ALASKA LEGISLATURE COMMITTEE FILES 1987-1988 8672
4977 HRES HB 423 - HB 454

TOGIAK MARINE TOURISM CENTER

I. PROJECT DESCRIPTION

Construction of a public boat launching ramp and surrounding park to serve as the focal point for tourism opportunities in the area. From the park small boats will transport visitors to Walrus island, Round Island, Togiak National Wildlife Refuge and the Togiak River.

II PROJECT READINESS

Engineering may begin immediately following confirmation of funding. Engineering costs will be absorbed by the City of Togiak. Construction can start May 1, 1988 to coincide with completion of the Togiak Fisheries Wharf.

III. TIMING OF DEVELOPMENT

Confirmation of funding - Engineering

May 1 - Start up of Marine Tourism Facility and completion of Fisheries Wharf. (Date is contingent on absence of ice in slough).

June 1 - Completion of Marine Tourism Facility in time for beginning of tourism season.

IV. LONG TERM OPERATION AND MAINTENANCE IMPLICATIONS FOR THE STATE.

None. The City of Togiak will assume all costs.

V. PRESENT LEVEL OF USE AND NEED FOR BASIC MAINTENANCE.

Minimal. Occasionally the ramp will need to be graded. Litter pick-up at the park will be accomplished by community service workers.

VI. ECONOMIC IMPACT OF PROJECT.

This project is important in that it works to diversify the local commercial fishing and subsistence economy. Currently, tourists to nearby wildlife refuges fly into Togiak Fisheries (located across Togiak Bay from the City and inaccessible save by air) to charter boats. Togiak Fisheries is a seafood processing plant and has limited space for accommodating visitors.

Funding of the Marine Tourism Center would bring visitors into the community where they could more directly purchase local goods (crafts, food) and thereby leave more money in the community.

Additionally, the Center itself would draw more visitors into the area because it would serve as a central base for visitor operations for the entire area (e.g. Goodnews Bay, Quinhagak, etc.)

Section 37

Project: Naknek Museum

Location: Naknek

Amount: $15,000

Description: See attached material.

Bristol Bay Museum

STATEMENT OF PURPOSE

The Bristol Bay Museum is owned and operated by the members of the Bristol Bay Historical Society, a non-profit organization. The purpose of the historical society is to record and preserve the history of the peoples of the Naknek-Kvichak River drainage area of the Bristol Bay region in Alaska. Among the functions of the Bristol Bay Historical Society are maintaining a museum and collection, providing public information through programs and publications, carrying on research including oral histories, interviews and collection of documents, photographs, manuscripts, publications and objects.

The scope of the museum collection covers the Naknek-Kvichak River drainage from prehistoric man to present. The collection is composed of items related to canneries and the fishing industry, as well as the life style of the peoples of Bristol Bay.

SCOPE OF WORK

The type of work to be done at the Bristol Bay Museum lies in three areas: interior and exterior building upgrades, and an outdoor exhibit platform.

Inside the museum, a new heating system needs to be installed. The present system is a large oil stove, which over-heats the facility when it is turned on. The stove has backfired in the past, covering the museum with soot. Oily vapors from the stove could damage the collection.

The old linoleum floor in the museum needs to be torn up so that insulation can be laid. After replacing the floor, durable carpeting should be laid to minimize the amount of dust which collects throughout the year.

The exterior of the building also needs to be upgraded. Styrofoam insulation needs to be applied to the walls, and siding must be placed over the insulation. In addition, the exterior must be painted. This will greatly improve the museum's heat efficiency and appearance.

The historical society wants to erect an outdoor platform to display a double-ender sailboat donated to the museum. The foundation for the platform will be a concrete pad, upon which wood pilings will be placed to simulate a dock. The platform will be covered to keep rain and snow from filling the boat.

COSTS

Interior Upgrade	
Heating System	$1,000
Flooring, insulation, carpeting	$2,000
Exterior Upgrade	
Insulation, siding, painting	$5,000
Exhibit Platform	
Concrete, pilings, lumber	$3,000
Labor-All Projects	$4,000
TOTAL	$15,000

Funds may be remitted to Bristol Bay Historical Society, P.O. Box 136, Naknek, AK 99633. Attn: Peter Hill, President.

PROJECT READINESS AND TIMING DEVELOPMENT

The interior and exterior building upgrades can be started immediately. Materials and labor are available locally. We expect the upgrade projects to be completed within four months after they have begun.

The exhibit platform must be begun during the late spring, summer, or early fall, to avoid problems created by freezing temperatures. Once the cement pad has been poured, the platform can be completed within two months.

LONG TERM OPERATION AND MAINTENANCE COSTS FOR STATE

The Bristol Bay Museum is a self supporting museum. The state will bear no responsibility for operating or maintaining the facility.

PRESENT LEVEL OF USE

During 1987, three hundred visitors toured the Bristol Bay Museum. Many school teachers utilize the museum, bringing their classes on field trips to the facility. The museum was used as a research tool for a high school ora. histor, class this year, as well.

The museum is a regular stop for tour groups. Next year, a local hotel working with Westours plans to increase its use of the museum. The museum is used for historical society meetings, and last year the building was featured on a segment of Jay Hammond's Alaska.

NEED FOR BASIC MAINTENANCE

Due to the inadequate heat from the present system, the museum cannot be comfortably used during the fall, winter, and many of the spring months. School classes interested in the museum must make abbreviated visits because of the cold, or contact a historical society member to turn on the stove several hours prior to the visit.

Lack of insulation in the building and the inadequacy of the stove cause the building temperature to fluctuate. This fluctuation could gradually damage the collection.

An exhibit platform will not only enhance the aesthetic presentation of the sailboat, but also keep it from filling with rain, snow, and ice which could cause the condition of the sailboat to deteriorate.

ECONOMIC IMPACT

The projects outlined in this proposal will have a beneficial economic impact on the community. The upgrade and construction will provide temporary jobs for one or more residents. The materials will be purchased from local businesses. More important, the improved museum will enhance tourism, an item of growing concern to local business people. In addition, the increased attractiveness of the museum will help the self supporting facility generate more revenue.

APPROPRIATENESS OF STATE INVESTMENT

Naknek is the center of the salmon fishing industry, which is vital to the state's economy The Bristol Bay

Museum records and preserves the history of this great industry. This area is rich in history and culture, which needs to be preserved as an integral part of Alaska's history. In addition, the museum is an educational resource for local school children, showing them the past and the paths of the future. It is very appropriate for the state to invest in the Bristol Bay Museum, which preserves the past for the people of the region and the state.

BRISTOL BAY HISTORICAL SOCIETY, INC.
FOR PRESERVING WAYS OF LIFE,
LANGUAGE AND RECORDS OF THE PAST
BOX 136
NAKNEK, ALASKA 99633

February 1, 1988

Dear Sir or Madam,

We, the undersigned members of the Bristol Bay Borough community, support the existence and activities of the Bristol Bay Historical Society and museum. The building upgrade and exhibit platform proposed by the historical society will improve the museum and benefit the community. We support their application.

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[illegible]
[illegible]
[illegible]
Jan M. [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Clark
Donna Vusich
[illegible]
Ron Morrison
Paul E. Morrison
[illegible]

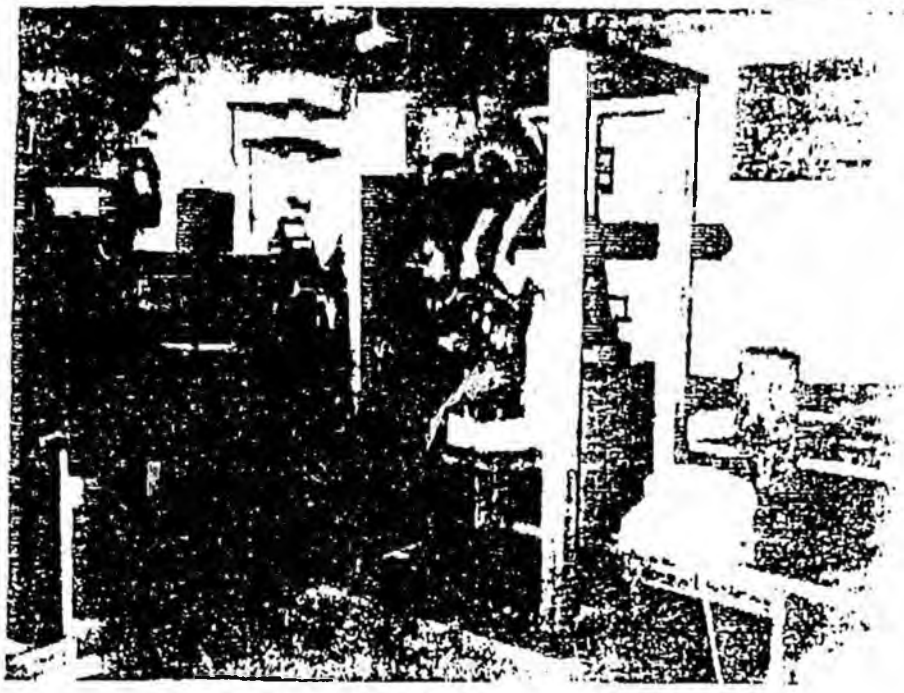
[illegible]
John C. Knutsen Jr.
Susan A. [illegible]
[illegible]
Larry Bradley
[illegible]
[illegible]
[illegible]
Chris Scott
[illegible]
[illegible]
[illegible]
[illegible]
Buddy J. Thompson
[illegible]
[illegible]
[illegible]
Anthony M. Chambless

BRISTOL BAY HISTORICAL SOCIETY, INC.

FOR PRESERVING WAYS OF LIFE,
LANGUAGE AND RECORDS OF THE PAST
BOX 136
NAKNEK, ALASKA 99633

Patty Lawrence
Jerry Holbrook
Stephen [illegible]
[illegible]
Marie [illegible]
Terri Beaulieu
Sally Backes
[illegible]
Glenn O. Anderson
[illegible]
[illegible]
Oscar Monsen
Mike Shapsnikoff
[illegible]
Laurie Anderson
Miriam [illegible]
Michelle Aspelund
Theodore [illegible] Jr.
Robert [illegible]
P.L. [illegible]
[illegible]
Diane Bakun
[illegible]

Jill A. [illegible]
Dean [illegible]
Tony [illegible]
Mary H. Johnson
Kelli Swanson
Peter E. Bakun
Kitty Wilson
Pamela Jones
James Huff
Lucy A. O'Hara
Mary K. Olson
[illegible]
Susanne Mundorf
Suzanne [illegible]
Maureen M. Knutsen
Phyllis Kochler
Mary Lou Aspelund
Roberta Bakken
Daniel E. [illegible]



Project #38: ALASKA CONSERVATION CORPS

Location:

Senate District:

House District:

Amount: $225,000 ($175,000 operations)

Description: This funding would reestablish the Alaska Conservation Corps (ACC) "Twin Bears" residential camp in the Chena River State Recreation Area near Fairbanks eliminated by FY'86-87 budget reduction. It would provide for staffing and operational expenses for an eight week session for 40 Alaskan youths, mostly from smaller Alaska communities.

This job-oriented camp accomplishes varied tasks such as construction and maintenance of trails, brushing of roadsides, facility maintenance, including refurbishing tables, barrier posts, guardrails, toilets, and shelters; landscaping use areas or correcting and rehabilitating erosional problems.

Funding would also provide for the upgrade and refurbishment of deteriorating camp buildings, and relocating a water well to meet necessary DEC standards.

Justification: This work-oriented camp provides an excellent opportunity for youths from small isolated communities to experience a new area, gain valuable

outdoor and construction skills, as well as develop valuable work ethics. Services provided to the public by ACC's labors are small in comparison to the enriching values these young people acquire by learning to work together, appreciating the outdoors and natural resources, and becoming better citizens and active contributors to society.

THE PRECEDING PAGES WERE TREATED AS
A UNIT IN THE ORIGINAL FILE.

2/24 HB 454/STATE HATCHERIES
(scheduled to be heard in resources 2/26)

Tom Mears from the Cook Inlet Acquaculture Association had the following to say about HB 454, State Hatcheries:

Fish & Game has determined that they will only be able to operate 15 of the 19 hatcheries in the state. As a solution they want to contract three hatcheries out to regional acquaculture associations in the area. (another alternative has been worked out for the fourth one)

Present procurement laws do not allow sole-source contracting. HB 454 is designed to remedy this problem by giving preference rights to acquaculture associations in this case.

The CIAA strongly supports this bill.

Cheri Shelley may try to get an amendment put on that would protect those state employees that would be laid off due to transferring the hatcheries (approximately 11 would be affected). The amendment would give priority to the laid off employees to be picked up by the associations.

The CIAA opposes the amendment. They want the flexibility to do their own hiring. It may even work out that they would pick up those laid off employees but they want the choice.

