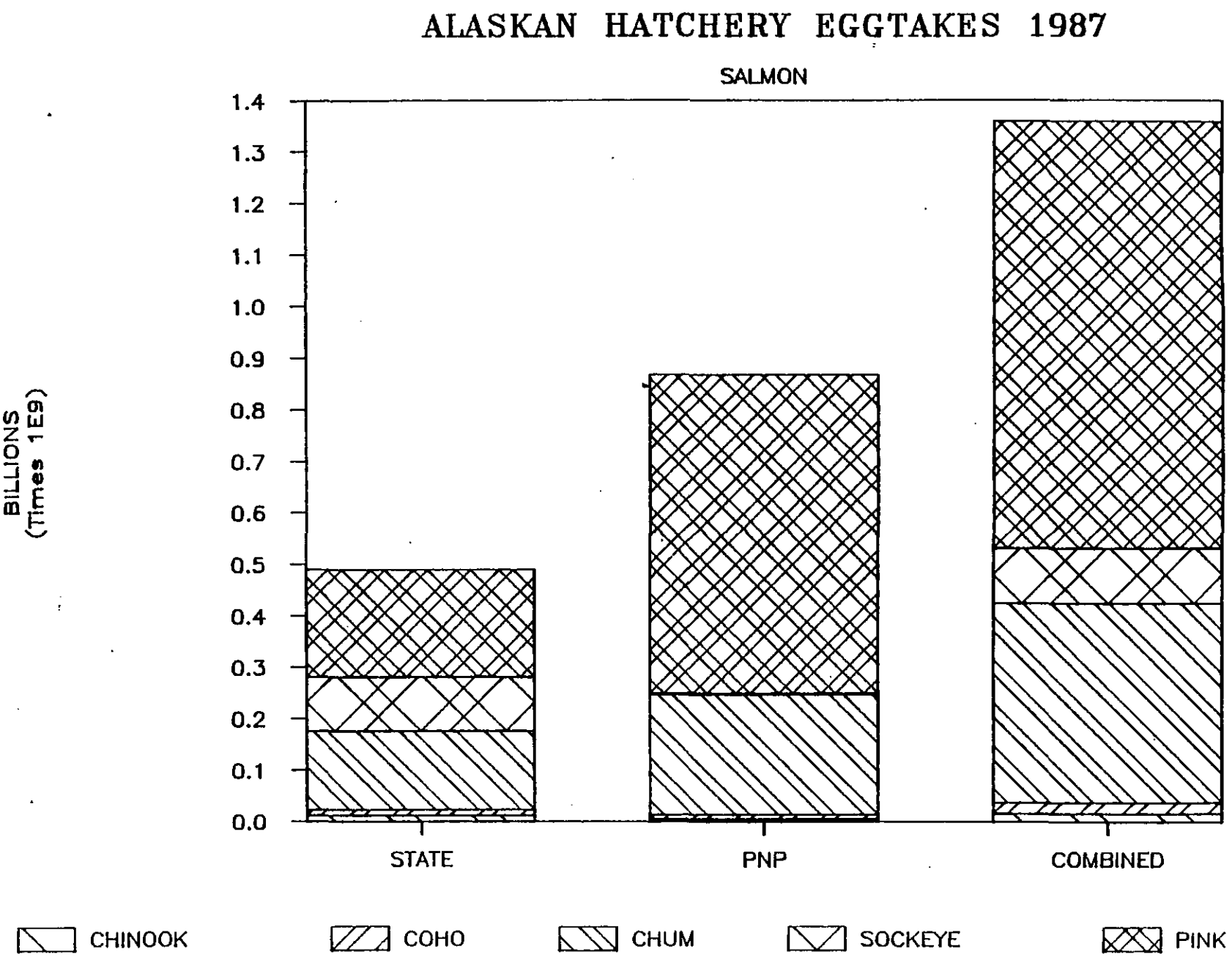

Figure 3. Alaskan hatchery egg takes for salmon in 1987.

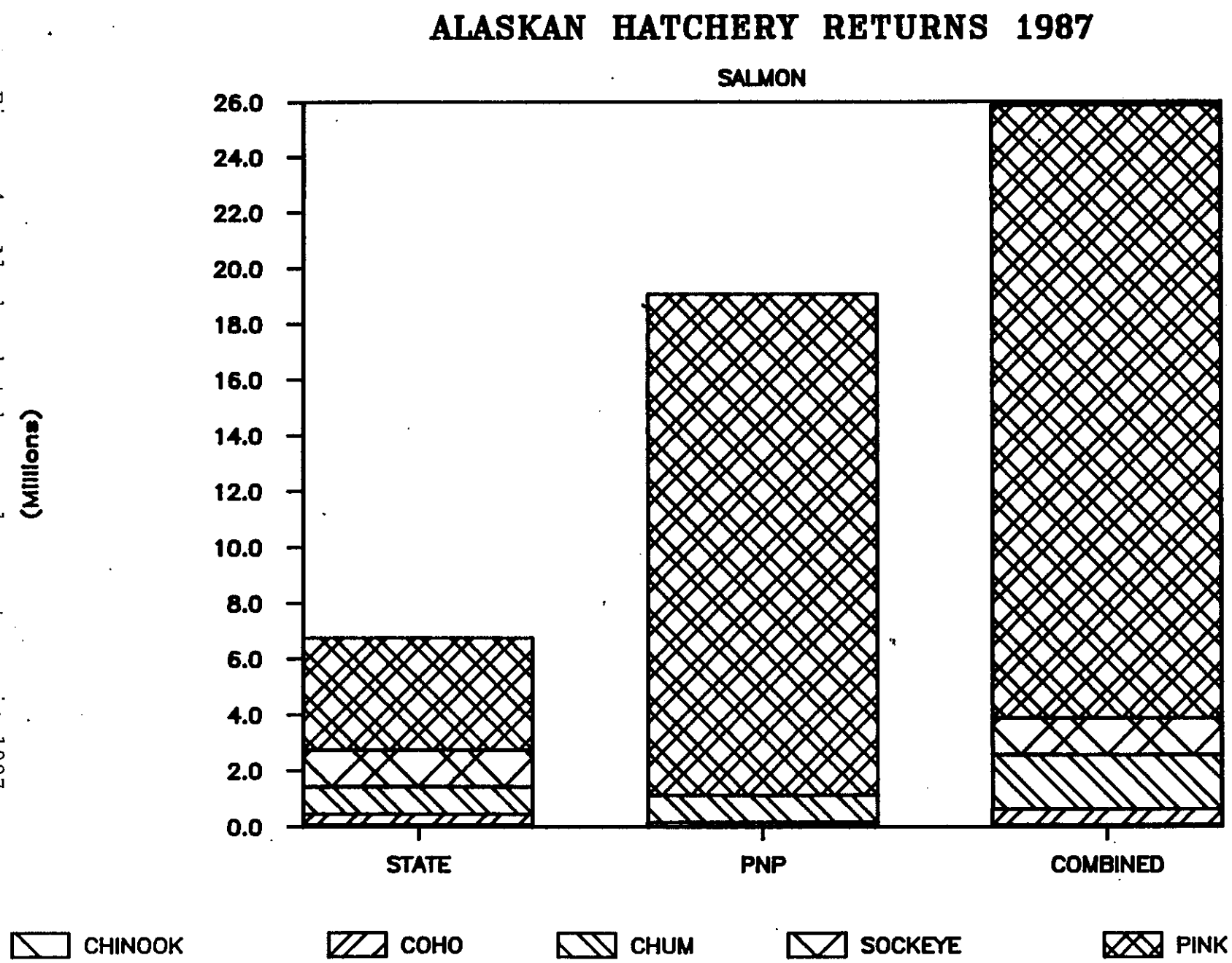

Figure 4. Alaskan hatchery salmon returns in 1987.

hatcheries. The distribution of salmon egg takes is shown in Figure 5. This production level will result in approximately 11 million harvested adults in the commercial fishery (Figure 6). Substantial harvests will occur in the recreational fishery also.

For the PNP Hatchery program, salmon harvests in the commercial fishery are estimated by hatchery operators. The salmon catch estimates for returning adults from brood year 1988 egg takes equal approximately 23 million (Figure 6).

THE ECONOMIC RATIONALE AND ECONOMIC PERFORMANCE OF THE STATEWIDE OCEAN RANCHING PROGRAM

The 1987 legislative intent statements were proposed because FRED Division and the rest of Alaska's ocean-ranching program are in a funding crisis. In non-inflation-adjusted terms, budget cuts account for a 25% reduction in FRED Division's portion of the general fund since FY 85; in inflation-adjusted terms, FRED funding has been reduced by 30% since FY 85 (Figure 7). While the hatchery egg takes and fish releases have grown dramatically through this period, much of the potential expansion of the state program has been curtailed. Thus, the program has been left with a number of facilities that are being operated below their optimal level, leaving some hatcheries with unutilized incubator and raceway space.

The fish hatcheries and other enhancement activities of the FRED and PNP hatchery programs have been the subject of a variety of economic studies. These studies have been undertaken to ensure that maximal social and economic benefits are derived from Alaska's investment in salmon enhancement technology.

Of the collection of public investments available to Alaska, very few are able to improve the level of economic activity in the state by expanding the basic sector output of the economy. In this regard, salmon enhancement is very attractive because it offers improved efficiency and positive impacts produced by increasing the level of economic activity. Preliminary studies undertaken by ADF&G show that the FRED program is producing significant net benefits and impacts in the salmon industry and throughout the regional economies of Alaska.

The economic data presented here summarize two independent analytical techniques. The first technique is benefit-cost analysis, which is a very stringent accounting of social and economic benefits over the time horizon of the investment (in our case 25 to 35 years). This technique measures the efficiency of the investment by determining what consumers or producers would be willing to pay for an improvement in their welfare if they had to bear all the social costs.

