

SCOMM

74:30

CHAPTER VIII. FUNDING OF THE ALASKA SALMON ENHANCEMENT PROGRAM

INTRODUCTION

Sources of funds for the Alaska salmon enhancement program and projects include bond issuances, state general fund appropriations, salmon enhancement tax assessments paid by fishermen, state enhancement loans, and cost recovery sales of fish. This chapter provides information on funding of Alaska salmon enhancement program.

STATE HATCHERIES AND ENHANCEMENT PROJECTS

The Alaska Department of Fish and Game, Fisheries Rehabilitation and Enhancement Division (FRED) was established by the State Legislature in 1971 to encourage the use of hatcheries and other enhancement techniques to return the state's then depressed salmon fisheries to abundance.

At its peak, the division operated 20 hatcheries. Currently, the FRED Division operates 12 (though 16 are owned by the State) hatcheries to produce salmonid fishes for commercial, sport, and subsistence fisheries. As a result of declining state revenues, state policy shifted regarding the construction and operation of state hatcheries. In general, the state will only continue to operate salmon hatcheries that primarily benefit sport and subsistence fisheries and/or are primarily research facilities. In keeping with this policy, four permits have been issued to regional aquaculture associations for the operation of state-owned hatcheries at Trail Lakes, Cannery Creek, Kitoi Bay, and Hidden Falls. Additional permits will be issued to regional aquaculture associations for operation of the Main Bay, Tutka, and Beaver Falls hatcheries in 1992. Many of the state hatcheries were constructed for research purposes and not with cost recovery and loan repayment in mind. Therefore, in order to transfer these facilities to PNPs, the state has invested funds to make the hatcheries cost effective. While these transfers may be cost effective from an amortized capital and annual operating cost analysis, questions have been raised regarding the resulting fisheries management problems. Information on state hatcheries is provided in Table 1.

In addition to hatcheries, FRED has constructed numerous fish passes (several maintained cooperatively with the U.S. Forest Service) which provide access to spawning and rearing habitat that would otherwise be unavailable to salmon stocks. Other enhancement operations include lake fertilization, habitat improvement, and fish stock introduction to provide increased freshwater survival and new salmon production opportunities.

FRED also administers the PNP Hatchery Program and coordinates the development of regional aquaculture associations, approves annual operations management plans for all salmon hatcheries, and reviews PNP hatchery applications and the permitting process (which includes hatchery and fish and egg transporting permits). FRED operates five biological laboratories--Fish Pathology, Genetics, Limnology, and Tag Recovery facilities--which provide information and support for FRED and PNP hatchery programs. FRED also provides engineering service support to the department (including field facilities) and coordination with consultants, contractors, and landowners.¹

¹Brad Pierce, Aquaculture in Alaska, House Research Agency Report 87-B, February 1987, p.30.

Alaska Department of Fish and Game-FRED Division
Public Hatchery Strategic Plan

15-Mar-91

Hatchery	Location	Species	Percent Commercial	Percent Sport	Percent ** Subsistence	FY92 Operating Costs	Funding Source	Operational Plan FY	Agency	Comments
1 Beaver Falls	Ketchikan	Sockeye	100%	0%	***			92	SSRAA	
2 Big Lake	Big Lake	Sockeye Coho	85% 30%	0% 65%	15% 5%	\$50.0 \$344.3	Unfunded GF	92	FRED	Sockeye unfunded interim funding or contract required.
3 Cannery Creek	Whittier	Pink	100%					89	PWSAC	
4 Clear	Clear	Arctic char Arctic grayling Lake trout		100% 100% 100%		\$22.4 \$308.5 \$90.8	GF DJWB F&G	92	FRED	Major sport fish production facility Vital to US/Can chum and chinook programs
5 Crooked Creek	Soldotna	Sockeye Coho Steelhead	95%	0% 85% 100%	5% 5%	\$46.0 \$346.2 \$12.0	CIAA GF PgR	92	FRED CIAA	Sockeye contracted to CIAA Contributes substantially to chinook sport fish program through eggtakes for other facilities
6 Crystal Lake	Petersburg	Chinook CL rel. Chinook remote rel. Coho Steelhead	56% 99% 83%	44% 1% 17% 100%	***	\$518.7	GF	92	FRED	Large US/Can capital investment US/Can involvement including Herding River, Deep Cove, and Farragut River Provides 5-7 million chinook eggs in addition to its own needs, primary stream rehab work from unique isolation modules.
7 Deer Mountain	Ketchikan	Chinook Coho Steelhead	60% 83%	40% 17% 100%	*** ***	\$144.2 \$144.2	GF ANAD	92	FRED	Fisheries technology development results supplied to other state and private programs. Prime tourist facility, over 200,000 visitors annually. Major role in public education.
8 Elmendorf	Anchorage	Chinook Coho	9% 10%	90% 87%	1% 3%	\$112.6 \$375.2 \$67.9	F&G DJWB GF	92	FRED	Major sport fish production facility High visibility tourist attraction
9 Ft Richardson	Anchorage	Chinook Coho Rainbow	13% 10%	88% 90% 100%		\$144.2 \$583.5 \$181.6	GF DJWB F&G	92	FRED	Major sport fish production facility