No. 1

STATE OF ALASKA
1988 LEGISLATIVE SESSION

BILL VERSION : CSHB 454(L&C)
PUBLISH DATE : HOUSE 2/24/88

FISCAL NOTE

REQUEST:

Revision Date: 2/22/88
Title : An Act relating to the operation of state hatcheries
Sponsor : Eliason
Requestor : Eliason

Agency Affected : Fish and Game
BRU : FRED

Components :

EXPENDITURES/REVENUES: (Thousands of Dollars)

OPERATING	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93
PERSONAL SERVICES	0	0	0	0	0	0
TRAVEL						
CONTRACTUAL						
SUPPLIES						
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS						
MISCELLANEOUS						
TOTAL OPERATING	0	0	0	0	0	0
CAPITAL	0	0	0	0	0	0
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Prepared by : [signature] Phone : 465-4160
Division : F.R.E.D. Date : 2/22/88

Approved by Commissioner : for Don Collinsworth Date : 2/24/88
Agency : Fish and Game

Distribution (by preparer) :
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

BILL ANALYSIS FOR
SB 410/HB 454

STATE OF ALASKA

OFFICE OF THE GOVERNOR

BILL ANALYSIS

DEPARTMENT	DIVISION	BILL NUMBER	SPONSOR
Fish and Game	FRED	SB 410/HB 454	Eliason, Jones, Kerttula/ Grussendorf

SHORT TITLE OF BILL

DEPARTMENT POSITION

The department supports this bill as is.

PREPARED BY	DATE	COMMISSIONER'S SIGNATURE	DATE
Brian J. Allee	2/22/88	[signature]	2-22-88

SUMMARY

OTHER AGENCIES AFFECTED BY BILL	CONSTITUENT GROUP(S) AFFECTED BY BILL
Department of Commerce and Economic Development	Regional aquaculture associations, commercial fishermen, sport fishermen
ORGANIZATIONAL SUPPORT FOR BILL	**ORGANIZATIONAL OPPOSITION TO BILL**
Regional aquaculture associations, sport fishermen, commercial fishermen	

FISCAL IMPACT: ☒ NONE ☐ FISCAL NOTE ATTACHED

BACKGROUND/LEGISLATIVE INTENT The 1987 Legislature placed intent language in the FY 88 FRED Division budget that directed the division to develop innovative programs for hatchery operation through cooperation with the regional aquaculture associations (RAA). Contracting operations of state-owned hatcheries to RAAs was recommended by a government/public work group formed to address the intent. Building on the private nonprofit laws that have proved effective, this amendment allows FRED to cooperate with the RAAs in developing innovative

Continued on page 2.

ANALYSIS OF BILL/PROGRAM EFFECTS This bill amends existing statutes to extend a preference right to operate under contract existing state hatcheries in the same manner that qualified RAAs have for the development of undeveloped hatchery locations. This preference right for qualified RAAs to operate existing state hatcheries will allow sole source contracting for the operation of state hatcheries if the state is unable to continue due to insufficient operating funds. These contracts will stipulate that the state remain in control of the total program through a permit, a public hearing, and completion of an annual operational plan, all of which are subject to the approval of the Commissioner of the Department of Fish and Game. Additionally, the RAAs, in order to recover the cost of hatchery operations, will be able to sell salmon returning to the facility which are surplus to the common property fishery.

AMENDMENTS PROPOSED

Amend to allow the Commissioner to waive the submission of an application for a permit to operate a hatchery due to the fact that the application process is designed for new hatcheries only, and is unnecessarily time-consuming in this situation.

PLEASE ATTACH A SEPARATE SHEET FOR ADDITIONAL COMMENTS OR ANALYSIS

(Background/Legislative Intent con't.)

programs. Further, the amendment provides certain assurances to the state, which must maintain jurisdiction over the facilities, to the general public, which bonded themselves for original capital costs to construct the facilities, and to the fishery user groups who depend on the hatchery-produced fish to supplement the natural stocks in off-years. These assurances arise from the proven technical and managerial expertise of the RAAs, along with their financial capability and socially and legally acceptable practice of special harvests of hatchery returns to pay hatchery operational costs. This approach allows for continued hatchery production while reducing the impact on the general fund.

BILL ANALYSIS FOR
CS FOR SB 410/HB 454

STATE OF ALASKA

OFFICE OF THE GOVERNOR

BILL ANALYSIS

DEPARTMENT	DIVISION	BILL NUMBER	SPONSOR
Fish and Game	FRED	CS for SB 410/HB 454	Eliason, Jones, Kerttula/ Grussendorf

SHORT TITLE OF BILL

DEPARTMENT POSITION

The department supports this bill.

PREPARED BY	DATE	COMMISSIONER'S SIGNATURE	DATE
Brian J. Allee	2/22/88	Don Collinsworth	2-22-88

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OTHER AGENCIES AFFECTED BY BILL	CONSTITUENT GROUP(S) AFFECTED BY BILL
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Continued on page 2.

ANALYSIS OF BILL/PROGRAM EFFECTS

The committee substitute for Senate Bill 410 has incorporated all the amendments proposed by the Department of Fish and Game and has had the thorough review of the Attorney General's Office.

AMENDMENTS PROPOSED

None.

PLEASE ATTACH A SEPARATE SHEET FOR ADDITIONAL COMMENTS OR ANALYSIS.

(Background/Legislative Intent con't.)

programs. Further, the amendment provides certain assurances to the state, which must maintain jurisdiction over the facilities, to the general public, which bonded themselves for original capital costs to construct the facilities, and to the fishery user groups who depend on the hatchery-produced fish to supplement the natural stocks in off-years. These assurances arise from the proven technical and managerial expertise of the RAAs, along with their financial capability and socially and legally acceptable practice of special harvests of hatchery returns to pay hatchery operational costs. This approach allows for continued hatchery production while reducing the impact on the general fund.

STATE OF ALASKA
1988 LEGISLATIVE SESSION

BILL VERSION: CSSB410
PUBLISH DA" : 2/22/88

FISCAL NOTE

REQUEST:

Revision Date: 2/22/88
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CAPITAL	0	0	0	0	0	0
REVENUE						

FUNDING: (Thousands of Dollars)

GENERAL FUND						
FEDERAL FUNDS						
OTHER						
TOTAL	0	0	0	0	0	0

POSITIONS:

FULL-TIME						
PART-TIME						
TEMPORARY						

ANALYSIS : (Attach a separate page if necessary)

Prepared by : [signature] Phone : 465-4160
Division : F.R.E.D. Date : 2/22/88

Approved by Commissioner : [signature] Date : 2/22/88
Agency : Fish and Game

Distribution (by preparer) :
Legislative Finance
Legislative Sponsor
Requestor
Office of Management and Budget
Impacted Agency(ies)

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

EXECUTIVE SUMMARY

FRED DIVISION

FRED 1988 Report To The Alaska State Legislature On The Funding Of The Fishery Enhancement Program

Brian J. Allee, Ph.D. Director

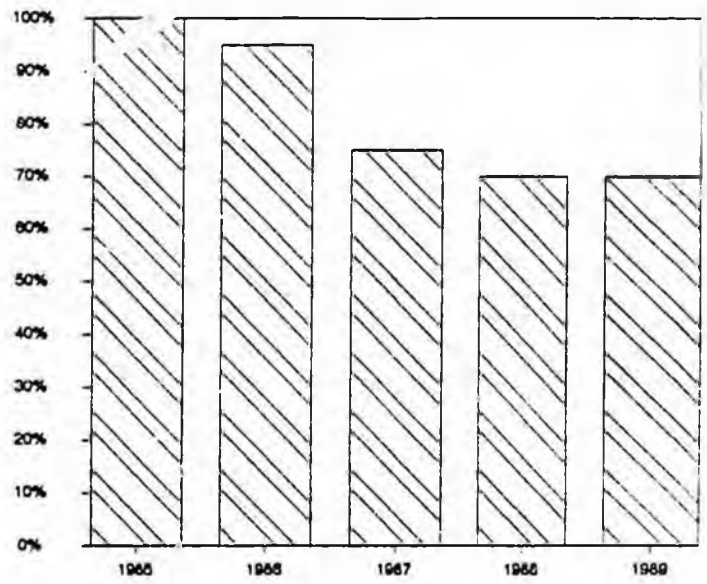


Figure 1. Decrease in General Fund to FRED Division. Percent of FY 1985 Budget. Adjusted for Inflation.

By the end of the 1987 Alaska legislative session, lawmakers and fishermen became aware that the budget allocation for the Fisheries Rehabilitation, Enhancement and Development (FRED) Division would reduce funding for the public hatchery program (Figure 1), and result in the shut down of several facilities. 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 regional aquaculture associations. The Legislature developed intent language in the FY 88 ADF&G budget to encourage this cooperative effort and explore a broad range of innovative funding techniques for the fishery enhancement program.

BACKGROUND

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 this "boom-and-bust" cycle that brought total salmon harvests to less than 30 million fish could be repeated in the future (Figure 2).

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, approximately one-half the size of Japan's program, and approaching the size of the Russian program. The sockeye salmon enhancement program in Alaska is the largest and most technologically advanced; over 100 million eggs were taken in FY 1988.

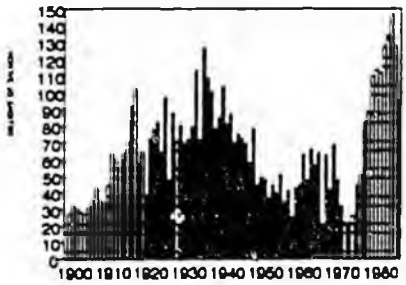


Figure 2. Alaska commercial salmon harvest from 1900 to 1987.

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. The combined state and PNP catch estimates equal approximately 26 million salmon in 1987 (Figure 3). This production represents roughly 20% of the total Alaska salmon harvests. Partially obscured by these numbers is the fact that

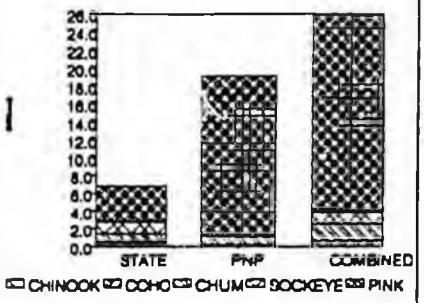


Figure 3. Alaska hatchery salmon returns in FY 1988.

the FRED facilities have focused on production of fewer, high valued species and the PNP facilities have focused on producing larger numbers of lower valued species.

In FY 89 more than 600 million salmon, steelhead, and trout eggs will be taken at state-owned hatcheries. The number of salmon eggs taken by species are shown in Figure 4. This production level will result in approximately 11 million harvested adults in the commercial fishery (Figure 5). Substantial harvests will occur in the recreational fishery also.

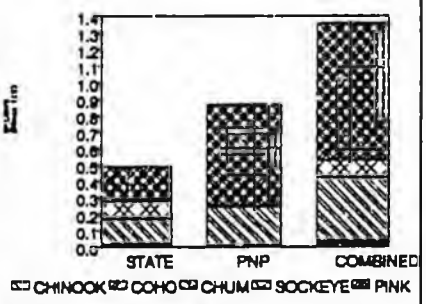


Figure 4. Alaska hatchery salmon egg takes for FY 1989.

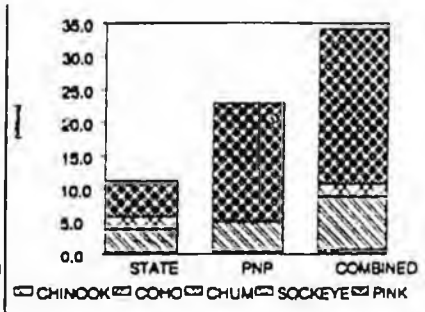


Figure 5. Projected commercial harvests from salmon egg takes in FY 1989.

The PNP salmon catch estimates for returning adults from fiscal year 1989 egg takes equal approximately 23 million. Total projected revenues to fishermen reemphasize the trend toward higher valued species in the FRED hatchery program (Figure 6).

Currently, Alaska's ocean-ranching program is in a funding crisis. 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 over 30% since FY 85.

The irony of this crisis is that with the exception of the enhancement program, few other general and capital operating budget expenditures, available to Alaska are able to improve the level of economic activity in the state, by expanding the output of the economy. In this

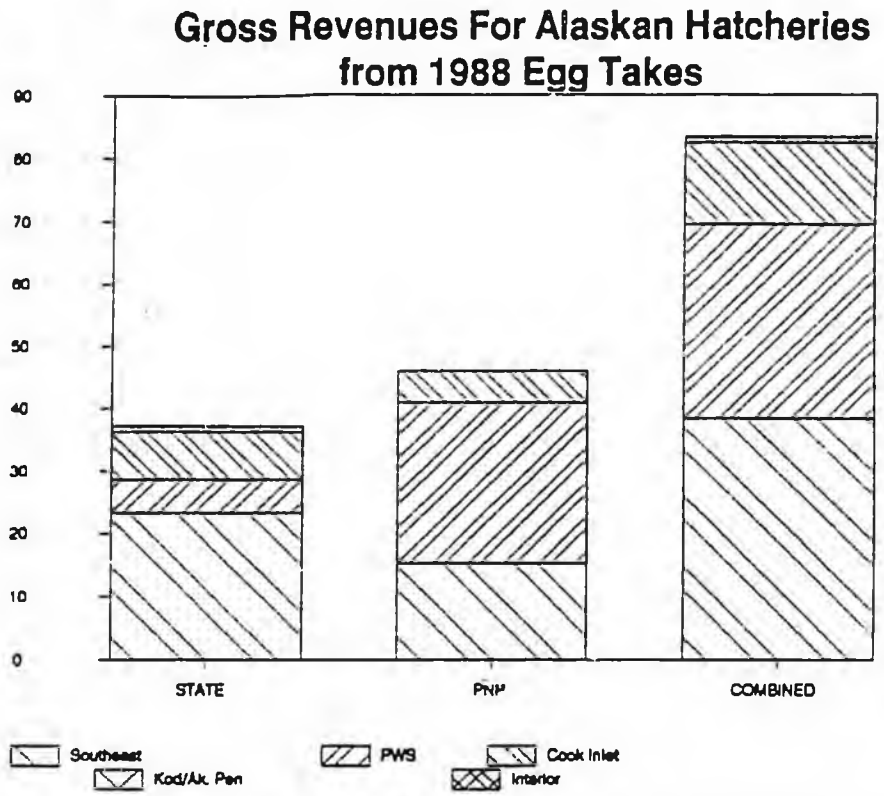


Figure 6. Projected commercial fishery revenue for hatcheries from eggs taken in FY 1989 in millions of dollars.

regard, salmon enhancement is very attractive because it offers impressive net benefits and impacts in the salmon industry and throughout the regional economies of Alaska.