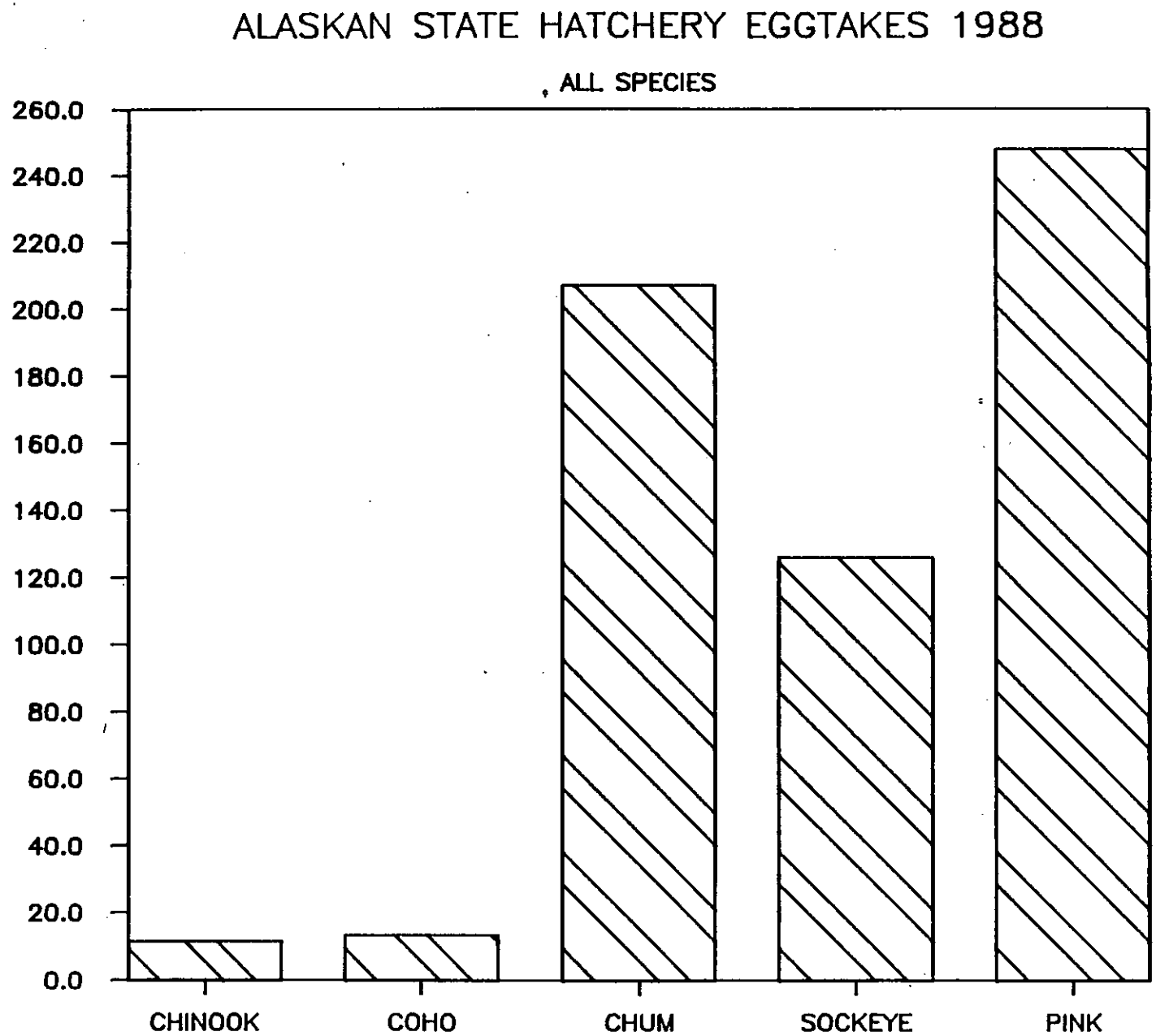

Figure 5. Alaska state hatchery salmon egg takes for 1988. Egg takes shown for salmon only.

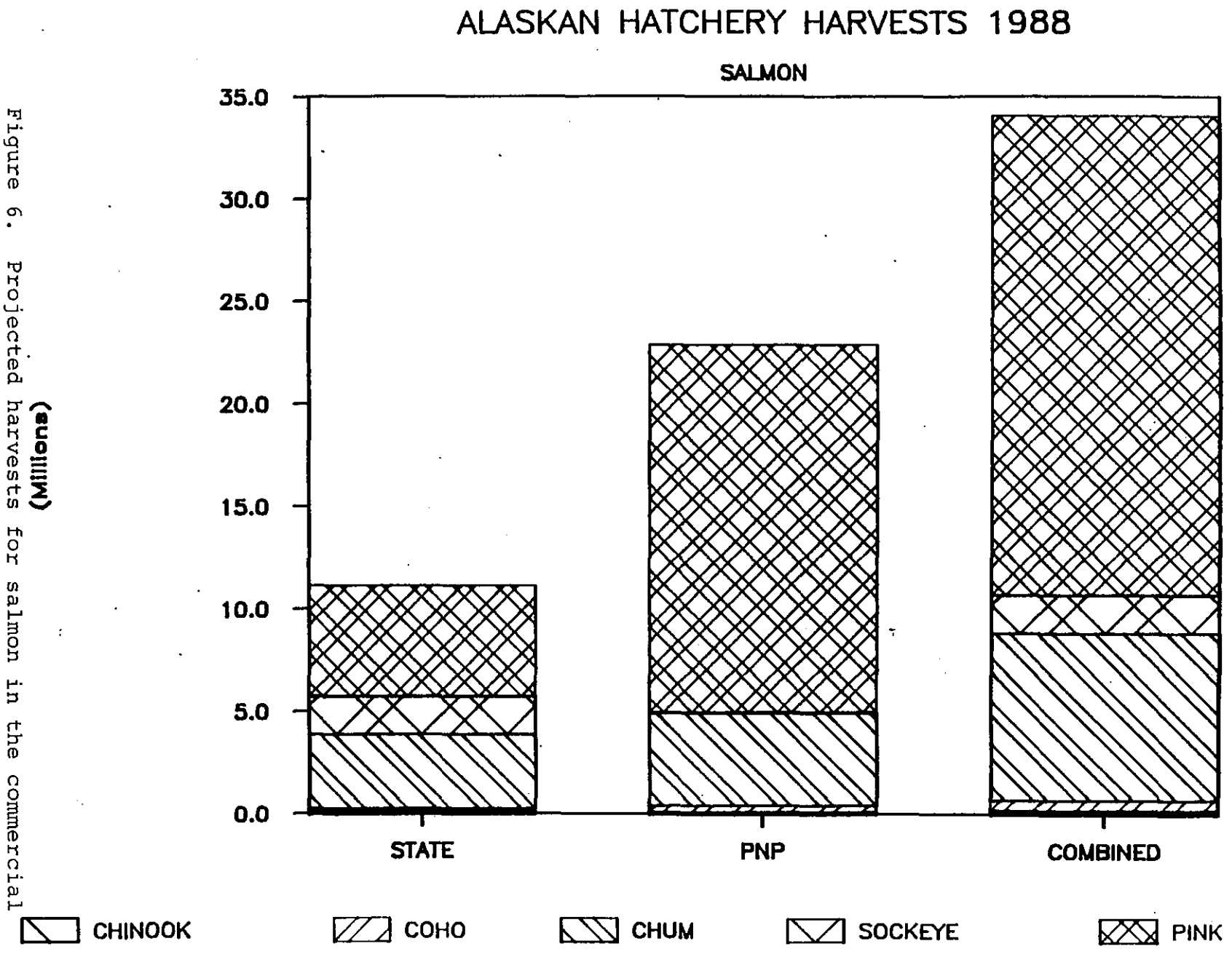

Figure 6. Projected harvests for salmon in the commercial fishery, by species for state and PNP hatcheries. Harvests result from eggs taken in 1988.

Figure 7. Estimated General Fund expenditures on FRED Division activities in non-inflation-adjusted terms and inflation-adjusted terms from FY 85 to FY 89.

Fiscal year	General fund expenditures FRED Division (millions of dollars) non-inflation adjusted[2]	Percent reduction in budget non-inflation adjusted	General fund expenditures FRED Division (millions of dollars) inflation adjusted[1]	Percent reduction in budget inflation adjusted
1985	14.7069	0%	14.70690	0%
1986 Authorized	14.2696	3%	13.93878	5%
1987 Restricted	11.5917	21%	11.05893	25%
1988	10.9952	25%	10.36722	30%
1989 Proposed	11.0819	25%	10.32823	30%

[1] Source: Anchorage Consumer Price Index from John Boucher, Alaska Department of Labor, Division of Research and Analysis.

[2] Source: General Fund expenditures from ADF&G budget files.

The second technique, impact analysis, focuses on the distributional and multiplier effects of investments. Its results are usually expressed as expenditures, gross sales, personal income, and employment. All expenditures whether they constitute a social benefit or a cost are used for determining effects on personal income and employment. Impact assessment pays great attention to whom and/or what sectors and regions of the economy are receiving the impacts. The time horizon in impact analysis is very short, usually a year or a few years.

In this report, calculations of the economic value and impact of salmon harvests are reported as point estimates. Point estimates have been used to keep the reporting results simple. Projections of biological or economic systems are subject to variability and these point estimates are believed to fall within the expected bounds.

Estimates from a 1984 study for the Governor's Mini-Cabinet on Fisheries suggest that the program will ultimately generate net benefits of $90.0 million (in 1984 dollars) for the commercial fishery portion of the program. This results in an overall benefit-cost ratio of 1.4:1. This means that $1.40 in fish values will be generated for each $1.00 expended, measuring all benefits and costs in dollars of equal value and discounting them as required to take into account the time at which they occur.

Decision makers are often interested in how fisheries investments or management policies may affect economic stability and development in various regions of the state. Impact models can determine the economic development that would occur from a change in gross sales of fisheries products resulting from an increase in catch or change in market prices. These impact models approximate the local economies by expressing relationships among business sectors of the economy. In 1986 this new analytical procedure was applied to the state's fishery-enhancement program to aid in the planning and budgeting processes. This was a first-of-its-kind analysis of resident employment resulting from the state's investments in salmon ranching. The model was designed and contracted through a cooperative effort with the Institute of Social and Economic Research (ISER) at the University of Alaska, Anchorage, and it projects large personal income and employment impacts resulting from the state-owned hatchery program. A recent simulation of the impacts of proposed FRED budgets for FY 88 revealed that receipt of $10.9 million in general fund monies (full funding) would result in over 850 resident jobs and $27 million in resident income. This represents from two to four times the level of impacts resulting from a typical expenditure of the state operating or capital budgets.