Hatchery	Location	Species	Percent Commerci	Percent Sport	Percent ** Subsistence	FY92 Operating Costs	Funding Source	Operational Plan FY	Agency	Comments
10	Gulkana	Glennallen Sockeye Chinook	90% 50%	2% 30%	8% 20%			92	FRED/PWSA	The most cost effective sockeye facility in the world 35 million sockeye salmon egglets annually
11	Hidden Falls	Sitka Pink Chum	100% 100%					89	NSRAA	
12	Kitoi Bay	Kodiak Pink Chum Coho Sockeye	100% 100% 50% 100%	50%				92	FRED/KRAA	
13	Klawock	Klawock Sockeye Coho Steelhead Chum	93% 50%	7% 100%	100% *** 50%	\$446.9 GF \$18.0 WB \$100.0 BIA (request)		92	FRID	BIA funds to address local projects, chum and sockeye. GF used in projects to rehabilitate POW in post-logging y
14	Main Bay	Whittier Sockeye	98%	1%				92	PWSAC	
15	Pillar Creek	Kodiak Sockeye	100%		***	\$200.1 PgR 38.6 GF		92	FRED/KRAA	Unfunded Interim funding or contract required
16	Russell Creek	Cold Bay Chum Pink Coho	100% 98% 50%	1% 50%		\$420.1 GF \$53.0 PgR		99	Reg. Assoc.	FY92 PgR from Aleutian's East Borough Fisheries developmental facility to be contracted in FY99
17	Sikusuilaq	Kotzebue Chum	80%		20%	\$391.4 GF		99	Reg. Assoc.	Developmental facility, fisheries technology development Great potential for subsistence harvest. To be contracted in FY99
18	Snettisham	Juneau Sockeye CIF Sockeye (smolt) Chinook (Deep Cove) Chinook (juvenile)	100% 100% 94% 66%	6% 34%	*** ***	\$775.8 GF \$167.6 US/Can Deep Cove \$108.0 US/CAN \$180.0 W/B		92	FRID	Tremendous involvement in US/Can projects, \$1.35 million 5 years operational funding in Deep Cove. Applied technology development for sockeye smolt. Major sport fish production in Juneau recreation project.
19	Trail Lakes	Moose Pass Coho Sockeye	100%	100%	***			89	CIAA	
20	Tulka	Homer Pink Chum Sockeye	98% 100% 100%	2%	*** ***	\$429.3 CIP		96	CIAA/ LCI Seiners	Unfunded Interim funding or contract required.

** - Includes personal use

*** - Thought to contribute to subsistence but as yet unspecified

STATE ENHANCEMENT PROJECT FUNDING

Funding for the operation of the state salmon enhancement program and state project construction, operation, and maintenance has been primarily through state bonds and general fund appropriations to ADF&G, FRED Division. From FY 72 - 92 operating budget, funding for the FRED Division totalled approximately \$210.3 million, the majority of which was for salmon enhancement. Bond issues totalling \$56.17 million were authorized by the 1976 and 1978 Legislatures, and overwhelmingly endorsed by voters, to fund the construction and operation of hatchery production and other enhancement projects in each region of the state. Of the \$56.17 million in bond issues for FRED enhancement projects, \$50.3 million was spent on the construction of hatcheries, while the remainder was used for other enhancement projects. In addition to bond issues, the capital appropriations for FRED division construction of state facilities totaled approximately \$24.8 million through FY 92.

As part of the Pacific Salmon Treaty, the federal government agreed to provide \$20 million in mitigation monies to produce new salmon through enhancement as a means to mitigate losses to Alaska fishermen resulting from treaty catch quotas. These funds were to be transferred over a five year period. The final \$2 million will be paid this year.