In the commercial fishery, the net benefits, or profits from these projects, first accrue to the fishermen who own limited entry permits; however, the impacts of the program ripple through the general state economy. The net benefits of the commercial fishery portion of the statewide program are approximately $90 million. 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. 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. The FY 89 budget proposed by FRED Division would generate approximately $35 million in resident income to Alaskans as well as 1,040 jobs. 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. This economic impact analysis has been generated by a model designed by The Institute of Social and Economic Research (ISER) at the University of Alaska in Anchorage.

CONCLUSIONS

There was a clear consensus among fishermen 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 costs than now.

Fishermen groups were unanimously opposed to tax and license fees 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 burdened with many costs.

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.

These are difficult issues for Alaska to sort out. 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. Many of the state-owned facilities were created to produce broadly distributed benefits. As such, it is difficult to find a voluntary method to shift the funding burden to a specific interest group without changing the goals and or the beneficiaries of the hatchery production. Also, 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. If the legislature should choose to go forward with professional service contracts or other funding mechanisms the timing for the approach will be critical. This is because a phased reduction of the General Fund would have to be accompanied by appropriate legislation to avoid a major discontinuity of the economic benefits of hatchery production.

In the absence of full funding for the projects, the division's short term and incremental approach to future funding is the FY 89 proposed budget strategy of contracting operation of selected state hatcheries to the private nonprofit sector.

The concept of contractual agreements in the FY 89 budget represents a 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 many user group meetings opposed the use of contracting out hatcheries to the regional aquaculture associations as a short-term solution.

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 FY88 (SLA 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 the work group effort in designing longer term solutions.

EXECUTIVE SUMMARY OF
FRED DIVISION ANNUAL REPORT FOR 1987

EXECUTIVE SUMMARY

FRED DIVISION

FRED DIVISION ANNUAL REPORT FOR 1987

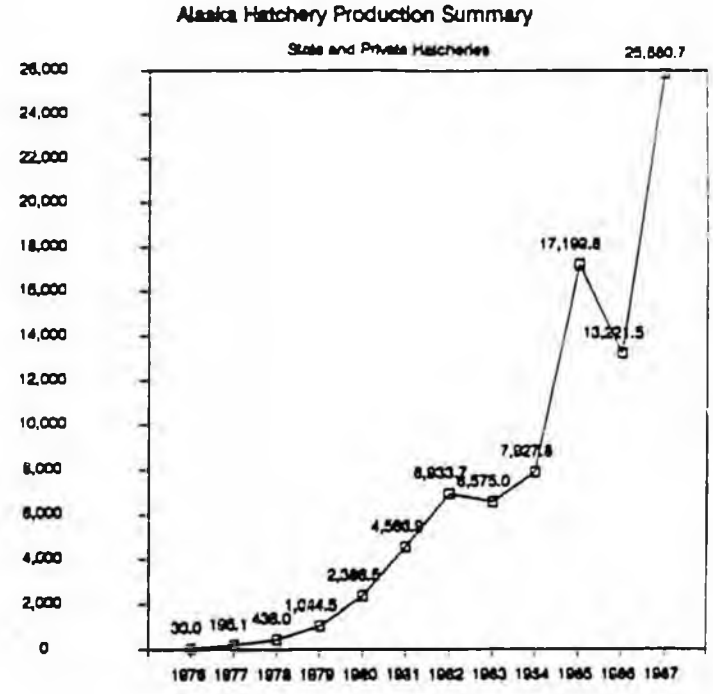


Figure 1. Alaska hatchery production in thousands of adult salmon.

The Fisheries Rehabilitation, Enhancement, and Development Division (FRED) of the Alaska Department of Fish and Game came into being through legislation enacted in 1971. Its purpose is to sustain and enhance Alaskan fisheries through the development and application of technologies in supplemental production and natural stock rehabilitation. It is the major component of the state's salmon enhancement program. FRED provides many services to the state's fisheries programs through its operation of 19 hatcheries and four laboratories, its complement of technical specialists and its administration of the regional aquaculture associations. FRED is closely associated with the Private Non-Profit (PNP) program in Alaska through its regulatory functions, its technical assistance, and its many cooperative ventures with various groups comprising the program.

Salmon production programs of both state and PNP operations are growing and contributing significantly to the fisheries and the economy of the state (Table 1). In 1987, the salmon enhancement program in Alaska (see map) produced almost 26 million adults, continuing a sweeping upward trend in production (Figure 1). FRED projects produced 6.8 million salmon plus over a half million trout, char, and grayling. Of the salmon produced, approximately 78% were harvested in common property fisheries statewide. All of the non-salmon production was harvested the in sport fishery. Of the salmon pro-

duced at FRED Hatcheries in 1987, approximately 61% were pink salmon, with diminishing percentages of sockeye, chum, coho, and chinook salmon in that order. Individual PNP operators reported that their hatchery programs produced 19 million salmon. Of those salmon produced, approximately 22% were harvested in special harvests and 70% in common property harvests. PNP operators report that 94% of their production was pink salmon with diminishing percentages of chum, coho, and chinook salmon in that order. Releases and egg takes were also up in the Alaskan enhancement programs in 1987. Approximately 1.3 billion salmon eggs were taken by Alaskan hatcheries with an additional 10 million non-salmon eggs taken by FRED facilities. Almost 840 million salmon juveniles were released from state and PNP facilities in 1987 and 10 million non-salmon juveniles were released from Fred facilities.

Returns to FRED facilities in 1988 are projected to be over 7 million fish. This is about one million less than the projections for 1987, but about the same number that actually returned in 1987. The lower projection is largely due to: changing emphasis from pink and chum salmon to coho, sockeye, and chinook salmon; effects of decreasing funding; and severe climatic conditions that have potentially affected certain pink and coho salmon runs.

Significant progress is being made in many areas of the Alaskan salmon enhancement program. Of the 26 million fish produced, approximately 18.8 million were harvested in the common property fisheries in 1987. This represents approximately 20% of the total statewide harvest in a year in which harvests of many natural stocks were down. The primary objective of enhancement production is to lessen the effect of lows in natural production. The 1987 harvest was the lowest in 8 years. Without production it would have been approximately 75 million fish instead of the 94 million that were harvested. Significant progress is also seen in chinook salmon production. The hatchery add-on to the quota of chinook salmon allowed by the U.S./ Canada Pacific Salmon Treaty was 16,000 fish -approximately 6% of the quota.

In other areas of progress, FRED is continuing its world technology leadership position by developing sockeye salmon hatchery techniques for rearing sockeye salmon to the smolt stage in fresh water. This has never been done before. The number of sockeye salmon eggs taken, (100 million) the increasing hatchery technology, and the lake stocking and enrichment activities undertaken by FRED put it at the forefront of sockeye salmon production in the world. The coded-wire-tag (CWT) lab operated by FRED is a model of efficiency in CWT retrieval and data processing. It has hosted visitors from many areas of the Pacific northwest who are interested in emulating the successes attained by this lab in decoding tags, information storage, and dissemination of timely, accurate reports of CWT information. The FRED pathology section opened a second laboratory to better serve the salmon enhancement program, as well as other Alaskan fishery and mariculture operations.

The new lab is in Juneau and will primarily serve the southeast Alaska area. During 1987, the FRED fish pathology staff set in place a statewide infectious hematopoietic necrosis virus (IHNV) control, monitoring, and evaluation program. FRED personnel are actively in-

volved in the recently legislated shellfish mariculture program with major feasibility studies in the Kodiak and Sitka area. Shellfish permitting and regulation activities are a part of the FRED PNP Program.

The FRED Limnology Laboratory processed over 30,000 individual water and zooplankton samples and contributed greatly to a lake fertilization program in which state, federal,and private agencies cooperated.

FRED biological staff continued evaluations of Alaska Dry Pellet (ADP), a diet designed for Alaskan salmon culture and made in Alaska. Latest results are generally excellent.

In 1987, fish hatcheries and other enhancement activities of FRED and the PNP hatchery system have been the subject of economic studies designed to ensure maximal social and economic benefits from the state 's investment.

A study conducted in 1984 for the Governor's Mini-cabinet on Fisheries predicts that the statewide enhancement program will generate benefits in excess of costs in the amount of $90 million to the Alaskan economy for just the commercial fishery portion of the program.

A recent study utilizing an economic impact model developed by the Institute of Social and Economic Research at the University of Alaska in Anchorage suggests that the economic impact on resident income for the public and PNP program for the FY89 budget will be $75 million in resident personal income and over 2,000 resident jobs. These impacts result from fishing industry expenditures, government expenditures, and related spending in the rest of the economy. The studies have attempted to quantify the economic impacts of the salmon ranching program to the economy, but economic impacts of the recreational fishery are not available at this time. This will step will be completed in early 1988. Thus, current estimates of personal income and employment for Fisheries Enhancement in Alaska are underestimated at this time.

1987 was a year of change and budget reduction for FRED. Under a new director, the division underwent a reorganization to bring about clarity of purpose and greater operating efficiency. Several FRED hatcheries were operated with help and cooperation from regional aquaculture associations and fishermen groups. Serious attempts at generating new and innovative funding strategies, based upon legislative intent, met with varying levels of success. FRED led an effort to analyze the statewide enhancement program with the specific goal of defining potential short and long term funding strategies for state facilities. A short term operating plan was designed for the FY89 budget which involves contracting the operation of four FRED hatcheries to private nonprofit operators. In all its activities, FRED is committed to reaching the full potential of fisheries enhancement which will support the economic and social integrity of Alaskan communities.