In 1987 the FRED Division began coordinating a new and greatly enhanced phase of fishery-enhancement impact analysis. The data collection and modeling effort have involved the biological,

fishery, and economic analysis of over 170 state and PNP enhancement projects. This analysis includes four complete, computer-generated data bases that are used in the on-going design of two new impact models and has involved a multiagency data-collection effort utilizing the cooperation of FRED staff, PNP operators, the Department of Commerce and Economic Development (DCED) enhancement loan office, Sport Fish Division, and ISER. The resulting improvements have allowed for a more complete economic evaluation of the FY 89 budget. The principal budget strategy is to move technologically sound hatcheries from public to private support and maximize the use of general funds to support developing technology. Since the budget maintains a functional hatchery program and allows a better utilization of hatchery space, the impacts are significantly improved over the previous year. The FY 89 budget proposed by FRED Division would generate approximately $35 million in resident income to Alaskans as well as 1,040 jobs (Figure 8). The analysis of the PNP enhancement program impacts resulting from brood year 1988 are preliminary at this time; however, preliminary estimates project approximately $40 million in resident income and 1,100 Alaskan jobs.

For the FY 89 budget analysis, a second impact assessment was developed on the basis of a "worst-case budget". This budget assumes that FRED Division would not be able to reprogram into other production funds available from contracting operations of some hatcheries to the private sector. The purpose of this economic analysis was to determine both the loss in gross revenues to fishermen and the loss in personal income and employment to Alaskans across the state if these funds were not available. The enhancement program reductions would result from a $1.4 million decrease in general funds, which is the approximate savings in general fund monies from the contractual agreements with the private sector. If the budget were reduced by this amount, a large portion of the chum salmon production at the Snettisham facility would be eliminated along with much of the sockeye enhancement initiative at Snettisham, Main Bay, and Gulkana. The reduction in gross revenues to fishermen from this option is approximately $9 million. The personal income lost to residents of Alaska is over $6 million along with 100 jobs (Figure 9). Clearly, the reprogrammed funds have a significant effect on the welfare of Alaskans.

The recreational component of the impact analysis project involving the additional personal-income impacts from FRED Division's recreational-fishery projects will be completed early in 1988. The personal income and employment that results from these projects make a significant impact on the Alaskan economy. Anglers pay for tackle, boats, moorage, transportation, lodging, food and beverages, guiding, and other fishing-related needs. Businesses that provide goods and services to anglers provide jobs and buy inventory from other businesses that, in turn, provide jobs and buy from other businesses. The first level of expenditures from the recreational fishery projects appears to be

Figure 8. Economic Impact Simulation Results, Stratified by Region for the FY 89 Budget. The simulation assumes that budget to be equivilant to the FY 89 Request to the Governor.

HATCHERY IMPACT MODEL HATMOD VERSION I. (preliminary)	TOTAL STATE	SOUTHEAST	PRINCE WILLIAM SOUND	COOK INLET	KODIAK/ ALASKA PENINSULA	INTERIOR
INPUTS FROM PRODUCTION AND CATCH MODEL********						
FISH HARVEST FROM HATCHERY PRODUCTION (A)						
Request Case	11,438,768	4,259,361	3,735,548	2,637,597	754,812	51,450
VALUE OF CATCH (Thousand 1987 $) (A)						
Request Case	$37,333	$23,312	$5,382	$7,605	$884	$150
HATCHERY PROGRAM BUDGET LEVEL (Thousand $) (B)						
Request Case	$15,037	$6,894	$919	$5,264	$1,160	$801
IMPACT SUMMARY ********						
TOTAL IMPACT						
INCOME	$35,242	$16,807	$5,114	$11,297	$1,432	$593
EMPLOYMENT	1038	531	123	308	54	23
DIRECT IMPACT						
INCOME	$24,297	$11,492	$3,985	$7,319	$1,049	$453
EMPLOYMENT	572	287	71	162	36	16
INDIRECT IMPACT						
INCOME	$2,813	$1,437	$277	$914	$145	$41
EMPLOYMENT	108	60	12	28	6	2
INDUCED IMPACT						
INCOME	$8,133	$3,879	$852	$3,065	$239	$99
EMPLOYMENT	359	185	41	118	11	5
EMPLOYMENT IMPACT:FULL & PART TIME						
DIRECT	572	287	71	162	36	16
INDIRECT	108	60	12	28	6	2
INDUCED	359	185	41	118	11	5
TOTAL	1038	531	123	308	54	23
INCOME IMPACT						
DIRECT	$24,297	$11,492	$3,985	$7,319	$1,049	$453
INDIRECT	$2,813	$1,437	$277	$914	$145	$41
INDUCED	$8,133	$3,879	$852	$3,065	$239	$99
TOTAL	$35,242	$16,807	$5,114	$11,297	$1,432	$593
BANG PER BUCK ANALYSIS********						
IMPACTS PER $1 MILLION OF STATE EXPENDITURE						
EMPLOYMENT	69	77	134	58	46	28
PERSONAL INCOME	$2.344	$2.438	$5.568	$2.146	$1.235	$0.740

Figure 9. Economic Impact Simulation Results, Stratified by Region for the FY 89 Budget. The simulation assumes that budget is reduced by $1.34 million dollars over the FY 89 Request to the Governor.

HATCHERY IMPACT MODEL HATMOD VERSION II. (preliminary)	TOTAL STATE	SOUTHEAST	PRINCE WILLIAM SOUND	COOK INLET	KODIAK/ ALASKA PENINSULA	INTERIOR
INPUTS FROM PRODUCTION AND CATCH MODEL********						
FISH HARVEST FROM HATCHERY PRODUCTION (A)						
Reduced Case	9,451,431	2,483,211	3,524,361	2,637,597	754,812	51,450
VALUE OF CATCH (Thousand 1987 $) (A)						
Reduced Case	$28,042	$15,075	$4,328	$7,605	$884	$150
HATCHERY PROGRAM BUDGET LEVEL (Thousand $) (B)						
Reduced Case	$13,680	$6,226	$767	$5,030	$855	$801
IMPACT SUMMARY ********						
TOTAL IMPACT						
INCOME	$29,249	$11,930	$4,392	$11,049	$1,285	$593
EMPLOYMENT	852	379	105	300	45	23
DIRECT IMPACT						
INCOME	$20,263	$8,177	$3,430	$7,246	$958	$453
EMPLOYMENT	470	206	61	157	30	16
INDIRECT IMPACT						
INCOME	$2,236	$1,000	$230	$851	$113	$41
EMPLOYMENT	85	42	10	27	5	2
INDUCED IMPACT						
INCOME	$6,750	$2,753	$732	$2,952	$214	$99
EMPLOYMENT	297	131	35	116	10	5
EMPLOYMENT IMPACT:FULL & PART TIME						
DIRECT	470	206	61	157	30	16
INDIRECT	85	42	10	27	5	2
INDUCED	297	131	35	116	10	5
TOTAL	852	379	105	300	45	23
INCOME IMPACT						
DIRECT	$20,263	$8,177	$3,430	$7,246	$958	$453
INDIRECT	$2,236	$1,000	$230	$851	$113	$41
INDUCED	$6,750	$2,753	$732	$2,952	$214	$99
TOTAL	$29,249	$11,930	$4,392	$11,049	$1,285	$593
BANG PER BUCK ANALYSIS********						
IMPACTS PER $1 MILLION OF STATE EXPENDITURE						
EMPLOYMENT	62	61	137	60	53	28
PERSONAL INCOME	$2.138	$1.916	$5.727	$2.197	$1.503	$0.740

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end

approximately $10 million. The completed project will estimate resident income and employment resulting from the direct, indirect, and induced effects of those expenditures.

METHODS USED TO ADDRESS THE LEGISLATIVE INTENT

The legislative intent statements were addressed by FRED Division as follows: 1) creating an enhancement-funding work group, 2) meeting with fisheries-enhancement constituents, and 3) reorganizing FRED Division.

Work Group

The work group[2] forum became one of the most important and revealing sources of information for this study. The working sessions reflected anxiety over the funding for state and PNP ocean-ranching programs. All of those who wished to be involved in addressing enhancement funding issues were invited to participate (see Appendix B). The initial objectives of the work group were threefold: (1) to solicit technical expertise within ADF&G as well as from agencies outside the department for reviewing legislative intent language and identifying strategies to meet that intent; (2) to analyze alternative financing mechanisms; and (3) to review the respective roles of the state and private ocean-ranching programs. The originally constituted group held two meetings to accomplish these tasks before the membership was broadened to include representatives from the private aquaculture sector and fishermen groups. During meetings of the expanded work group, funding options were more fully considered and specific roles of the public and private aquaculture sectors were identified and prioritized. The reorganization of FRED Division was a result of these meetings. Finally, the broad-based work group developed and approved the outline of the report to be presented to the Legislature.

Constituency Meetings

The FRED Division Director, Brian Allee, and/or staff met on at least 25 separate occasions with fishermen groups, regional salmon planning teams, and the general public (see Appendix C). During these meetings, Dr. Allee explained the legislative intent, how the division was addressing it, and how the intent and action it generated might impact the FY 89 proposed budget.

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[2] The working group consisted largely of representatives of regional associations and fishermen groups although nonassociation PNP hatchery operators were also invited to attend.

Reorganization

During early winter, the FRED Division was reorganized to achieve clarity of purpose, program efficiency, and cost savings. Also addressed in the reorganization were the roles identified and prioritized for FRED Division during the September 1987 work group meeting. The thrust of the reorganization was a more decentralized management structure in which the regions report directly to the director. The benefits of this structure will be to increase communication, reduce the number of management layers in the headquarters and regional offices, and promote efficiency. The reorganization eliminated six middle management positions.

RESULTS OF THE WORKING GROUP ANALYSIS OF FUNDING METHODS FOR THE ENHANCEMENT PROGRAM

One of the major accomplishments of the working group was a comprehensive evaluation of the funding alternatives for fishery enhancement in Alaska. Participants concurred that specialized contracts, professional-service agreements, and select-service charges provide more probable short-term solutions to immediate funding shortfalls in the FY 89 budget. The more likely long-term solutions appear to be the Enhancement Authority and alteration in the allocation of existing taxes or license fees. The full list of the funding alternatives follows.

1. Taxes (long term):
   a. Alter or increase Raw Fish Tax
   b. Vessel Fuel Tax
   c. Landings Tax
   d. Enhancement Tax

2. License Fees (long term):
   a. Entry Permit Renewal Fee
   b. Terminal Area License Fee
   c. Recreational Fishing License Fee
   d. Subsistence/Personal Use License Fee

3. Authorities (long term):
   Enhancement/Aquaculture Authority

4. Agency Service Charges & Other (short or long term):
   a. FRED Division harvests terminal fish and sells
   b. FRED Division sells live and dead eggs and fish
   c. Charge for consulting fees of FRED
   d. Visitor Fees
   e. Public Donations
   f. Rescheduling of debt on public hatcheries/use for operating costs

5. New Ownership/Leasing/Contracts (short term):
   a. Transfer and Leasing of Hatchery Ownership
   b. Cooperative Agreements
   c. Contracting Harvest and Operations

General Information on Fisheries Taxes

Aside from the value of fisheries in Alaska and the economic activity (i.e., employment and personal income) generated from them, fishing also generates revenues directly to the state from taxes and licenses. In FY 87 these revenues equalled $63.98 million, of which $59.5 million went to the general fund and $4.48 million to the fish and game fund. Revenues from hunting and trapping sources (e.g., license sales) have been excluded from these figures. Fishery revenues include fish taxes, marine-fuel taxes, fishing permits, fishing licenses, and other similar items. The revenues in 1987 represent an increase of over four times the same figures in 1977. Clearly, the fishing industry is a major contributor to Alaska's revenue base, and fishermen pay a significant portion of their income for the use of common-property resources.

While not part of the legislative intent, it is helpful to know how these revenues compare to fishery management expenditures. To conduct this comparison, two items were removed from the total fishery revenues to the general fund: 1) revenues dedicated to the private nonprofit organizations (e.g., salmon enhancement tax was $4.4 million for FY 87) and 2) revenues received from federal sources ($16.68 million in FY 87). The collection of salmon enhancement taxes helps to fund aquaculture associations and does

not represent unrestricted revenue to the state. Some of the federal monies that have been removed from the analysis are Alaska's share of Dingell-Johnson funds, which are derived from a national excise tax on recreational fishing equipment. In any case, fishery revenues, excluding revenues from these two sources, total $42.86 million for FY 87 (Figure 10).

The total cost of managing fisheries in Alaska for FY 87 was determined by adding together the estimated portions of the budgets of ADF&G and several other state departments that are associated with fisheries management. Because many divisions and departments have multiple functions, it was difficult to separate costs associated with management of fisheries alone. Best estimates of the costs associated with fisheries were determined through discussions with staff in each department.

As might be expected, the greatest general fund expenditures are associated with ADF&G ($34.2 million), followed by the Department of Public Safety ($7.5 million), and DCED ($2.1 million). The estimated total expenditures for all departments in FY 87 was $45.2 million from general fund monies and $64.3 million from all funding sources combined; when expenditures on Sea Grant and the Marine Advisory Program of the University of Alaska are added, the totals come to $46.3 million and $67.0 million, respectively.

A thorough review of the taxing alternatives was presented to users at meetings with the funding work group. All user groups were unanimously opposed to increasing taxes or license fees. There was some interest in developing legislation to change the allocation formulas to redistribute more of the funds into fishery enhancement. All groups were also opposed to closing state hatcheries. It was pointed out in the work-group meetings that changing the appropriation formula for the Raw Fish Tax does not create additional rents to the state treasury; it would only redistribute the revenues.

Specific Information on Funding Alternatives

Alter or Increase Raw Fish Tax:

The Raw Fish Tax is levied on processors and is based on the price paid for fish in the round. The funds are distributed into the general fund and appropriated by a specific formula into communities and the fish and game fund. Depending on the size of the annual catch, there is a potential for $3 to $5 million to be to be raised from a 1% increase in the tax. The tax is now reappropriated back to communities and the general fund. Members of the enhancement-funding work group suggested reviewing the funding formula to determine if the funds are being allocated in the appropriate manner.

Figure 10. Historical Fish and Game Revenues from FY 77 to FY 87.

HISTORICAL FISH & GAME REVENUES - UPDATED 12/2/87

AKSAS CODE	REVENUE TYPE	FY 87	FY 86	FY 85	FY 84	FY 83	FY 82	FY 81	FY 80	FY 79	FY 78	FY 77
							(THOUSANDS OF DOLLARS)					
GENERAL FUND												
:60620	FISH TAX-CANNED :	4,606.0	3,496.9	5,621.2	5,500.0	4,304.1	8,590.1	5,917.8	4,322.9	6,707.7	5,527.1	3,830.3
:60630	FISH TAX-SHOREBASED :	12,914.3	10,079.5	8,253.0	7,100.0	11,518.7	8,697.7	10,963.6	7,612.7	3,280.4	2,305.3	1,855.4
:60640	FISH TAX-FLOATING :	9,084.8	7,528.0	4,788.5	6,400.0	4,693.9	5,549.0	3,840.1	2,709.8	1,921.1	494.2	517.4
:60605	SALMON ENHANCEMENT TAX :	4,444.1	4,263.1	2,625.3	2,241.3	2,533.8	2,425.0	0.0	0.0	0.0	0.0	0.0
:60690	SEAFOOD MARKETING TAX :	1,460.2	1,121.9	964.2	1,119.7	921.9	0.0	0.0	0.0	0.0	0.0	0.0
:60230	MARINE FUEL TAX :	5,372.9	5,289.7	4,298.0	3,904.1	4,298.2	3,681.4	3,554.7	3,241.9	2,629.3	2,042.5	1,358.2
	TOTAL G. F. TAXES	37,882.3	31,779.1	26,550.2	26,265.1	28,290.6	28,943.2	24,276.2	17,887.3	14,546.5	10,369.1	7,561.3
:61350	DUP COMM LIC :	1.5	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:61370	COMMERCIAL FISH-RES :	148.9	147.3	142.4	150.1	83.8	43.6	45.3	42.3	61.4	55.8	80.2
:61380	COMMERCIAL FISH-NR :	235.9	228.0	234.3	229.0	132.1	83.3	76.8	65.2	100.9	79.7	92.0
:61390	COMM FISH-SCALLOP :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:61400	COMM FISH-EXTENSION :	1.5	1.8	1.8	4.4	3.9	2.9	2.3	1.1	2.3	6.2	10.3
:61570	ENTRY FEE PERMIT :	2,910.8	3,096.9	2,409.8	2,331.2	2,734.5	2,899.7	2,849.4	3,056.2	3,089.2	2,050.0	0.0
:62005	PERMIT FEE :	(10.0)	0.0	0.2	0.0	0.3	0.3	0.5	0.3	0.4	0.0	0.0
:62020	HUNT LIC-RES :	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62030	HUNT TRAP LIC-RES :	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	6.6	5.8	4.8
:62040	HNT SPT FISH LIC-RES :	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62050	HNT TRP FISH LIC-RES :	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	28.3	26.8	28.5
:62080	HUNT LIC-NONRES :	0.0	(1.4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62100	HUNT TRAP LIC-NONRES :	0.0	(0.3)	0.0	0.0	0.0	0.0	0.0	0.8	7.0	9.1	6.6
:62130	MILITARY SPC-SM GAME :	0.0	(0.1)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62150	BIG GAME TAG-RES :	0.0	(0.4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62160	BIG GAME TAG-NONRES :	0.0	(6.7)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62170	TRAPPING LIC-RES :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	4.4	4.1
:62180	SPRT F & G DUP LIC :	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.7	5.7	5.4	4.7
	TOTAL G. F. LICENSES	3,288.6	3,469.3	2,790.0	2,714.7	2,954.6	3,029.8	2,974.3	3,171.4	3,306.5	2,243.2	231.2
:58440	COMM FISH-RES S & D :	333.3	455.7	386.9	321.4	177.7	91.5	94.4	90.9	91.1	83.7	120.6
:58450	COMM FISH-NR S & D :	538.0	518.6	531.0	512.0	290.7	174.5	164.4	145.6	151.0	120.0	138.1
:58490	ENTRY FEE PERMIT :	433.8*	431.4	860.6	442.5	598.8	5.0	151.1	160.2	151.1	117.7	0.0
:58590	FISH SALES :	344.8	191.6	258.2	59.8	61.9	147.8	128.0	46.8	60.8	53.4	43.7
:VARIOUS	FED. FUNDS(F&W RESTOR.) :	16,676.0	6,558.3	5,238.9	7,088.5	6,491.2	6,475.1	635.1	420.6	715.6	871.2	824.5
	TOTAL G.F. RESTRICTED	18,325.9	8,155.6	7,295.6	8,424.2	7,620.3	6,893.9	1,173.0	864.1	1,169.6	1,246.0	1,126.9
	TOTAL GENERAL FUND	59,496.8	43,404.0	36,635.8	37,404.0	38,865.5	38,866.9	28,423.5	21,922.8	19,022.6	13,858.3	8,919.4
FISH & GAME FUND												
:62000	PERMIT APP FEE :	471.8	(207.0)	364.5	335.5	231.5	178.9	107.6	157.1	69.4	43.9	1.1
:62010	SPORT FISH LIC-RES :	1,025.2	1,008.8	1,034.7	983.2	1,029.8	648.9	885.0	818.0	833.9	765.7	501.8
:62020	HUNT LIC-RES :	289.4	291.6	319.9	317.7	296.3	276.7	263.5	263.3	267.6	253.8	135.1
:62030	HUNT TRAP LIC-RES :	38.1	43.1	44.1	38.7	38.4	38.1	34.7	29.4	25.6	23.2	14.0
:62040	HNT SPT FISH LIC-RES :	822.8	895.6	925.7	856.2	875.8	589.6	699.0	627.2	650.7	645.9	580.1
:62050	HNT TRP FISH LIC :	208.2	262.5	313.0	337.0	322.1	251.5	256.5	230.0	207.6	195.5	174.8
:62060	VIST SPEC FISH LIC :	997.8	946.1	789.5	698.0	645.3	550.0	526.2	491.5	441.6	348.7	273.6
:62070	SPRT FISH LIC-NR :	561.0	604.2	671.3	680.8	678.1	469.2	447.6	373.5	380.6	361.3	410.8
:62080	VIST SPEC FISH LIC :	303.9	306.6	265.1	257.8	260.0	261.5	249.7	258.3	216.8	211.3	116.1
:62090	HUNT FISH LIC-NR :	89.3	111.6	93.8	94.8	102.7	94.4	82.6	87.9	71.7	72.0	63.6
:62100	HUNT TRAP LIC-NR :	6.4	6.5	12.0	12.1	10.3	12.9	15.2	12.4	3.0	13.0	2.3
:62110	VIST 1-DAY FISH LIC :	506.8	467.0	423.3	371.3	140.9	96.9	89.1	78.7	76.9	58.1	2.6
:62120	MIL SPEC FISH LIC :	58.2	65.3	67.1	61.0	71.1	52.5	65.8	66.0	84.0	64.3	18.8
:62130	MIL SPEC SMALL GAME :	8.4	9.6	10.4	10.6	11.6	12.7	11.3	10.8	13.5	11.0	1.9
:62140	MIL SPEC FISH SM GM :	15.3	20.4	20.8	22.5	23.1	25.7	21.9	17.5	23.5	18.0	12.7
:62150	BIG GAME TAGS-RES :	144.0	181.2	167.1	171.5	143.4	108.4	101.2	91.4	94.5	92.4	18.7
:62160	BIG GAME TAGS-NR :	2,054.5	2,023.0	1,679.8	1,699.0	1,103.2	1,164.6	1,148.0	1,250.2	1,013.2	983.4	718.5
:62170	TRAP LIC-RES :	9.5	14.6	12.1	4.2	8.0	4.5	16.0	4.0	0.0	0.0	0.0
:62180	F & G DUP LIC :	10.5	9.2	10.3	9.0	7.4	6.3	6.8	0.0	0.0	0.0	0.0
:62290	GUIDE LIC :	0.4	3.0	3.4	2.6	1.6	3.6	2.7	6.9	0.0	0.0	0.0
:62230	KING SALMON/STLHD PERMIT :	0.0	0.0	0.0	24.8	329.5	335.1	414.3	56.1	0.0	0.0	0.0
:62320	WATERFOWL STAMP :	134.4	198.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:62330	TRAPPING-RES :	0.1	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:64750	REC SERV REND :	0.0	0.0	0.2	0.0	0.0	0.0	2.2	1.0	5.8	5.4	0.0
:64800	SALE OF PRODUCTS :	1.0	0.1	21.8	10.8	0.0	0.0	1.2	0.8	4.8	0.6	6.6
:66370	MISC REVENUE :	38.0	31.7	26.6	88.9	29.8	18.2	16.8	10.5	16.7	13.8	23.2
:65040	JUDGEMENT SETTLEMENT :	0.0	120.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
:VARIOUS	FED. FUNDS(F&W RESTOR.) :	0.0	0.0	0.0	0.0	0.0	10.5	5,801.7	3,720.3	4,400.8	4,207.3	3,590.9
	TOTAL F & G FUND	7,795.0	7,413.7	7,276.5	7,108.0	6,359.9	5,230.7	11,266.6	8,662.8	8,902.2	8,388.6	6,667.2
	GRAND TOTAL	67,291.8	50,817.7	43,912.3	44,512.0	45,225.4	44,097.6	39,690.1	30,585.6	27,924.8	22,246.9	15,586.6