ALASKAN HATCHERIES

STATE AND PRIVATE

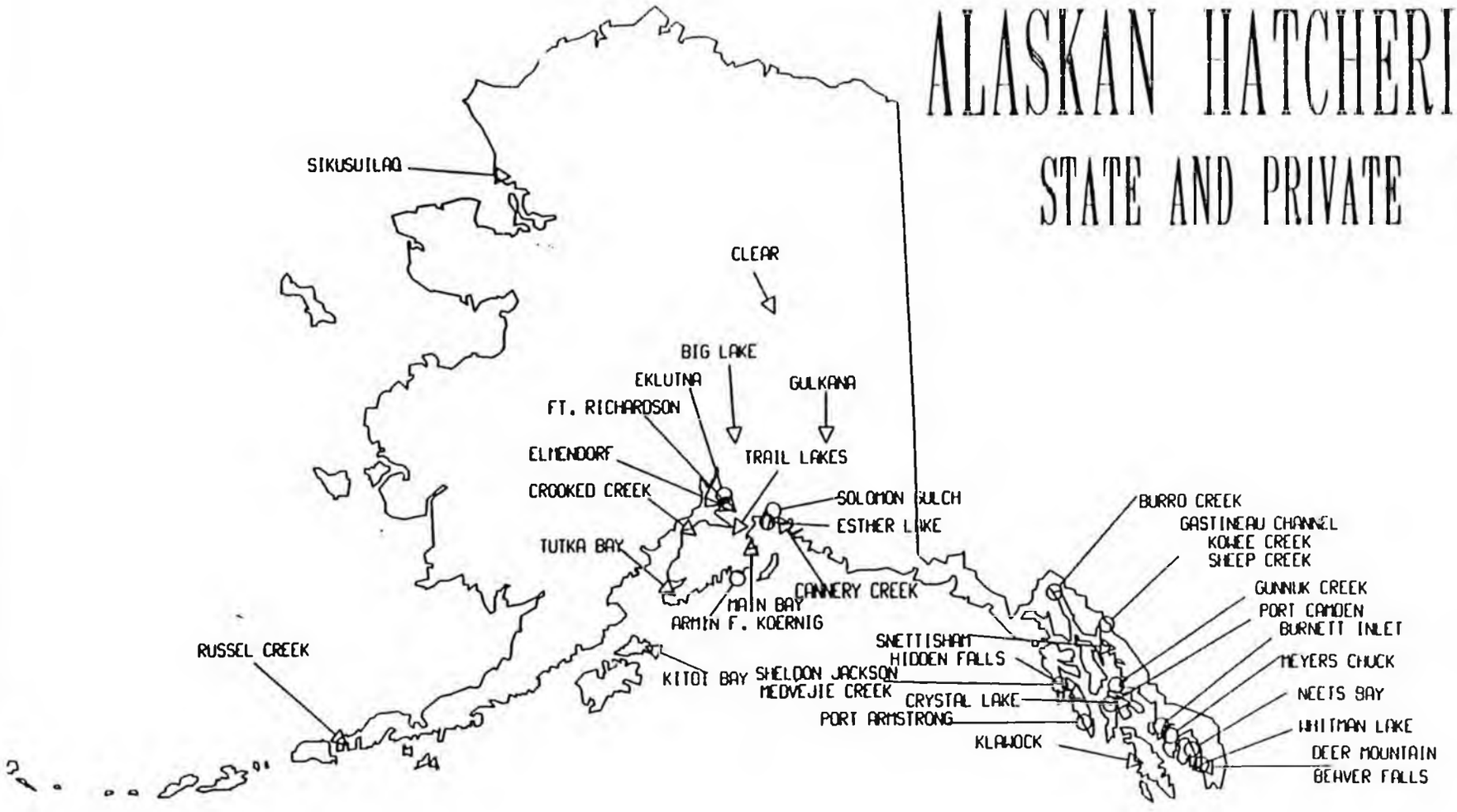
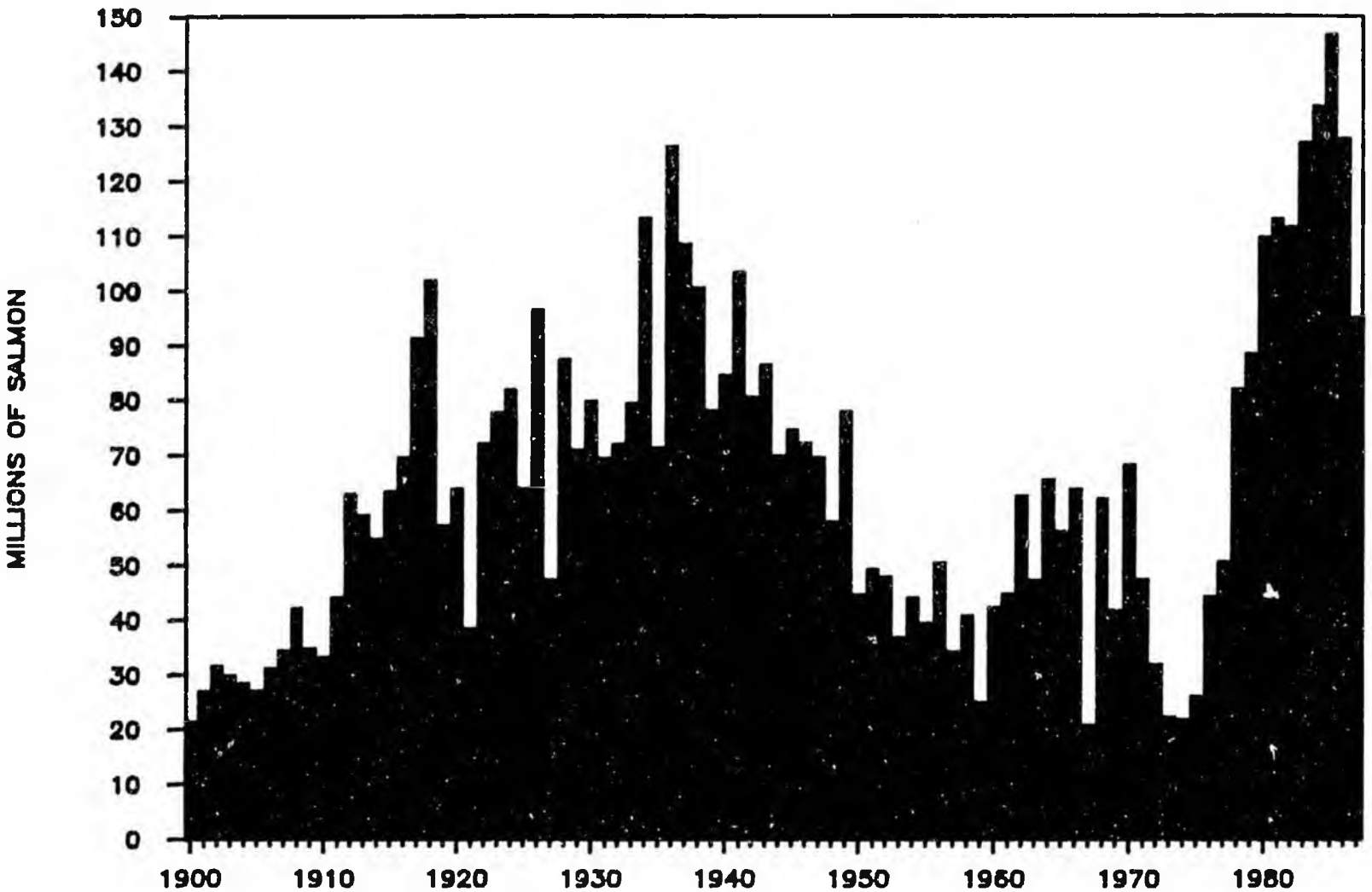


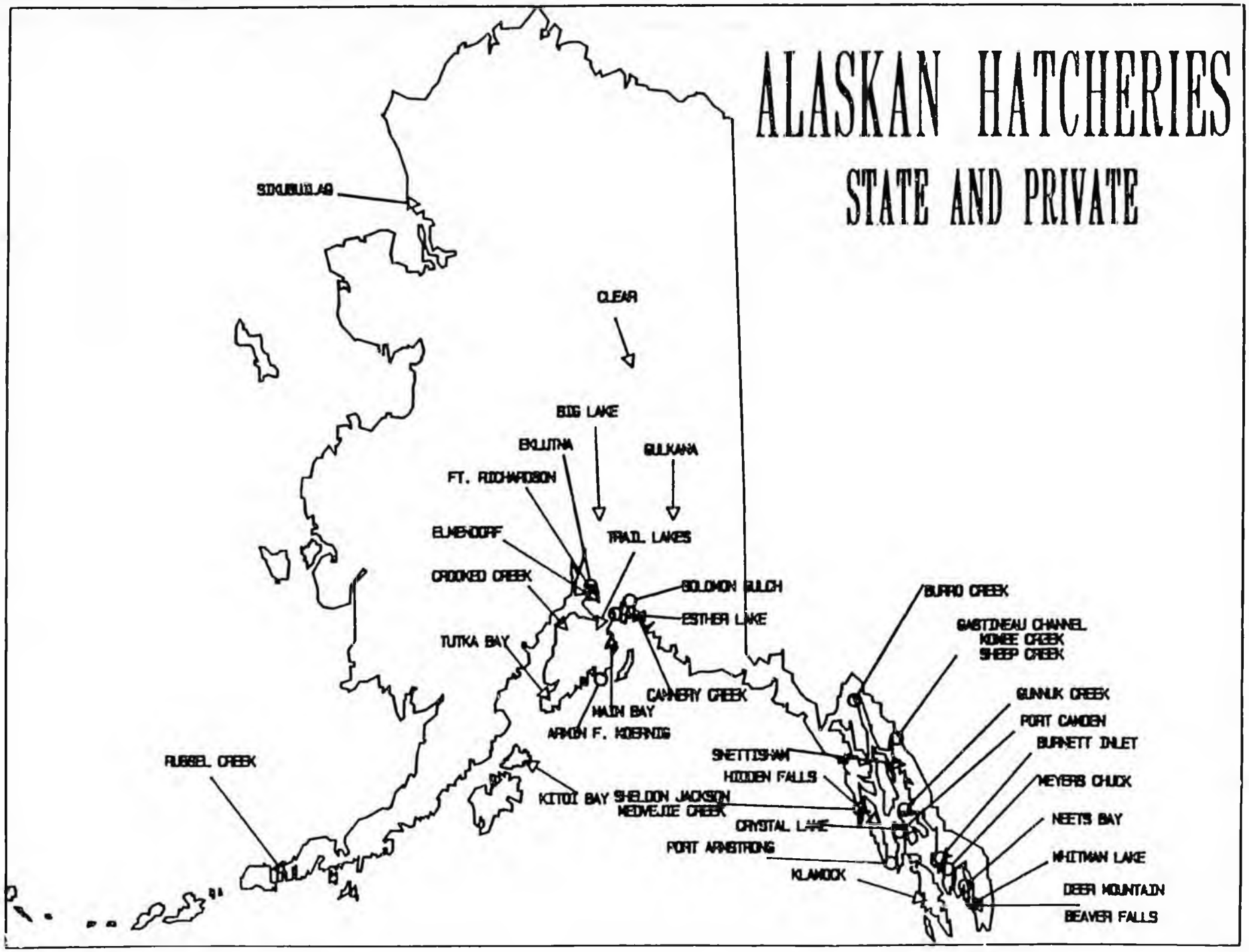
Table 1
ALASKA PRODUCTION SUMMARY 1982-87
STATE AND PNP FACILITIES

	CHINOOK	COHO	CHUM	PINK	SOCKEYE	TOTAL
STATE						
1982	7,935	47,896	97,366	1,389,029	51,070	1,593,296
1983	13,420	22,340	152,800	1,864,800	226,000	2,279,360
1984	17,950	58,550	777,980	1,941,000	368,300	3,163,780
1985	20,434	130,956	863,859	7,312,900	765,000	9,093,149
1986	22,467	321,856	1,179,615	2,630,220	1,163,850	5,318,008
1987	69,624	393,707	974,946	4,037,212	1,308,290	6,783,779
PNP						
1982	3,500	61,709	22,459	5,259,208	0	5,346,876
1983	872	71,781	126,783	4,086,552	0	4,285,988
1984	3,656	121,112	1,001,449	3,637,927	0	4,764,144
1985	8,181	168,427	525,088	7,404,789	0	8,106,485
1986	11,156	344,749	779,637	6,767,984	0	7,903,526
1987	8,643	169,149	955,294	17,963,785	0	19,096,871
COMBINED						
1982	11,435	109,605	119,825	6,648,237	51,070	6,940,172
1983	14,292	94,121	279,583	5,951,352	226,000	6,565,348
1984	21,606	179,662	1,779,429	5,578,927	368,300	7,927,924
1985	28,615	299,383	1,388,947	14,717,689	765,000	17,199,634
1986	33,623	666,605	1,959,252	9,398,204	1,163,850	13,221,534
1987	78,267	562,856	1,930,240	22,000,997	1,308,290	25,880,650