SOURCE: BOB ELLIOTT (8465-2173) (M.S. 0400)
DEPARTMENT OF REVENUE-RESEARCH SECTION

* FED FUNDS INCLUDE FISH RESTORATION-DJ (57640), WILDLIFE RESTORATION-PIT (57660), AND PL 89-304 (57690).

* FY 80 REPRESENTS A TRANSITION PERIOD WITH SIX MONTHS OF COLLECTIONS UNDER THE OLD TAX RATES

Increase the Amount of the Vessel Fuel Tax:

An increase in the vessel fuel tax could be applied to all fishing and nonfishing fuel purchases in the state. In 1986 the $.05/gal tax yielded approximately $5.3 million. The vast majority of these taxes are paid by the fishing fleet. All of the receipts from this tax currently go into the general fund. A significant change in the tax would be required to generate additional revenues of a couple of million dollars or more.

Landings Tax:

A landings tax for salmon would be similar to the Raw Fish Tax. Its main difference is that it would be levied directly on the fishermen instead of being paid by processors. The tax would be based on an assessment per pound of fish or per fish. The tax might be structured to vary by species harvested so that enhancement-produced species would be more heavily targeted. Since it would be a new tax, it would not be subject to the reallocation formula used for the Raw Fish Tax. As in the Raw Fish Tax, considerable revenue could be generated by this tax: $1 to $2 million a year of revenue is not an unreasonable estimate. This alternative is not supported by fishermen.

Increase and or Modify Enhancement Tax:

An aquacultural assessment is collected by the processor from the payment to fishermen for their catch and is automatically withheld by the processor. The tax then goes into the general fund, and is later appropriated to DCED, which then distributes the receipts back to the associations. One modification might be to distribute the tax directly to hatcheries. Some of the tax receipts might also be given to an enhancement authority for distribution. The estimated revenue for FY 87 is approximately $2.8 million. A doubling of the existing assessment would yield $5.6 million. This approach appears to have a low level of fishermen acceptance.

Increase the Commercial Fishing License Fee and Distribute a Portion of the Receipts to FRED Operations:

The Commercial Fisheries Entry Commission (CFEC) has investigated the feasibility of using the entry permit renewal fee as a mechanism to fund the Permit Buy-Back Program. Proposed legislation has been written by CFEC that could apply to the financing of any management or enhancement activity. This approach has also been implemented recently by the Canadian Department of Fisheries and Oceans for the Pacific salmon fleet. In FY 87 approximately $2.9 million in renewal fees were collected. Obviously, a doubling of the renewal fee would produce large tax revenues. This approach appears to have a low level of fishermen acceptance.

Create a Terminal Area License Fee:

A terminal area license fee gives fishermen the alternative to fish in a controlled area of the fishery for a fee. This system would be different from other forms of cost recovery because the fisherman exercises his freedom of choice in making an economic decision of whether or not to enter the fishery. This system would be applied to areas that have a high portion of enhancement-produced fish; the area would only be open to users with valid entry permits. Another variation on the license fee would be to have fishermen bid for the rights to enter the fishery. Since this approach would be suited to sites with terminal-fishing areas or a high fraction of hatchery-produced fish, the amount of revenue that could be generated is small (relative to total program costs). To generate significant amounts, revenue license fees would have to be substantial. At $1,000 each for 200 seiners at Hidden Falls, the program receipts would be on the order of $200,000. This approach appears to have a low level of fishermen acceptance.

Increase the Recreational Fishing License Fee or Have a Supplemental Fee for Hatchery Fish and Earmark a Portion of the Program Receipts for FRED:

Existing studies on willingness to pay for nonresident sport fishermen in the Pacific Northwest indicate that these users are willing to pay far more for the rights to harvest Alaskan salmon. Currently, all license receipts are channeled into the Division of Sport Fish. Substantial revenue could be generated by a small increase in recreational fishing fees. In 1986, 308,472 sport licenses were sold. If we assume that 250,000 salmon fishermen would buy a $5.00 salmon enhancement stamp, this would generate $1.25 million in revenue. A bill for increasing general recreational user fees was submitted but not passed during the 1987 Legislative Session.

Create a Subsistence or More Aggressive Personal-Use License Fee:

Further study on this option is required. Subsistence and personal-use representatives were not present at the funding meetings. It is likely that there would be user opposition to the fee.

Creation of an Enhancement Authority:

A summary of the legislative work on a proposed enhancement authority has been compiled by Brad Pierce of the House Research Agency. The adaptation of existing statutes to produce a long-term funding solution for the state's ocean-ranching program would create a single, statewide public corporation along the lines of the Alaska Power Authority. The enhancement authority would combine the resources of the public and PNP hatchery systems. The authority would have revenue-generating and bonding powers and would be responsible for distributing the costs of the

ocean-ranching program as equitably as possible among user groups. The enhancement authority is seen as a long-term means of reducing the state's general fund contribution to enhancement activities. Pierce outlines several assumptions that must be shared by user groups before an enhancement authority mechanism could become politically acceptable. (Pierce, 1987, "The Enhancement Authority: A Long-Term Funding Mechanism for Alaska's Ocean-Ranching Program.")

Harvest of Fish by FRED and Direct Sale by Government:

Even the most careful directing of commercial fishery gear and sport fishing effort to salmon fisheries may result in sustained underutilization of some fish stocks. Stocks that are produced from state-owned hatcheries generally are fully exploited. A few hatchery stocks consistently have surpluses at the hatchery's terminal-harvest area or in freshwater locations. It is technically feasible for FRED Division to collect the fish in these areas. Collection would probably be similar to methods used for cooperative agreements at a few state facilities. Major objections have been voiced by the fishing community.

Selling Immature Fish and Fish Products (e.g., live fish and eggs to fish farmers, unripe eggs, and carcasses):

Spawned carcasses have economic value, and a range of contracts exist for competitive bidding on spawned fish. The state also sells green and eyed eggs to PNP operators for brood-stock development purposes.

Charge for Consultant Fees for Specialized Services of FRED Division (fish culture expertise, bioengineering, pathology, etc.):

It may be possible to implement some consulting fees, but there are administrative and program conflicts that suggest this option has limited potential to generate revenue.

Visitor Fees for Hatcheries (e.g., charge for tour companies, gate fees, hatchery literature, and fish food for hand-feeding low-risk lots of fish):

See page 18 Results section and Appendix A.

Create Mechanism to Accept Grants from Local Support Groups and Individual Donations:

Under AS 16.05.050, the Commissioner of ADF&G can accept these grants; however, the process should be clarified by the Attorney General's Office.

Reschedule Debt on Public Hatcheries/Use for Operating Costs:

Each year the state pays interest and principal on over $50 million in bonds sold to build public hatcheries. This mechanism was investigated and determined to be administratively and legally difficult.

Transfer and/or Lease Hatcheries to PNP Ownership:

This mechanism is not intended to generate new revenue but to keep hatcheries from closing because of potential budget reductions and to maintain the social and economic net benefits to the state. The most obvious method of transferring hatchery ownership is an outright sale of the facility. PNP facilities have been granted the rights to produce, harvest, and sell salmon to recover the costs of operations. This cost-recovery arrangement would provide an alternative option to using general fund dollars for operational costs. Those specific conditions allow a somewhat stable financing of some of the PNP operations. Generating new revenue for the state treasury is not the intent of this mechanism.