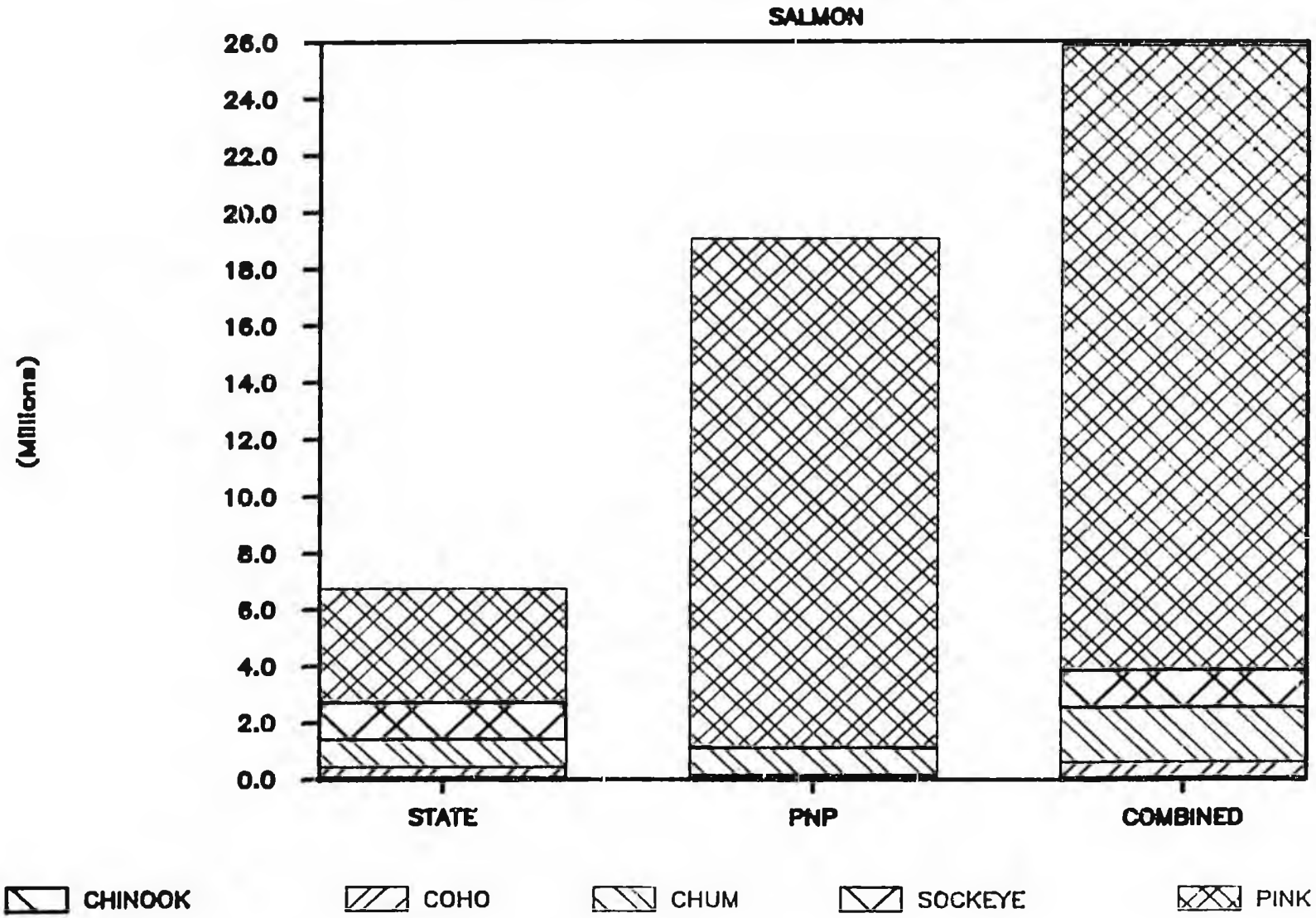
PRODUCTION FIGURES

ALASKA COMMERCIAL SALMON HARVEST

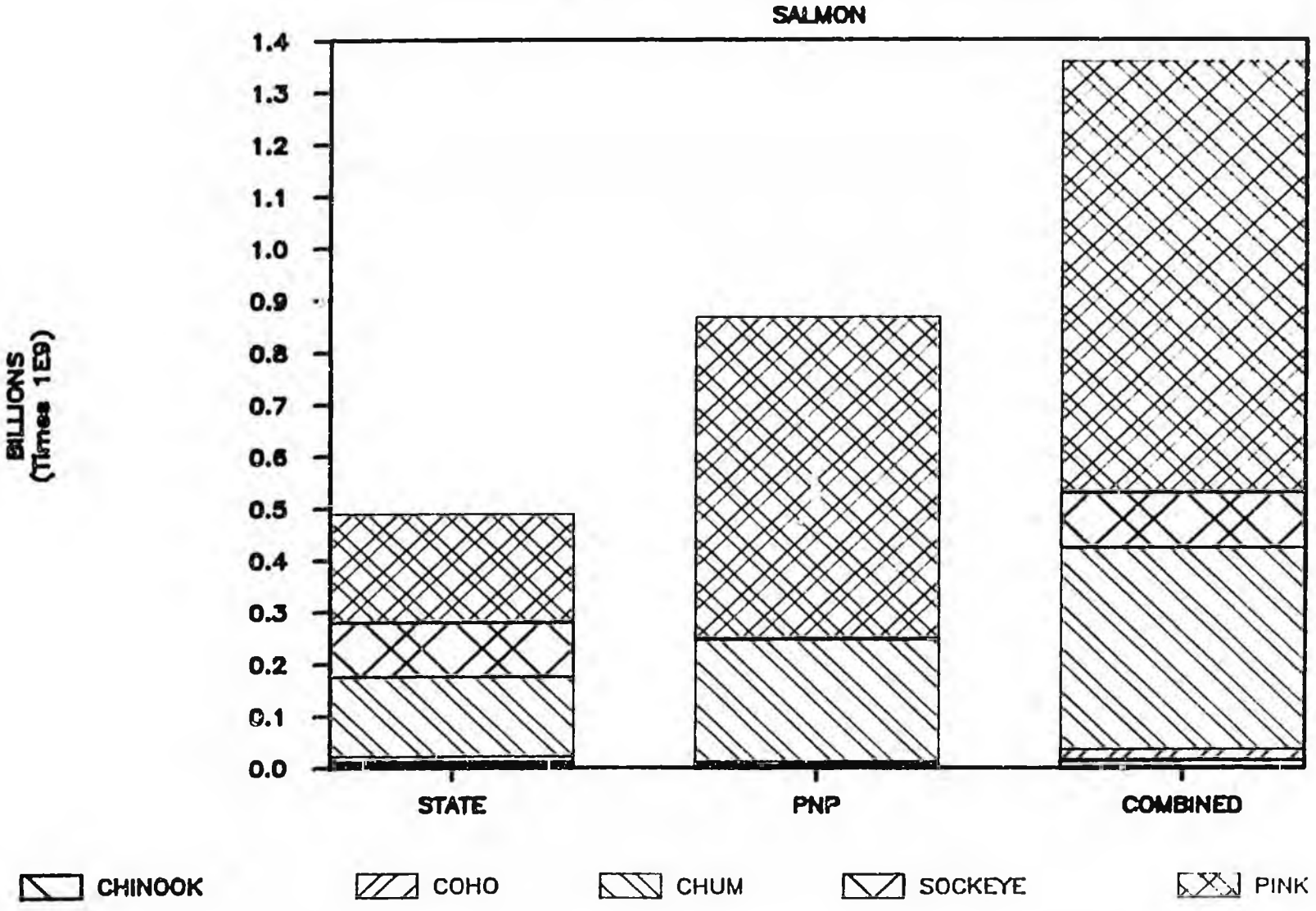



ALASKAN HATCHERIES
STATE AND PRIVATE
SITKA
CLEAR
BIG LAKE
EKLUTNA
GULKANA
FT. RICHARDSON
ELMENDORF
TRAIL LAKES
CROOKED CREEK
SOLOMON GULCH
ESTHER LAKE
TUTKA BAY
CANNERY CREEK
MAIN BAY
ARMIN F. KOERNIG
RUSSEL CREEK
KITOI BAY
SHELDON JACKSON
MEDVEJIE CREEK
SNETTISHAM
HIDDEN FALLS
CRYSTAL LAKE
PORT ARMSTRONG
KLAWOCK
BURRO CREEK
GASTINEAU CHANNEL
KOWEE CREEK
SHEEP CREEK
GUNNUK CREEK
PORT CAMDEN
BURNETT INLET
MEYERS CHUCK
NEETS BAY
WHITMAN LAKE
DEER MOUNTAIN
BEAVER FALLS