This has been one of the more widely debated approaches to financing fisheries enhancement in Alaska. Legislation would be required to transfer hatcheries, and the Legislature will need to determine the appropriate course of action. Support for the approach seems to be mixed in the Legislature and among fishermen.

Cooperative Agreements:

In FY 88 the FRED Division is using a temporary financing mechanism called a "cooperative agreement" for operating some state-owned hatcheries. The mechanism also involves a contract between the regional association and limited-entry permit holders. The intent of this approach was to capture some of the revenues from the salmon harvest and channel them into the program receipts to help offset operating costs of the facility. The revenue generated by this approach was from 30% to 50% of the operating costs of the facilities.

Contracting Out Hatchery Operations and Harvest:

The most obvious method for contracting out hatchery activities is through a professional services contract (PSA). The PSA could be applied to either the operation of a state-owned hatchery, the harvest of fish from a state-owned hatchery, or both. The current thinking is that most PSAs would be applied to both hatchery operation and harvesting. The PSA would involve a small fee or no fee because the contractor would have a vested interest in the continued operation of the facility.

PROGRESS ON LEGISLATIVE INTENT ASSIGNMENTS

The FRED Division has addressed all eight legislative intent statements during the interim. Some of the concepts that have not been as effective as was hoped will be reviewed.

Harvesting of Surplus Fish by FRED at Hatchery or Other Enhancement Sites and Sale of the Fish to Various Public Agencies and Private Processors

The user groups view state harvest of hatchery fish for sale as direct competition.

Conducting Tours and Tourist-Related Activities at Hatcheries

These proposals have met opposition from municipalities and tour companies; however, this opposition is viewed as a temporary situation that may be alleviated by educating the opposing parties about the economic and program benefits. Currently, the FRED staff is consulting with the Division of Tourism to define a reasonable system of tours and fees (see Appendix A).

Sale of Carcasses

Some revenue has been generated, and it may be increased with better planning and advertising (see Appendix D).

Sale of Trout Fingerlings

Rainbow trout fingerlings could not be sold because they are produced for the sport fishery by federal funds.

Use of Correctional Institution Inmates on Site for Non-skilled Labor

Corrections institution residents were employed to assist at hatchery sites, and reports of results have been positive (see Appendix D). This is an outstanding example of interagency cooperation.

Shared Operations

The legislative intent statements have generated a renewed cooperative effort between ADF&G and the PNPs to maintain operation of state hatcheries. Kitoi Bay and Cannery Creek Hatcheries were operated because of supplemental funding from cost recovery of hatchery returns. Two seine boat owner associations contributed labor to place the barrier net at Hidden Falls Hatchery, and cost recovery was also used to pay for its operations. This net allows for separation of brood-stock in order to continue the early chum salmon run so valued by the fishermen in southeast Alaska.

Summary of 1988 Experiences

Generally, the positive experience from addressing legislative intent has provided the cornerstone for the FY 89 FRED Division budget strategy, which proposes to move operation of four hatcheries to the PNPs and yet keeps the state as owners and managers. The private-sector users are guaranteed a direct voice in cooperative planning and operations of the facility, yet continued state ownership assures that legal requirements for management, regulation, and use of capital construction bond funds are met. With the fishermen taking a more direct financial responsibility for operating hatcheries that are currently producing fish, FRED Division can use available general funds to address critical program inefficiencies, such as underutilized hatcheries and to develop sockeye salmon enhancement, which puts Alaska in a more advantageous economic position.

To comply with legislative intent, FRED Division proposed the use of contracts with regional associations. Without the contracts, the budget required for fish production in FY 89 would be at least $1.3 million higher than the proposed FY 89 Governor's budget. The Legislature urged the public and private aquaculture sectors to attempt to keep in operation those hatcheries that ultimately would have been closed on July 1, 1987. For those legislators who place priority on hatchery production in their districts, it gave an additional opportunity to support those activities. These efforts provided guidance in exploring the options for short- and long-term relief to the general fund and in defined roles and responsibilities of the participants.

The enhancement funding work group addressed various options that were also discussed at meetings with PNP boards of directors, regional planning teams, and the public. From these discussions emerged three short-term and long-term solutions:

1. Contract operations of some commercial fish production hatcheries to the private sector. The state would retain ownership and management responsibility.

2. Review current use of raw fish tax revenue and make recommendations as to how that tax might be applied differently to relieve general fund support of fishery enhancement.

3. Further explore implementation of an Enhancement Authority on a regional or statewide basis.

As was previously stated, the FY 89 FRED Division budget proposed a short-term strategy developed after evaluation of state-private cooperative ventures, work-group efforts, and socio-economic considerations. Four hatcheries would be contracted to the private sector, allowing use of ongoing general fund appropriations to maximize existing state hatchery potential and

further sockeye salmon production technology that will contribute more to the state's economy. This approach allows the continuation of current salmon production and the increase of future production without increasing capital or operational expenditures of general funds. It provides recognition of the unique roles of the public and private aquaculture sector.

The legislative intent statements of almost nine months ago and the efforts of the enhancement funding work group have set the aquaculture sectors on a clear road. The state should continue to be ultimately responsible for the hatchery salmon enhancement program the people of Alaska mandated through legislation and bond referendums. The public and private sectors have distinct yet shared roles in aquaculture development and maintenance. The raw fish tax allocation should be reviewed as a source of fishery enhancement funding, and the salmon Enhancement Authority may provide a vehicle for future fiscal support of enhancement activities.

MAJOR CONCLUSIONS OF THE LEGISLATIVE INTENT STUDIES

This report has offered an overview of the legislative intent, stated in the FY 88 FRED Division budget, and the results of the intent assignments. Proposed solutions to the main task, which are analysis and implementation of innovative funding techniques, have been included in the "Results" section of this report. The major conclusions of this report follow.

The present and projected fish catches as well as the net benefits and impacts of the statewide fishery enhancement program are very large.

In the commercial fishery, the net benefits, or profits from these projects, accrue primarily to the fishermen who own limited entry permits; however, the impacts of the program ripple through the general state economy, and Alaskans in almost all regions of the state realize increases in personal income in not only the fishing sector, but also the fish processing sector, government sector, and through service, wholesale and retail trade sectors. The impacts in terms of personal income to resident Alaskans are greater than the dollar-for-dollar impacts of typical state expenditures from the general fund, capital projects, and the permanent fund disbursements.

There was a clear consensus among fishermen user groups and in the work group at large that the FRED Division should receive full funding for hatcheries from the general fund as a first priority.

Most work group members acknowledged that this was the most secure way of continuing the economic net benefits of enhancement projects.

A key issue in the funding discussions was whether primary users should pay a greater share of fishery enhancement than now.

Two contrasting opinions were discussed in the working group on this subject.

1. As noted in the result section of this report, fishermen groups were unanimously opposed to tax and license fee mechanisms that might increase their contribution to the state treasury for fishery enhancement. The regional association representatives and fishing leaders have pointed out that existing tax revenues from the fishing industry are already large and approximately offset general fund expenditures for fishery management and enhancement. Fishermen also assert that they are large contributors to the general fund, and there should not be additional fees imposed on them. The fishing leaders explain that any additional costs of fishing may impose financial hardships on a fleet already saddled with many costs.

2. The second view presented to the work group states that the salmon fishery is a common property fishery that belongs in part to all Alaskans. As with the royalty oil taxes, the residents of Alaska have a right to collect rents to the state treasury that are equal to or in excess of the amount required to manage and enhance the fishery or to find other methods of sharing costs of enhancement among the primary beneficiaries.

It is not the intent of the FRED Division or this report to suggest which view is appropriate. The Legislature has to determine the social and economic goals it wishes to achieve with fishery enhancement. The availability of funding for statewide enhancement as well as the net benefits from the state fishery enhancement program could be dramatically effected by legislative action on user financing. The timing is also critical in that a phased reduction of the General Fund with appropriate legislation will avoid a major discontinuity of the economic benefits of hatchery production.

The corner stone of this division's short term and incremental approach to future funding is the FY 89 proposed budget strategy of contracting operations of state hatcheries to the private sector.

The concept of contractual agreements in the FY 89 budget represents a small but significant shift toward a greater user participation in hatchery funding and hatchery decision making. They allow for greater user participation in financing in return for considerable additions in future harvests, net benefits to fishermen, and personal income and employment in Alaska's economy. These benefits derive from reprogramming funds that would otherwise be spent to operate conventional, commercial fish production hatcheries. None of the parties involved in the various meetings listed in Appendix C actively opposed the use of contracting out hatcheries to the regional aquaculture associations as a short-term solution.

The "Results" section of this report details the approach FRED Division will take to develop competitive bids for contracting hatchery operations. The success of this process will depend on legislative approval of the FY 89 budget, bidding/award procedures, the active interest of participating regional associations, and bids with no direct contract costs.

Since the contracts for state hatchery operation are innovative, legal or administrative obstacles may delay or stop the process. The fishing industry and the entire state economy would suffer both short- and long-term losses if the targeted hatcheries were shut down or other FRED programs were put in "mothball" status. Perhaps the Legislature could suggest other solutions to avoid these losses, such as an exemption from the new procurement code or an amendment to the PNP statutes.

Fulfilling the requirements of the FY 87 legislative intent has been a highly interactive and revealing process for all participants. On one hand, the interacting with varied interests in the work group as well as developing the analytical information, has allowed us to examine funding methods open to government. On the other hand, it has shown us that implementation of effective and innovative funding methods must be incremental in nature and will require patience and cooperation of government, user groups, and the Legislature. In the final analysis, it may be possible in FY 89 and, perhaps, FY 90 to promote increased user participation in funding fishery enhancement. Other measures have been taken to reduce FRED Division's dependence on the general fund and generate program receipts. However, in the short term, there remain no other legal and politically acceptable quick fixes that would result in larger scale reductions in FRED's operating budget without significant reductions in enhanced salmon production and considerable dislocation in the general economy.

The FRED Division believes this report should not be the end point for the funding investigation process. **The division intends to continue work group effort in designing longer term solutions.**

ACKNOWLEDGEMENTS

We would like to acknowledge all of the members of the Enhancement Funding Work Group for assisting in carrying out the legislative intent and completing this report. Special thanks to Brad Pierce, Ken Leon, and Sid Morgan for comments and editorial assistance and Shaleen Harrison for editing and typing the report.