ALASKAN HATCHERY RETURNS 1987

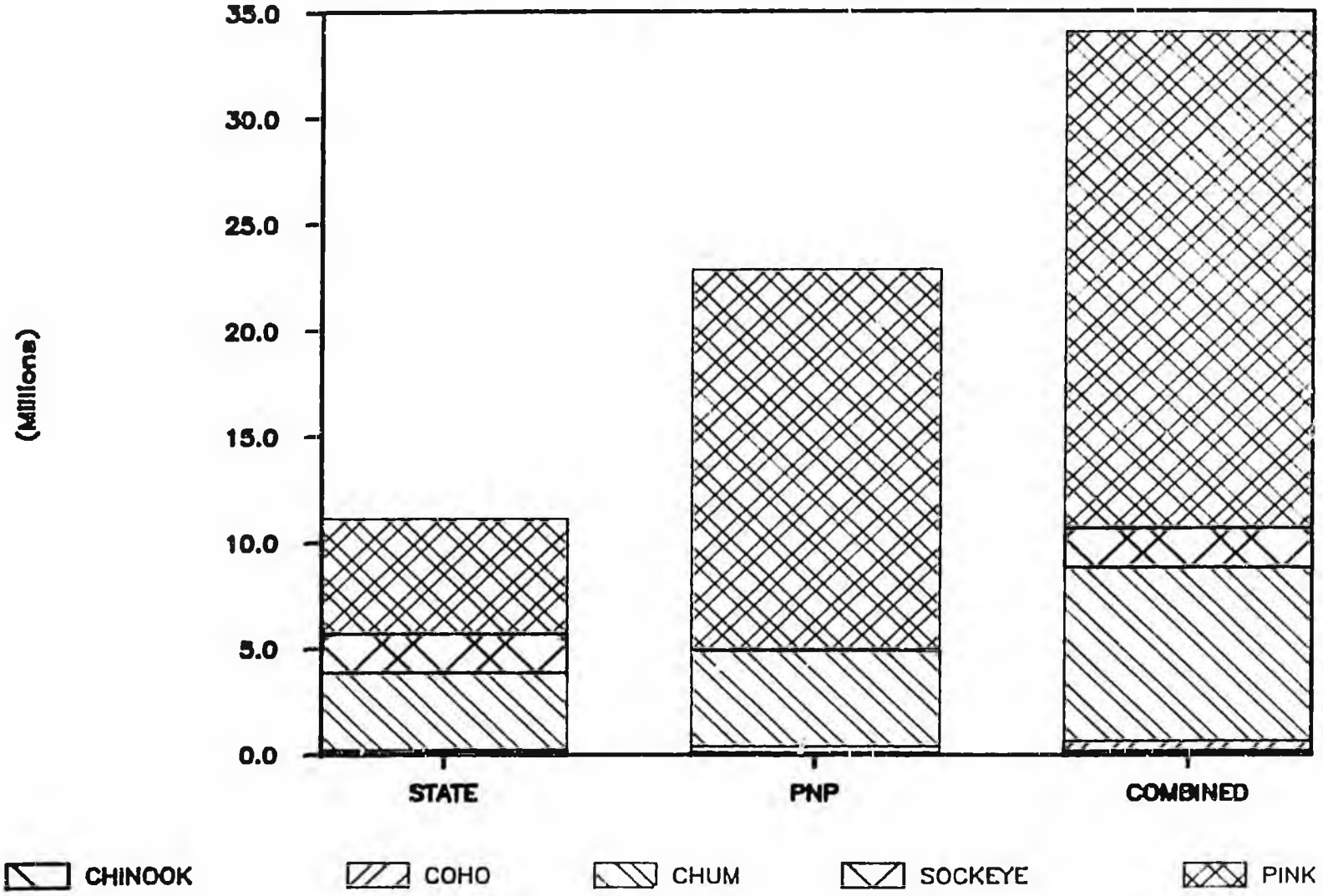


ALASKAN HATCHERY EGGTAKES 1987

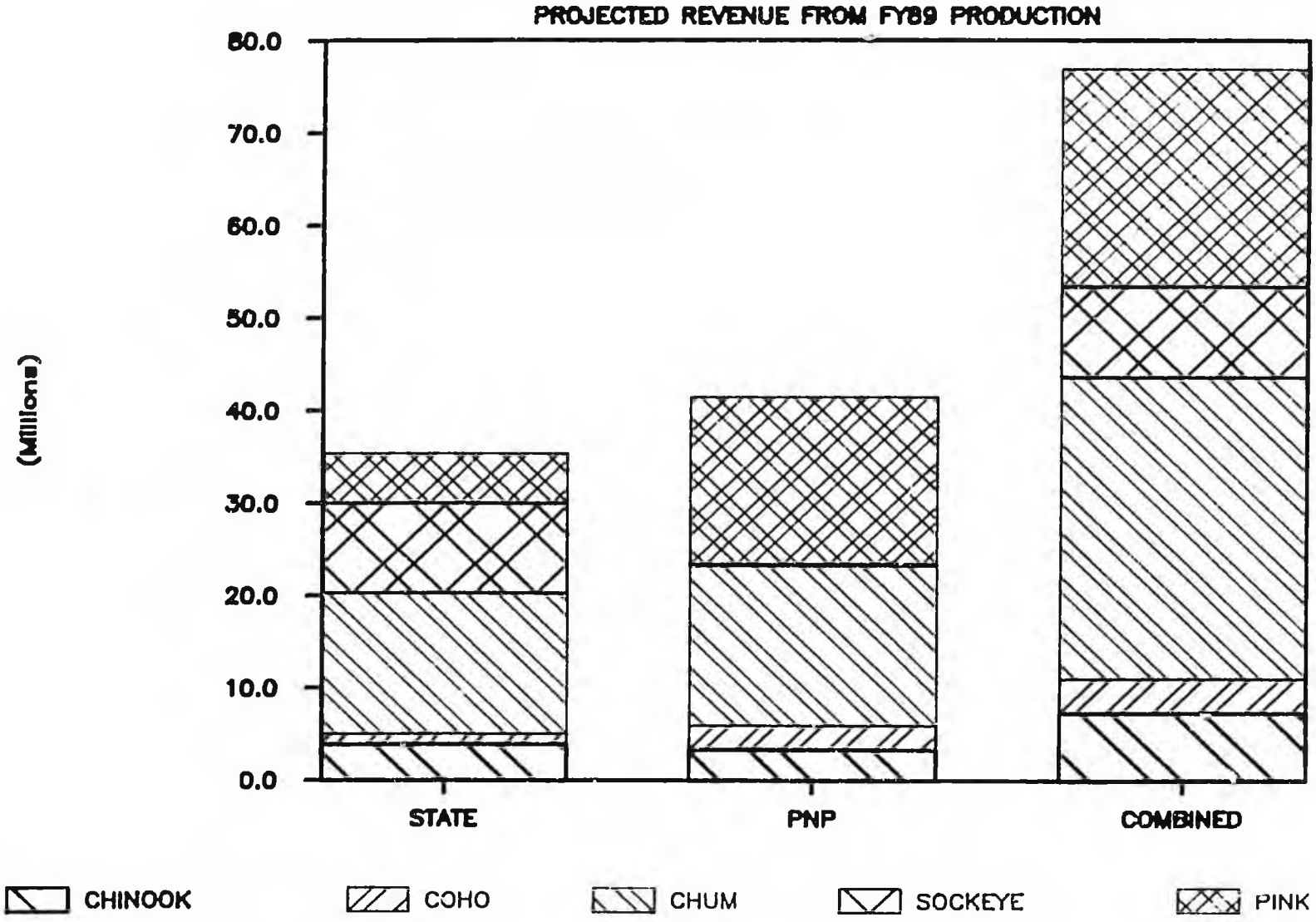


ALASKA STATE AND PNP HATCHERY PROGRAMS

PROJECTED HARVEST FROM FY89 PRODUCTION

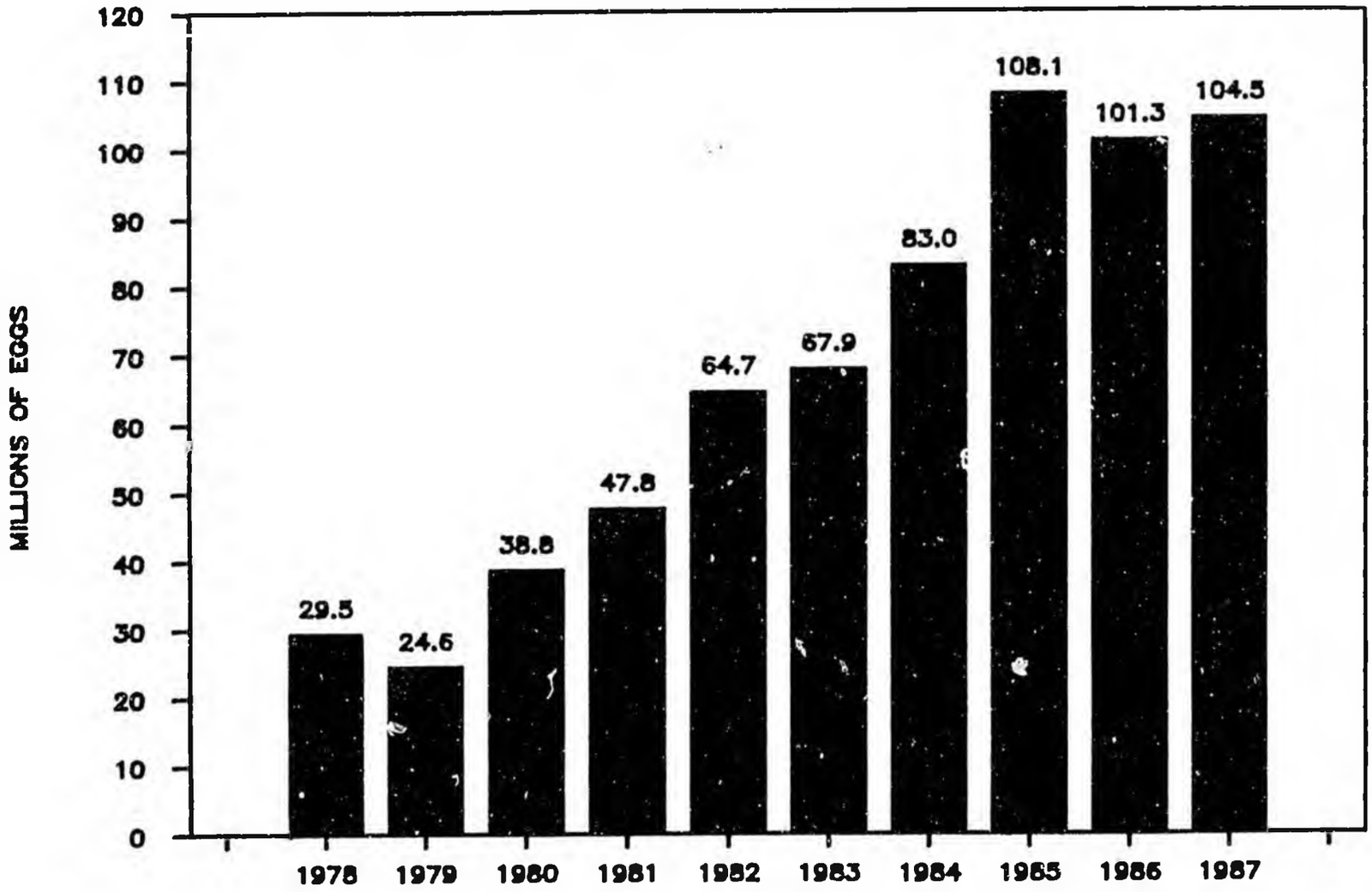


ALASKA STATE AND PNP HATCHERY PROGRAMS



SOCKEYE EGGS COLLECTED IN ALASKA

FOR STATE FACILITIES



ECONOMIC VIABILITY OF THE STATEWIDE ENHANCEMENT PROGRAM

BENEFIT/COST ANALYSIS

GOVERNORS MINI-CABINET ON FISHERIES PROJECTS LONG TERM BENEFITS OF THE STATEWIDE FISHERY ENHANCEMENT PROGRAM OF :

$90 MILLION DOLLARS

BENEFIT / COST RATIO OF 1.4 : 1

NET BENEFITS OVER THE 25 YEAR ECONOMIC LIFE OF THE STUDY

THE NET BENEFITS DO NOT INCLUDE THE CONSIDERABLE VALUE OF THE RECREATIONAL FISHERY

ECONOMIC VIABILITY OF THE STATEWIDE ENHANCEMENT PROGRAM

ECONOMIC IMPACTS OF THE FISHERY ENHANCEMENT PROGRAM

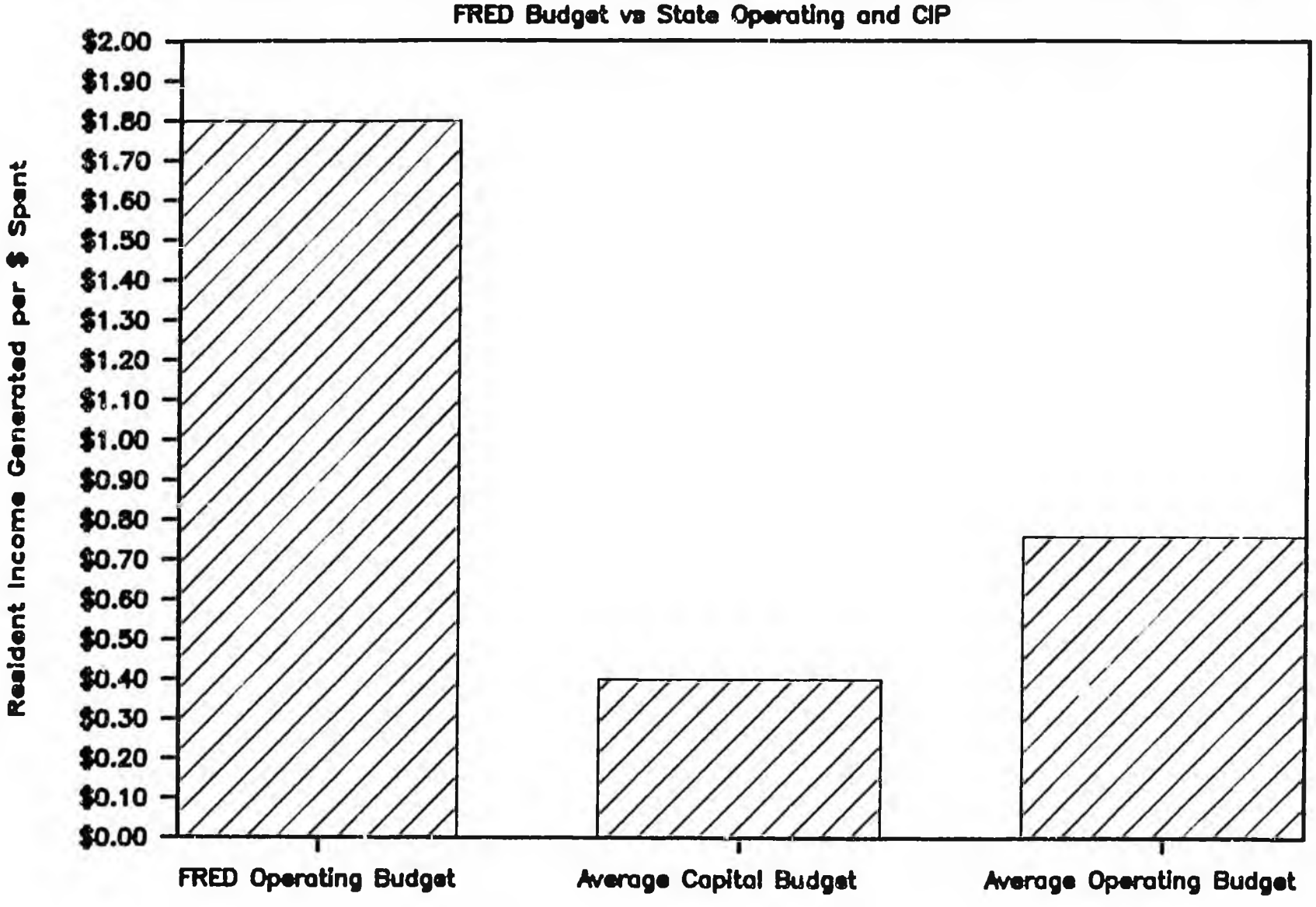
THE STATEWIDE ENHANCEMENT PROGRAM EXPANDS RESIDENT EMPLOYMENT AND PERSONAL INCOME TO ALASKANS IN 5 REGIONS OF THE STATE

THE IMPACTS GENERATED BY THE STATE AND PNP HATCHERIES ARE :

STATE HATCHERIES : PERSONAL INCOME : $35 MILLION
RESIDENT EMPLOYMENT : 1030 JOBS
FISH HARVESTED : 11 MILLION SALMON

PNP HATCHERIES : PERSONAL INCOME : $40 MILLION
RESIDENT EMPLOYMENT : 1100 JOBS
FISH HARVESTED : 23.8 MILLION SALMON

Impacts upon Alaskan Resident Income



LETTER FROM OMBUDSMAN
REGARDING SOLE SOURCE AUTHORITY TO NEGOTIATE

Ombudsman

State of Alaska

Reply to:

☐ 3201 C Street, Suite 403
Anchorage, Alaska 99503
(907) 563-3673

☑ P.O. Box WO
Juneau, Alaska 99811
(907) 465-4970

December 23, 1987

Don Collinsworth, Commissioner
Department of Fish and Game
Post Office Box 3-2000
Juneau, Alaska 99811-1100

RE: Ombudsman Complaint J87-0811 (Closed)

Dear Commissioner Collinsworth:

The Office of the Ombudsman recently received a complaint from Dale Young against the Department of Fish and Game alleging that the department is proceeding, contrary to law, to negotiate a contract for transferring the operation of the Hidden Falls Fish Hatchery to the Northern Southeast Regional Aquaculture Association (NSRAA).

Our office has reviewed the copies of the approved Authority to Negotiate (ATN) and the Request for Alternative Procurement Method (RAPM). Your RAPM indicates two reasons for the exemption: (1) The contracting agency demonstrates that there is a single source of expertise or knowledge required, and (2) the service is provided by a political subdivision, state agency or the federal government.

Frankly, I have concerns regarding both reasons expressed in the RAPM. To begin with, it is doubtful that the Northern Southeast Regional Aquaculture Association is the only organization with the expertise and knowledge to operate the Hidden Falls Hatchery. I believe there is sufficient evidence to the contrary.

Your second reason for exemption from solicitation is that the service would be provided by a political subdivision of the State of Alaska. Section 16.10.380 of Alaska Statutes allows the formation of regional aquaculture associations, and paragraph C of that section goes on to say that a qualified regional association is established as a service area in the unorganized borough for the purpose of providing salmon enhancement services. I am wondering if your office has sought legal advise regarding this section as the Hidden Falls Fish Hatchery is within the City and Borough of Sitka, and the NSRAA may not be empowered to operate there. Also the municipality might be interested in operating the facility directly. There is some interesting language on this subject in State, N.S.E. Regional Aquaculture Ass'n v. Alex (Alaska, 646 P.2d 203).

Circumventing the procedures for soliciting a professional services contract by requesting an exemption from Alaska Statutes not only leaves your department open to just criticism but also possible successful legal action.

Since this is a sole source contract there is no formal appeal procedure but I understand the complainant may contact you directly for a review, and because of this, it is considered closed in our files. I would suggest that if you have not already done so, your department take a long pause before proceeding with negotiations on this contact.

If this matter is not resolved after your review, the Office of the Ombudsman may consider investigating the significant issues raised by the complainant. If you have any question, please do not hesitate to contact me.