MEMORANDUM State of Alaska

TO: Tom Kron, Chief of Operations
Division of Fisheries Rehabilitation
Enhancement and Development
Department of Fish and Game

DATE: January 7, 1988

FILE NO:

TELEPHONE NO:

THRU:

SUBJECT: Fish Hatchery Site Visitation

FROM: Mary B. Klugherz, Marketing Coordinator MK
Division of Tourism
Department of Commerce &
Economic Development

The purpose of this memo is to outline my preliminary observations and identify issues regarding the development of Crooked Creek Fish Hatchery and Elmendorf Fish Hatchery as revenue generating visitor facilities. These comments are based upon my discussions with you, Tim McDaniel and your staff at both these facilities, and my site visitation the week of December 14.

Overview

The Legislature has put intent language on your division's budget to work with the Division of Tourism to begin developing the potential for generating tourist receipts within the state hatchery program. Since many of the state operated hatcheries already receive many thousands of visitors each year, both resident and nonresident, program receipts generated as the result of a fee charged could represent several thousand dollars. In addition, these hatcheries are not marketing themselves as visitor facilities, yet are still attracting substantial numbers of visitors, particularly those on the highway system. It is within the realm of possibility that visitation of selected sites could increase dramatically with some basic marketing efforts. However, marketing these sites should not occur until basic visitor amenities are provided at these sites. The question then becomes, which sites should be targeted for potential development and what will be the cost for the development. In addition, how does your division collect fees both before and after development.

In our discussions, we reviewed the location and facilities of the state operated hatcheries and agreed to concentrate on those facilities on the

road system with large numbers of current visitors, and potential to attract more visitors. During my recent trip to Anchorage, I was able to visit the Crooked Creek Hatchery and the Elmendorf Hatchery. I will discuss each individually.

Crooked Creek Hatchery

This site, located approximately 12 miles south of Soldotna, receives approximately 50,000 visitors per year. This facility currently has no road signage, visitor parking, restroom facilities, or interpretive displays to speak of, yet still receives this large number of visitors each year, primarily between June and August. Visitors are both resident and nonresident, as many residents bring visiting friends and relatives to see the hatchery. This represents several hundred visitors each day.

The current situation at the hatchery, with this high visitation and no visitor facilities, raises several issues which the state should address. It is understandable that the state sees an opportunity here to generate revenue from the hatchery visitor. In order to charge for a visit, though, the facility should offer the visitor something - whether it is a self-guided tour with interpretive displays, or a tour guided by a knowledgeable individual. In addition, several improvements should be considered for both safety and ease of visitor flow. Among these improvements are a parking lot, restroom facilities and visitor paths.

During our visit, the manager of the Crooked Creek site indicated that several years ago a consultant was hired from Washington State to look at several hatchery sites and make recommendations for development of visitor facilities. The recommendations for Crooked Creek included drawings of a parking lot, pedestrian bridge, visitor information center and interpretive displays. These drawings and recommendations should be located and studied to see if they can be used today. In addition, costs associated with developing such facilities may be included to give an idea of investment capital necessary to pursue this direction. At a minimum, this facility needs a parking lot and restroom facilities, just to handle the current visitor volume.

Then there is the issue of generating revenue. Unless there is a controlled situation, where there is one entrance with an attendant to collect the fees, visitor donations must be relied upon. This could be as simple as a donation box with adequate signage requesting donations and explaining their use (i.e. donations help maintain the facility, etc.). The donation box must be in a secure place, so as not to encourage vandalism and theft. The recommended amount of donations or fees needs to be discussed as well.

The Crooked Creek Hatchery site has tremendous potential as a visitor facility, but it is in desperate need of visitor facilities. It has the potential to accommodate more people than are currently visiting the site, with some minimum site improvements. It is up to the Department of Fish and Game as to whether the capital investment is worth the revenue generated.

Elmendorf Hatchery

This hatchery, located five minutes from downtown Anchorage, also has tremendous potential for visitor use. The site has no road signage, no interpretive displays, or restroom facilities. It does have a parking lot, however. The large viewing area for the waterfalls to observe the fish jumping is ideal for large groups of visitors. However, for safety, the area needs additional railing and handicapped accessible paths, as well as interpretive displays and perhaps a self-guided tour.

As with the Crooked Creek Hatchery, this site receives thousands of visitors (approximately 30,000), with no marketing efforts. Given its proximity to downtown Anchorage, this site's potential for visitor use is tremendous. Recommendations for visitor facility development were also made by the Washington State consultant regarding this site. These should be located and studied as well.

This site could immediately install a donation box in a secure area to begin to generate program receipts while it is undergoing further development.

Issues

During my site visitations and discussions with the staff, several issues came to mind with regard to the development of state operated fish hatcheries as a visitor attraction. The development of this resource into a visitor attraction has many positive benefits including providing additional visitor attractions, generation of program receipts and providing a means to educate the public (both resident and non-resident) about the state's valuable fisheries resource. Several concerns come to mind, however, which need to be addressed. These are as follows:

1. Fee collection - Until the fish hatchery facilities have a controlled situation, collection of a fee from individuals is very difficult. An interim measure is a donation box, located in a safe, secure area. To collect a fee, the facility should offer something to the visitor, such as a self-guided tour and interpretive displays at a minimum. In addition, basic visitor amenities should be provided (i.e. restrooms).

Who do you charge for fees? Visitors only? Visitors and residents? It is my understanding that many residents visit the fish hatcheries regularly. Do you charge them for each visit? Do you risk damaging relationships with local residents who may consider, as taxpayers, that they already support the hatchery? Other state agencies have faced a similar situation - that is, the need to generate revenues and have instituted fees (i.e. Alaska State Museum in Juneau). Lessons can be learned from these agencies by contacting them and discussing the challenges and issues they faced when initiating fees.

How much do you charge? What is the value of the experience? Do you charge adults one fee, children another, senior citizens another?

Requiring fees from tour operators who may feature a fish hatchery on an itinerary is a sensitive issue. While tour operators may understand the need for a fee to be charged, that fee gets passed along to the consumer and eventually increases the cost of the tour. As tour operators get charged more and more fees by state and federal agencies, the cost of tours increases and lends to the image that Alaska is a high-priced destination. In the long run this is not constructive for anyone in the industry. However, tour operators should be kept informed of the possibility that fees for fish hatchery visitation may be implemented. These operators should be encouraged to include the hatchery on itineraries and at the same time a negotiated agreement with regard to fees could be worked out. Ketchikan is a good example of a fee structure that meets everyone's satisfaction. In addition, the planning cycle for tour operators should be acknowledged when discussing fees. Most large operators are finalizing their summer 1989 tariffs (retail tour rates) by February and March of 1988. If operators are not informed until May 1989 that a fee for hatchery visitation for summer 1989 is to be charged, they will not only be upset, but also may drop the hatchery from the itinerary. This doesn't serve anyone's purpose.

2. Capital Investment Needed - It is clear that the two facilities visited need some capital improvements to serve current visitors as well as encourage increased visitation. In addition, due to the large number of visitors at Crooked Creek, without improvements or limitations on visitation, the state may be faced with a liability problem. Improvements can be made in stages, with the initial investment kept to a minimum and

subsequent improvements made out of revenue generated. Whether money is available for improvements prior to revenue generation is a question which I can't answer. However, I would encourage creative solutions to this situation, (i.e. local service clubs providing assistance with project development, etc.).

3. Staffing - The current staff at the fish hatchery sites have become very involved in dealing with the visitor. Some enjoy it, some don't. Spending time with visitors may decrease the time the staff should spend on their primary function. The self-guided tour is one solution to this situation. Another is to utilize university students as guides - either tourism students or fisheries students. Train them and pay them out of program receipts. This could not only provide a positive visitor experience, but also valuable job training and experience for Alaska's future tourism and fisheries professionals.

Next Steps

Since most fish hatchery sites were not built with generating visitor traffic in mind, each site poses unique challenges. The following next steps are recommendations to the FRED Division for proceeding with these challenges.

1. Address issues - I've pointed out a few issues which need to be addressed in the context of each site. In addition, you may have identified additional areas of concern.

2. Previous Plan - It is important to find the previous consultants' visitor development plans for the facilities analyzed at that time. These plans may provide many answers to questions regarding improvements and costs.

3. Other States - There are several other states who have built fish hatcheries and incorporated visitor flow into their facilities (Oregon and Washington in particular). A review of their work would be worthwhile.

From these steps, you can formulate plans unique to each site which can be implemented soon. Focus must be kept on the main objective, which is to generate revenue through program receipts. Program receipts can't be generated without some site improvements. Once site improvements are made and a little marketing is done, program receipts should increase, therefore accomplishing the main objective.

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Appendix B.

ENHANCEMENT FUNDING WORK GROUP

Allee, Brian - ADF&G, Juneau.
Amend, Don, - Southern Southeast Regional Aquaculture Association, Ketchikan.
Blake, Bob - United Fishermen of Alaska, Cordova.
Bruce, Geron - United SE Alaska Gillnetters, Juneau.
Burkett, Bob - ADF&G, Juneau.
Cole, Bob - Representative Peter Goll's Office, Juneau.
Daisy, Dave - ADF&G, Anchorage.
Esquiro, Pete - Northern Southeast Regional Aquaculture Association, Sitka.
Good, Gale - Alaska Trollers Association, Juneau.
Graham, Kate - United Fishermen of Alaska, Juneau.
Hartman, Jeff - ADF&G, Juneau.
Heinkel, Harold - ADF&G, Juneau.
Holm, Oliver - Kodiak Regional Aquaculture Association, Kodiak.
Kron, Tom - ADF&G, Juneau.
Madden, Jerry - ADF&G, Juneau.
Massey, David - DCED, Juneau.
Mears, Tom - Cook Inlet Aquaculture Association, Soldotna.
Muse, Ben - CFEC, Juneau.
Pierce, Brad - House Research Agency, Juneau.
Schelle, Kurt - CFEC, Juneau.
Sele, Brad - ADF&G, Juneau.
Sommerville, Ron - Territorial Sportsmen, Juneau.
Suzumoto, Bruce - Prince William Sound Aquaculture Corporation, Cordova.
Troxell, Nick - Kodiak Regional Aquaculture Association, Kodiak.
Wright, Tom - Representative Swackhammer's Office, Soldotna.

Appendix C.