Sincerely,

Bruce Aronson
Acting Ombudsman

BCA:JRT:pjc
cc: Dale Young
✓Bev Reaume, Dir. Administration
Brian Allee, Dir. FRED program

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

Compiled by
Jerry Madden and
Jeff Hartman

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

Don W. Collinsworth
Commissioner

Brian J. Allee, Ph.D.
Director

January 1988

PUBLICATION ABSTRACT

TITLE/SUBTITLE

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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- [ ] TRANSPORTATION
- [ ] LAW ENFORCEMENT
- [ ] COMMERCE & INDUSTRY
- [ ] GENERAL GOVERNMENT
- [ ] LOCAL GOVERNMENT
- [ ] OTHER

DOCUMENT CATEGORY

- [ ] PERFORMANCE REPORT
- [X] FINANCIAL REPORT
- [X] PLANNING DOCUMENT
- [ ] GRANT APPLICATION
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- [ ] TRAINING MANUAL
- [X] EDUCATIONAL/GENERAL INFORMATION
- [ ] REGULATIONS/RIGHTS
- [ ] RECOMMENDED LEGISLATION
- [ ] OTHER

AGENCY *(Dept./Div./Program)*	Dept. of Fish and Game, Div. of Fisheries Rehabilitation, Enhancement and Development
AGENCY ADDRESS	P. O. Box 3-2000, Juneau, Alaska 99802-2000
SPONSORING AGENCY *(IF APPLICABLE)*	
AGENCY CONTACT FOR MORE INFORMATION	Brian J. Allee, Director 465-4160 FRED Division, Juneau, AK
PERSONAL AUTHOR/EDITOR *(IF APPLICABLE)*	Jerry Madden Jeff Harrman
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DOCUMENT FORMAT

- [X] NARRATIVE
- [ ] FINANCIAL STATEMENTS
- [ ] MAPS
- [ ] STATISTICAL CHARTS
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LA-A25

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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 [illegible] division will work with the Department of Com[illegible]e, 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

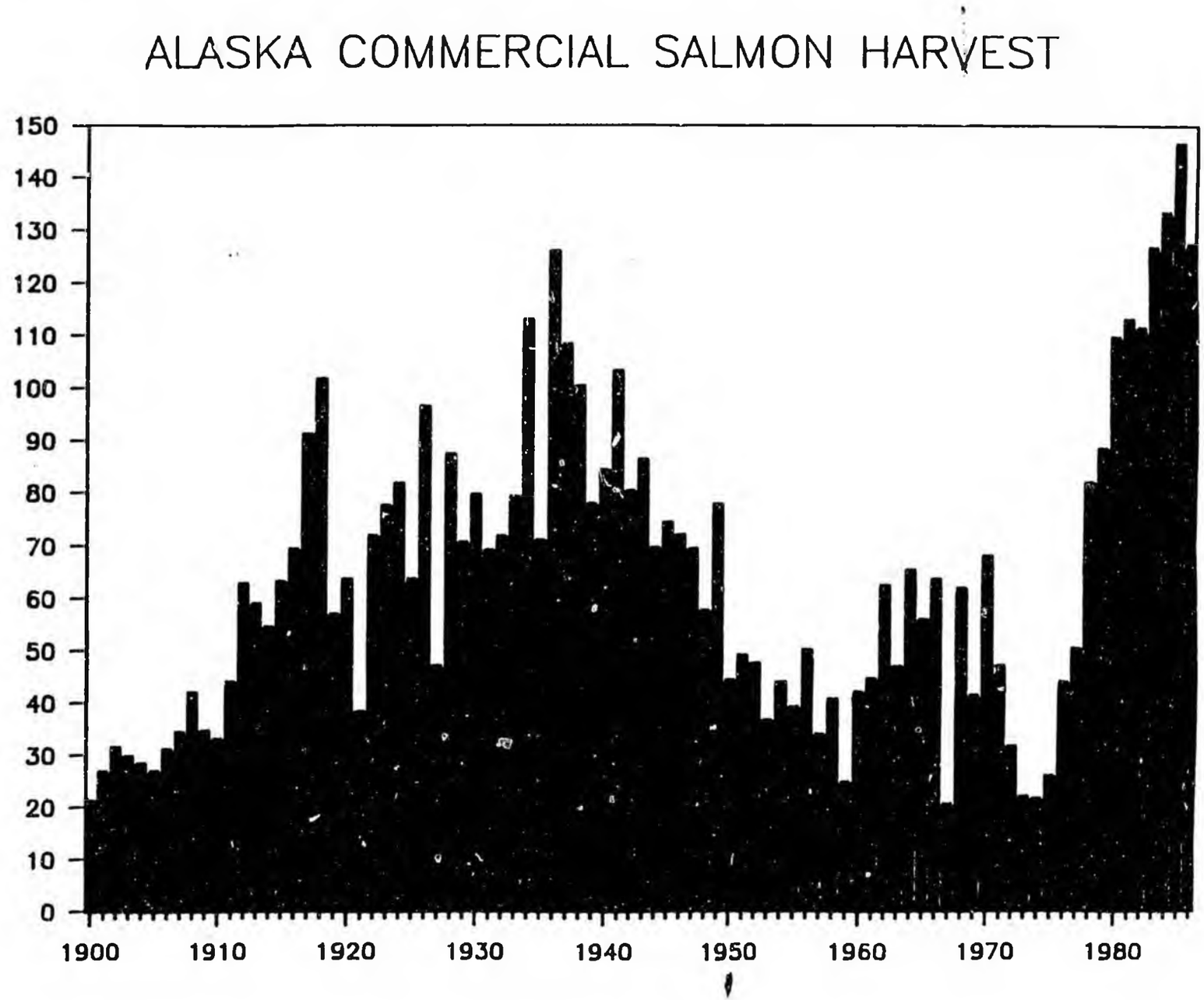

Figure 1. Alaska commercial salmon harvest from 1900 to 1986.

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.

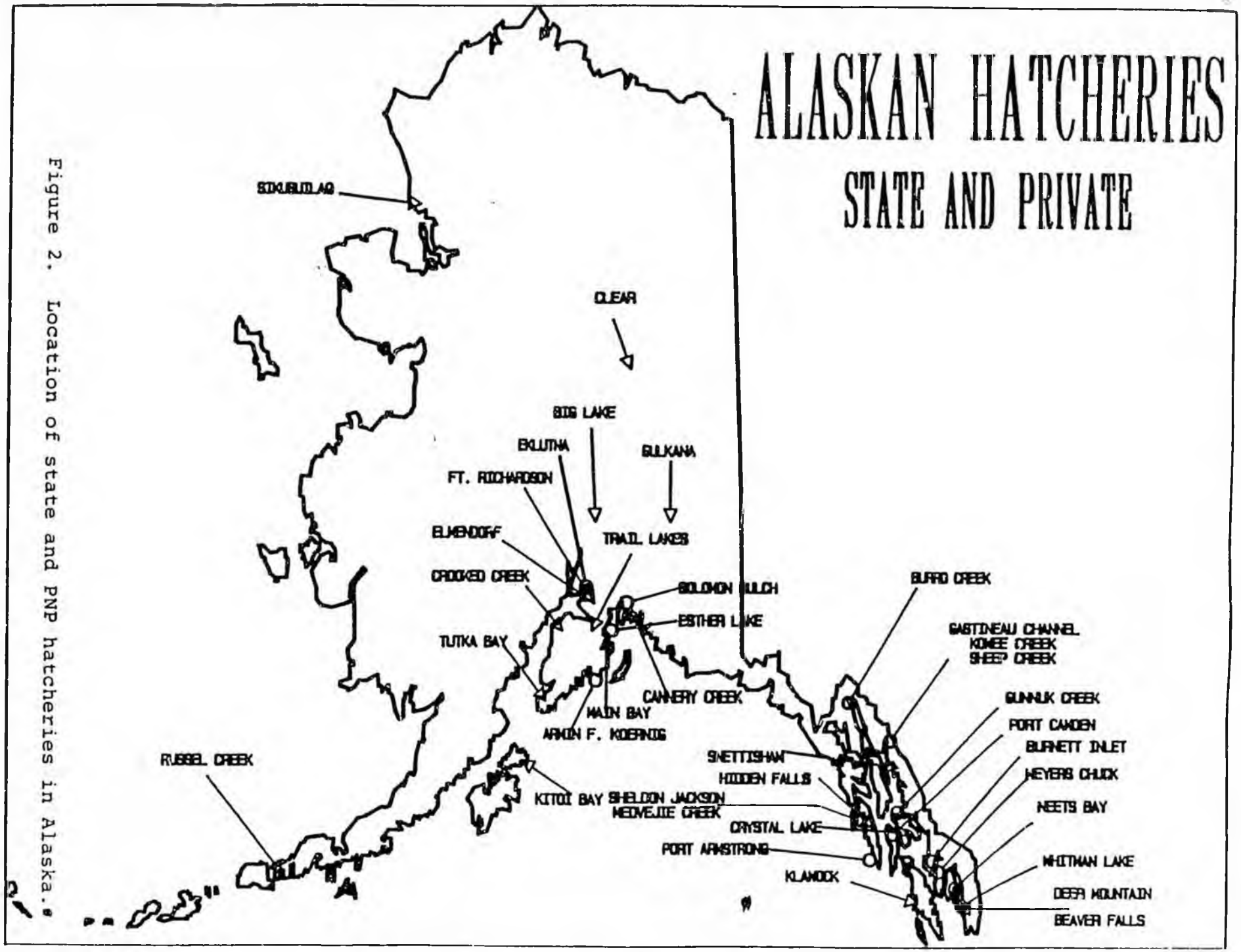

Figure 2. Location of state and PNP hatcheries in Alaska.

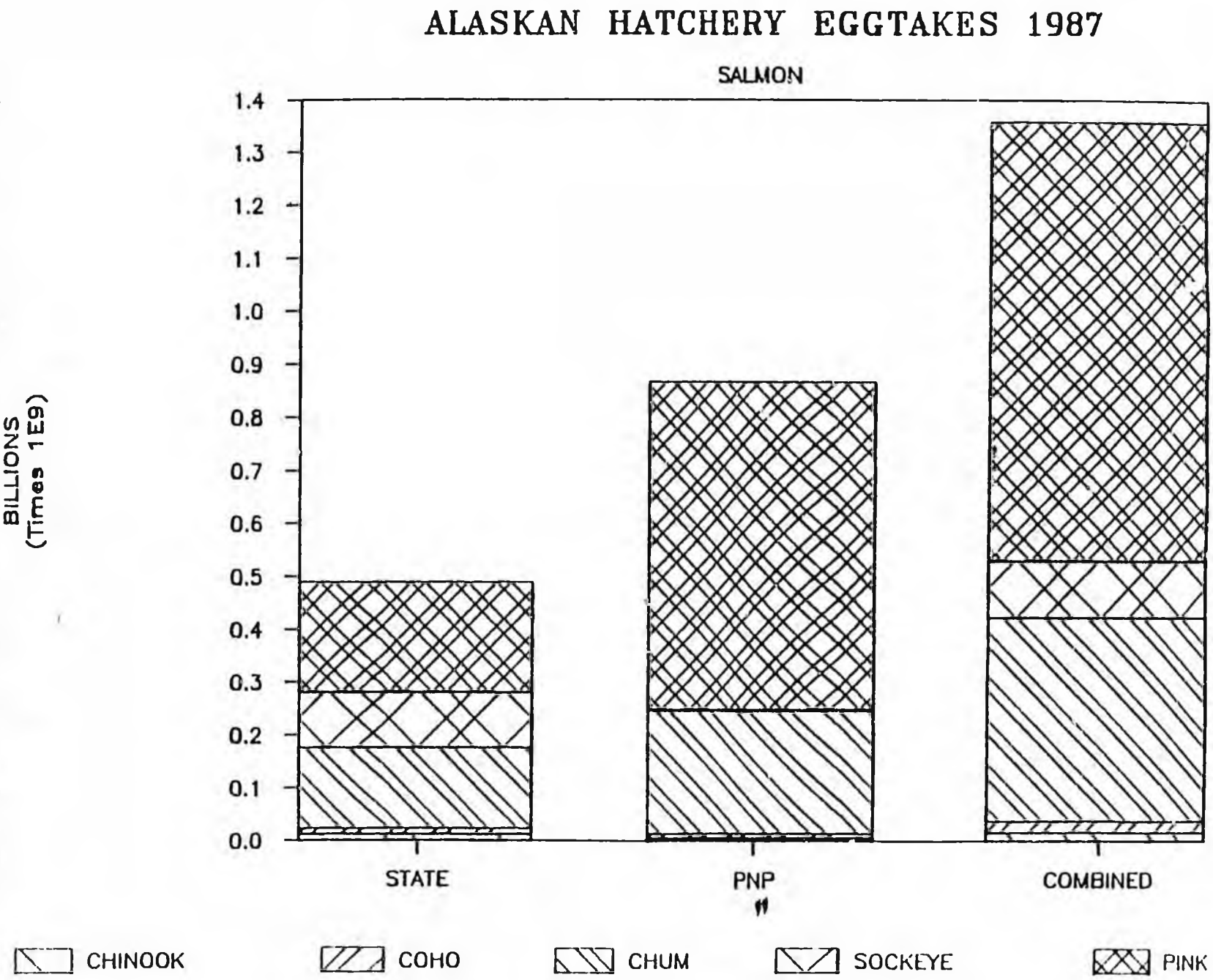

Figure 3. Alaskan hatchery egg takes for salmon in 1987.

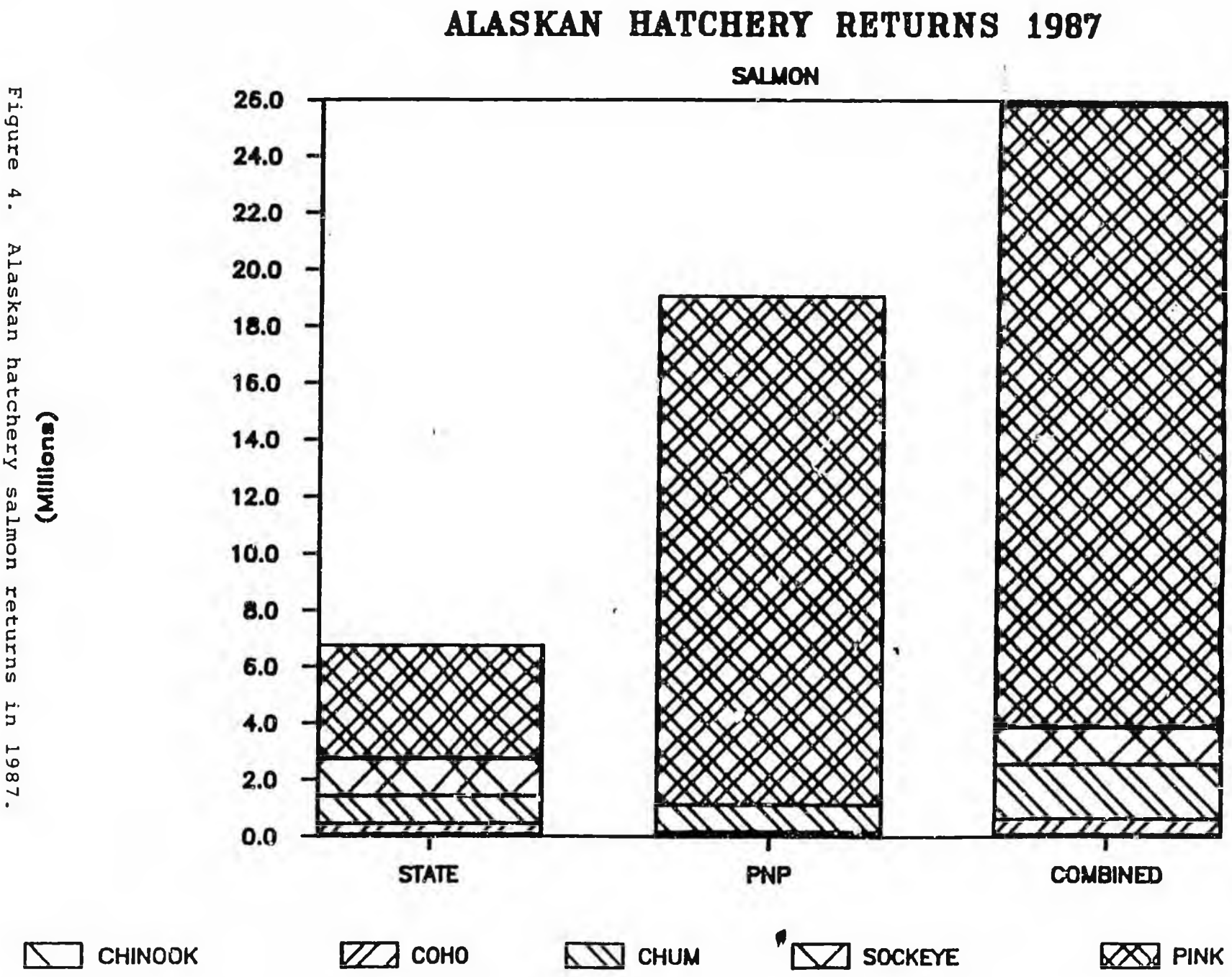

Figure 4. Alaskan hatchery salmon returns in 1987.

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.

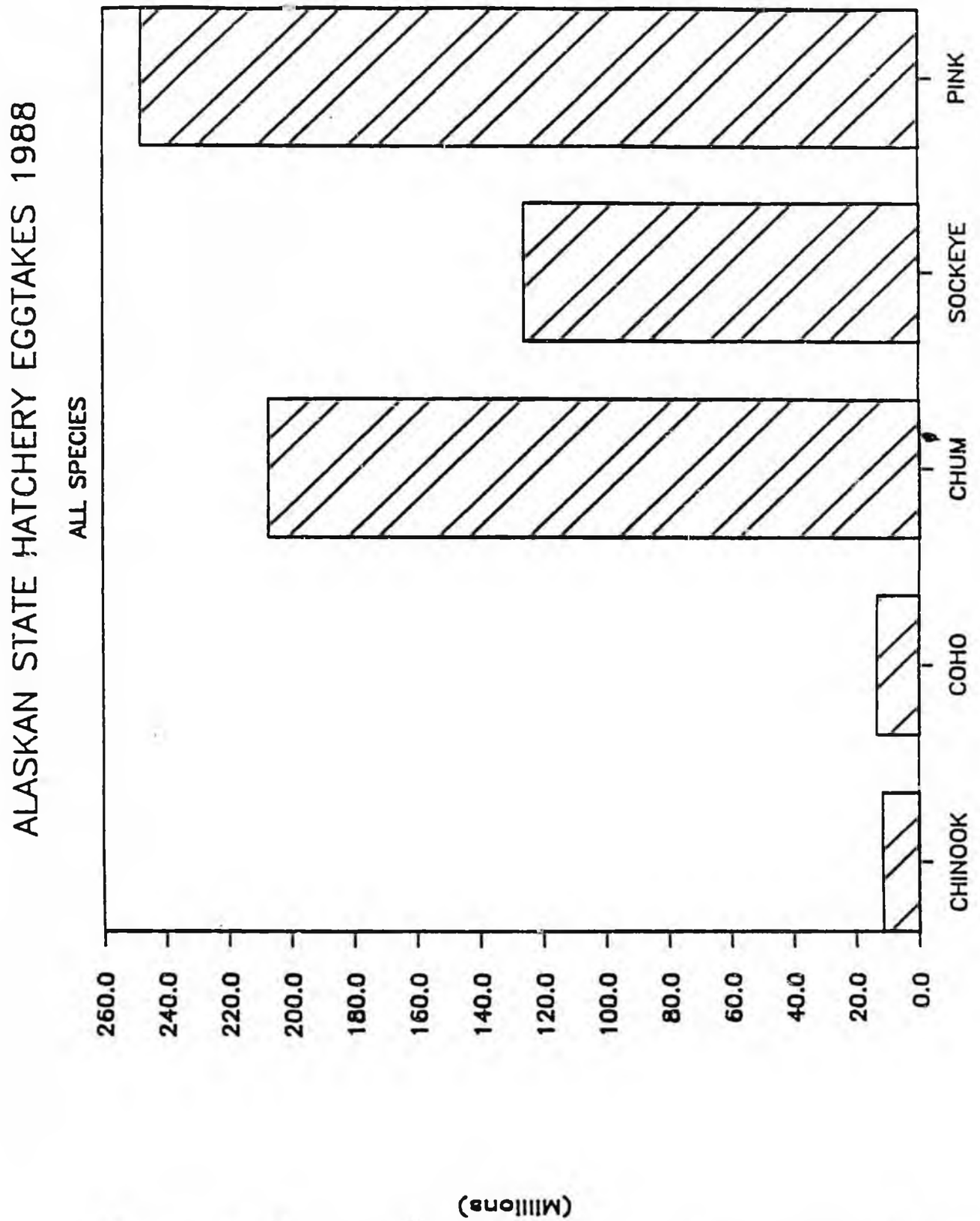

Figure 5. Alaska state hatchery salmon egg takes for 1988. Egg takes shown for salmon only.

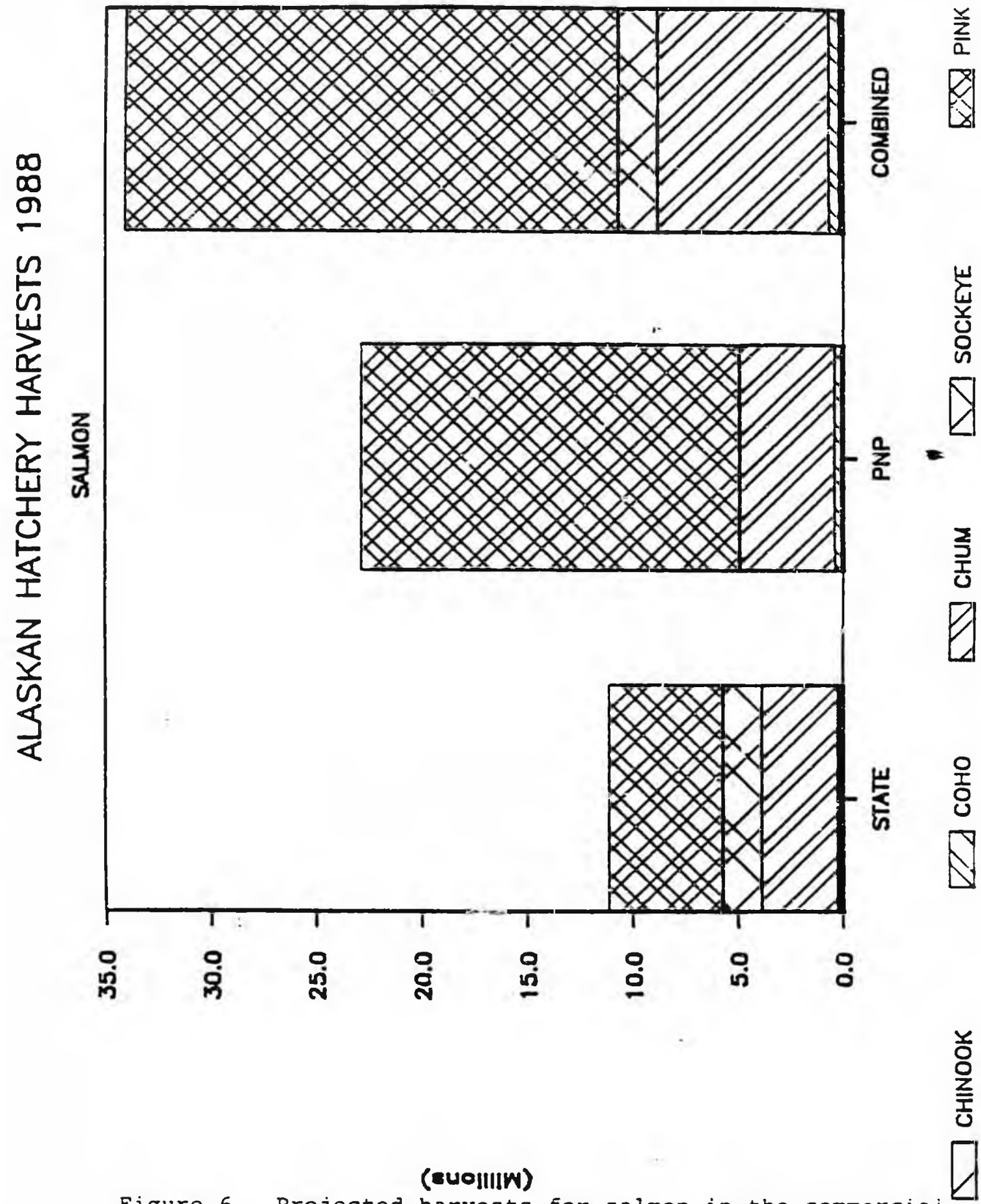

Figure 6. Projected harvests for salmon in the commercial fishery, by species for state and PNP hatcheries. Harvests result from eggs taken in 1988.

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

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

ACSAS 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	4,666.0	3,496.9	5,621.2	5,500.0	4,384.1	8,590.1	5,917.8	4,322.9	6,787.7	5,527.1	3,830.3
:60630	FISH TAX-SHOREBASED	12,914.3	10,079.5	8,253.0	7,100.0	11,310.7	3,697.7	10,963.6	7,612.7	3,280.4	2,305.3	1,822.4
:60640	FISH TAX-FLOATING	9,084.8	7,328.0	4,788.5	4,400.0	4,693.9	5,549.0	3,848.1	2,709.8	1,721.1	644.2	517.4
:60645	SALMON ENHANCEMENT TAX	4,444.1	4,263.1	2,625.3	2,241.3	2,353.8	2,425.0	0.0	0.0	0.0	0.0	0.0
:60690	SEAFOOD MARKETING TAX	1,440.2	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	3,944.1	4,298.2	3,681.6	3,554.7	3,241.9	2,629.3	2,642.5	1,358.2
	TOTAL G. F. TAXES	37,882.3	31,779.1	26,550.2	26,263.1	28,290.6	28,943.2	24,276.2	17,887.3	14,546.5	10,369.1	7,561.5
: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	43.3	42.3	61.4	55.8	80.2
:61380	COMMERCIAL FISH-NR	233.9	228.0	234.3	229.0	132.1	83.3	76.8	63.2	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	2,950.0	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
:62060	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	0.0	7.0	9.1	6.6
:62130	MILITARY SPC-BH 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	2,974.2	3,171.4	3,306.5	2,243.2	231.2
:58440	COMM FISH-RES S & D	333.3	455.7	586.9	521.4	177.7	91.5	94.4	98.9	91.1	83.7	129.6
:58450	COMM FISH-NR S & D	538.0	518.6	531.0	512.0	290.7	174.5	164.4	145.6	151.0	129.0	158.1
:58490	ENTRY FEE PERMIT	433.8	431.4	880.6	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	128.8	46.8	60.8	53.4	43.7
:VARIOUS	FED. FUNDS(FISH RESTOR.)	16,676.0	6,558.3	5,238.9	7,008.5	6,491.2	6,475.1	633.1	429.6	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	884.1	1,169.6	1,244.0	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)	344.5	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	883.0	818.8	833.9	765.7	501.8
:62020	HUNT LIC-RES	299.4	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	854.2	875.8	589.6	699.0	627.2	650.7	645.9	500.1
:62050	HNT TRP FISH LIC	298.2	282.5	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	698.8	645.3	550.0	526.2	491.5	441.6	348.7	273.6
:62070	SPRT FISH LIC-NR	561.0	644.2	671.3	680.8	678.1	469.2	447.6	373.5	350.6	341.3	410.8
:62080	VIST SPEC FISH LIC	343.9	356.6	365.1	257.0	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	144.9	96.9	89.1	78.7	76.9	38.1	2.6
:62120	NIL SPEC FISH LIC	58.2	45.3	67.1	61.0	71.1	52.5	45.8	66.0	84.0	64.3	18.8
:62130	NIL 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	NIL SPEC FISH GM GR	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	985.6	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	8.0	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
:62330	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	24.6	88.9	29.8	18.2	16.6	10.3	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(FISH 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	3,570.9
	TOTAL F & G FUND	7,795.0	7,613.7	7,276.5	7,108.0	6,359.9	5,250.7	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 (465-2173) (R.S. 04001)
DEPARTMENT OF REVENUE-RESEARCH SECTION

• FED FUNDS INCLUDE FISH RESTORATION-A (57660), WILDLIFE RESTORATION-PIT (57660), AND PL 89-304 (57690).

1 FY 90 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.