FRED DIVISION MEETINGS WITH CONSTITUENCY GROUPS

The following meetings with the listed parties were held during 1987 by Dr. Brian Allee, FRED Division Director, and/or FRED staff to discuss legislative intent on FRED funding.

April 10	-	Southern Southeast Regional Aquaculture Association (SSRAA) Board of Directors, Ketchikan, Alaska
May 7	-	Kodiak Public Meetings, Kodiak, Alaska
May 15	-	Kodiak Regional Aquaculture Association (KRAA) Board of Directors, Kodiak, Alaska
May 16	-	Cook Inlet Regional Aquaculture Association (CIAA) Board of Directors, Soldotna, Alaska
June 6	-	Prince William Sound Aquaculture Corporation (PWSAC) Board of Directors, Cordova
August 30	-	Interagency Enhancement Funding Meeting, Juneau, Alaska
September 15/16	-	Interagency/Fisherman Organizations Enhancement Funding Meeting, Juneau, Alaska
October 2	-	SSRAA Board of Directors, Ketchikan, Alaska
October 12	-	Northern Southeast Regional Aquaculture Association (NSRAA) Executive Committee, Sitka, Alaska
October 13	-	Prince William Sound Regional Planning Team, Cordova, Alaska
October 14	-	PWSAC Executive Committee, Cordova, Alaska
October 15	-	KRAA Board of Directors, Kodiak, Alaska
October 15	-	Kodiak Regional Planning Team, Kodiak, Alaska
October 16	-	Cook Inlet Regional Planning Team, Soldotna, Alaska
October 17	-	CIAA Board of Directors, Soldotna, Alaska
October 20	-	Northern Southeast Regional Planning Team, Juneau, Alaska
October 21	-	Southeast Gillnetters Federation, Juneau, Alaska

October 22	-	Southern Southeast Regional Planning Team, Ketchikan, Alaska
October 23	-	United Fishermen of Alaska, Anchorage, Alaska
October 28	-	Southeast Seiners Association, Seattle, Washington
October 29	-	Southeast Alaska Gillnetters, Seattle, Washington
November 13	-	NSRAA Board of Directors, Petersburg, Alaska
December 2	-	Enhancement Work Group, Juneau, Alaska
December 8	-	Bristol Bay Regional Planning Team and Bristol Bay Aquaculture Association, Public Meeting, Anchorage, Alaska
December 9	-	Public Meeting, Juneau Alaska

MEMORANDUM State of Alaska

TO: Bev Reaume
Director
Division of Administration

DATE: December 11, 1987

FILE NO:

TELEPHONE NO: 465-4160

FROM: Brian J. Allee
Director
Division of FRED

SUBJECT: Compliance With Legislative Intent

1. IT IS THE INTENT OF THE LEGISLATURE THAT THE FISHERIES REHABILITATION AND ENHANCEMENT DIVISION, USING UP TO $150,000 IN INTERAGENCY RECEIPTS, WILL WORK WITH THE DEPARTMENT OF CORRECTIONS TO DEVELOP A CORRECTIONAL INDUSTRIES PROGRAM AT DIVISION HATCHERIES. THE DIVISION SHALL ENTER INTO A COOPERATIVE AGREEMENT WITH CORRECTIONAL INDUSTRIES FOR THE USE OF INMATES FOR ON SITE NON-SKILLED LABOR AND FOR THE PROCESSING OF NON-SALEABLE EXCESS FISH FOR ANIMAL FOOD AND INDUSTRIAL PRODUCTS. A REPORT ON THIS PROGRAM SHALL BE SUBMITTED TO THE LEGISLATURE ON THE TENTH DAY OF THE 1988 SESSION.

- <u>Inmate Work Program</u>: The division entered into the agreement with the Department of Corrections to use minimum security inmates for on-site, non-skilled labor. A total of 12-14 inmates were involved in work at five separate sites.

  <u>Corrections Processing of Unsalable, Excess Fish</u>: An agreement to supply food-quality salmon to the Department of Corrections did not materialize since it was primarily based on the harvest of sockeye salmon returning to Tustumena Lake. Unfortunately, the concept of state-sponsored cost recovery met with strong opposition from the Cook Inlet fishing industry. FRED Division did supply Corrections with good quality sockeye and coho salmon broodstock carcasses for experimenting with alternate food products. A total of $50,000 was transferred from the Department of Corrections to FRED Division to compensate for joint-venture activities.

2. IT IS THE INTENT OF THE LEGISLATURE THAT THE DEPARTMENT, THE GOVERNOR'S OFFICE, THE AQUACULTURE ASSOCIATIONS,THE PUBLIC, AND FISHERMAN'S GROUPS MEET TO DEVELOP INNOVATIVE POLICIES FOR THE GENERATION OF REVENUES TO OFFSET THE DECREASING AVAILABILITY OF GENERAL FUNDS. THE DEPARTMENT SHALL REPORT ITS RECOMMENDATIONS TO THE LEGISLATURE BY THE TENTH DAY OF THE 1988 SESSION.

- An interagency technical work group has been formed to address directly the issue of decreasing revenues. All parties listed in the intent were invited to participate.

The technical work group held two meetings to develop revenue alternatives. These alternatives were reviewed by the expanded group, including aquaculture associations and fishery user group representatives. Presentations were made to user group and aquaculture association board meetings and to regional planning teams. All participants reached consensus on content of an outline for preparing a report. The outline was the topic of two scheduled, advertised, and centrally located public discussions.

3. THE BUDGETED HIDDEN FALLS NET BARRIER CONTRACT REIMBURSEMENT FEES ARE INTENDED FOR USE AT THE HIDDEN FALLS HATCHERY.

- Under a cooperative agreement with the department, two southeast Alaska seine boat user group associations harvested $95,469.90 worth of chum salmon. This amount was dedicated to operating the barrier net.

4. IT IS THE INTENT OF THE LEGISLATURE THAT THE DIVISION WILL WORK WITH THE DEPARTMENT OF COMMERCE, DIVISION OF TOURISM, TO PROMOTE TOURS OF FRED DIVISION HATCHERIES, AND THAT FEES WILL BE CHARGED FOR SUCH TOURS.

- Because the budget cycle begins essentially during the peak of the tourist season in Alaska, FRED Division was not able to organize and implement formal tour projects at hatchery facilities in the region during the first half of FY 88. FRED Division staff are currently working with the Division of Tourism to determine which hatcheries can accommodate tourist viewing systems and what fees are reasonable.

5. IT IS THE INTENT OF THE LEGISLATURE THAT THE PROGRAM RECEIPTS REQUIRED OF THE DEPARTMENT SHALL INCLUDE BUT NOT BE LIMITED TO FUNDS DERIVED FROM THE FOLLOWING SOURCES: EGG SALES, HATCHERY TOURS, RENT RECEIPTS AND RAINBOW TROUT FINGERLING SALES. THE DEPARTMENT SHALL WORK TO DEVELOP AND EXPAND THESE REVENUE-PRODUCING ACTIVITIES.

- <u>Egg Sales</u>: Eggs were sold from three hatcheries and will have generated $63,202.75 when all funds have been received.

  <u>Hatchery Tours</u>: Tours of two hatcheries will have generated approximately $37,000 in donations or fees.

  <u>Rent Receipts</u>: The FRED hatchery rental program is being operated in-house, and all receipts will be used to offset general funds to support the program.

Trout Fingerlings: All rainbow trout fingerlings are produced at FRED facilities supported by federal funding and cannot be marketed.

Carcass Sales: Carcasses were sold from five hatcheries. Income from carcass sales was approximately $80,000.

6. IT IS THE INTENT OF THE LEGISLATURE THAT THE DIVISION ENTER INTO AGREEMENTS WITH COOK INLET AQUACULTURE ASSOCIATION, THE PRINCE WILLIAM SOUND AQUACULTURE ASSOCIATION, AND THE KODIAK REGIONAL AQUACULTURE ASSOCIATION TO PROVIDE ASSISTANCE IN THE OPERATION OF TUTKA BAY, CANNERY CREEK, AND KITOI BAY HATCHERIES, RESPECTIVELY, ON A COOPERATIVE BASIS. A REPORT OF THIS EFFORT WILL BE PROVIDED TO THE LEGISLATURE BY THE TENTH DAY OF THE 1988 SESSION.

- Agreements were formalized with the three associations. Cooperative operations occurred at Kitoi and Cannery Creek Hatcheries allowing both to continue operating in spite of General Fund shortfalls, and each being filled to the maximum with eggs for FY 88. The Legislature determined to fund Tutka fully, so Cook Inlet Aquaculture Association did not participate.

7. IT IS THE INTENT OF THE LEGISLATURE THAT THE REVENUE PRODUCING ACTIVITIES ONGOING AT TUTKA, KITOI, AND CANNERY CREEK WILL BE EVALUATED AS MODELS FOR ADDITIONAL REVENUE GENERATING ACTIVITIES WITH THE INTENT OF MAINTAINING THE STATE'S CONTINUING OWNERSHIP, MANAGEMENT AND OPERATION OF F.R.E.D. DIVISION HATCHERIES. A REPORT WILL BE SUBMITTED TO THE LEGISLATURE BY THE TENTH DAY OF THE 1988 SESSION.

- Through experience with Kitoi and Cannery Creek, the division has determined it can enter into long-term contracts with regional aquaculture associations to operate these hatcheries. Also under consideration is contracting-out operation for partial operation of Hidden Falls and Trail Lakes Hatcheries. Ownership would remain with the state, and major goals and objectives of the operations would be arrived at jointly through a management planning process approved by the Commissioner of the Department of Fish and Game. The specific terms of the contracts are still to be negotiated.

8. IT IS THE INTENT OF THE LEGISLATURE THAT THE DIVISION WILL INCREASE ITS ACTIVITIES ASSOCIATED WITH MAINTENANCE OF NATURAL FISH RUNS AND WILL WORK WITH THE SPORTFISH, COMMERCIAL FISH, AND HABITAT DIVISIONS TO IDENTIFY NEEDS AND DEVELOP PROJECTS.

- The fishery division directors have scheduled a series of meetings to jointly review the fishery program of the three divisions and to examine areas where coordination

can be improved and conflict or duplication eliminated. These meetings include presentations on ongoing projects and proposed changes, discussion of issues and differences, and examination of future joint efforts to address fishery unit needs.

Bev, I hope this meets the needs for your coordinated response. If you have questions, contact me or Jerry Madden.

cc: Jerry Madden