PRIVATE NONPROFIT HATCHERIES

The PNP Hatchery Program was created by the legislature to provide private sector participation in rebuilding Alaska's depleted salmon fisheries. The impetus for the program came from the desire of commercial fishermen to enhance the severely depressed salmon stocks of the early 1970s. The program represented an unprecedented partnership among fishermen, processors, legislators, and the Governor's Office.² The statutes for PNP salmon hatcheries (AS 16.10.375-620 passed in 1974) authorized the ADF&G, FRED to issue hatchery permits to qualified PNP corporations. The intent of the program was to allow private ownership of salmon hatcheries that would contribute to the state's salmon fisheries. Costs of constructing and operating these hatcheries was to be derived from the sale of a portion of the returning fish. Comprehensive salmon planning is part of the PNP program and is implemented through the regional planning teams in conjuncture with the regional aquaculture associations.

Since the inception of the PNP program, 30 salmon-hatchery permits have been issued and three given up. The ADF&G is currently in the process of revoking another PNP permit. Thirty-nine applications have been either denied or withdrawn from the permitting process. Twenty-two of the permitted PNP hatcheries are in operation, and all but one (Bell Island) had returns of adult salmon in 1991. Currently, there are 3 applications for PNP hatchery permits under consideration. Another application is expected in early 1992.

²Brian J. Allee, "The Private, Non-Profit Hatchery Perspective," Alaska Fish and Game, May/June 1986, p. 17 and Brad Pierce, op.

TABLE 2.
SALMON ENHANCEMENT REVENUE SOURCES, FY 76 - FY 91
(nominal dollars)

REGION/CORPORATION	CAPITAL LOANS	OPERATING LOANS (a)	ENHANCEMENT TAX	COST RECOVERY (b)	TOTAL REVENUE	OUTSTANDING PRINCIPAL
Bristol Bay RAA	\$0	\$100,000	\$0	\$0	\$100,000	\$0
Chignik RAA	0	65,000	0	0	65,000	0
Cook Inlet RAA	1,438,881	783,369	12,069,415	76,295	14,367,960	328,614
Kodiak RAA	0	100,000	3,182,884	11,671,982	14,954,866	0
Lower Yukon/Kuskokwim RAA	0	100,000	0	0	100,000	0
Northern Southeast RAA	2,724,265	1,738,496	9,015,989	3,842,420	17,321,170	2,684,209
Prince William Sound AC	18,676,153	1,185,500	6,053,981	37,045,965	62,961,599	19,869,315
Southern Southeast RAA	8,093,000	2,948,942	15,882,353	6,884,886	33,809,181	12,393,824
Alaska Aquaculture, Inc.	1,091,985	2,537,554	0	376,463	4,006,002	3,876,043
Armstrong-Keta, Inc.	2,002,645	2,015,500	0	753,724	4,771,869	3,961,608
Burro Creek Farms, Inc.	119,500	171,575	0	6,079	297,154	256,651
Douglas Is. Pink & Chum, Inc.	8,124,000	5,193,000	0	990,723	14,307,723	13,445,375
Kake Nonprofit Fisheries Corp.	1,500,724	1,845,060	0	253,878	3,599,662	3,324,227
Sheldon Jackson College AP	362,254	61,370	0	638,797	1,062,421	346,728
Tlingit & Haida Fisheries Dev. Corp.	1,464,000	89,860	0	0	1,553,860	1,200,000
Valdez Fisheries Development Assoc.	3,193,830	3,250,563	0	8,328,064	14,772,457	5,965,383
TOTAL	\$48,791,237	\$22,185,789	\$46,204,622	\$70,869,276	\$188,050,924	\$67,651,977
% Category is of Total Revenues	26%	12%	25%	38%	100%	95% (c)

Notes: (a) Operating loan amounts include initial organizational and planning grants to regional aquaculture associations (\$100,000 except for \$65,000 to the Chignik RAA).
(b) Information on cost recovery from ADF&G, FRED annual reports.
(c) This is the percentage of total loan principal outstanding as of 10/16/91.
Enhancement taxes can only be paid to regional aquaculture associations.

Sources: Alaska Department of Commerce & Economic Development, Division of Investments, November 1991.

Regional Aquaculture Associations

In 1976, the legislature authorized the formation of regional aquaculture associations. Regional associations are comprised of representatives of commercial, sport, and subsistence fishermen; processors; local communities members; and other user groups in the region. Each regional association must have a board of directors consisting of at least one representative from each user group within the association. Currently, there are eight regional aquaculture associations:

Northern Southeast Regional Aquaculture Association (NSRAA)
Southern Southeast Regional Aquaculture Association (SSRAA)
Prince William Sound Aquaculture Association (PWSAC)
Cook Inlet Aquaculture Association (CIAA)
Lower Yukon/Kuskokwim Regional Aquaculture Association (LYKRAA)
Bristol Bay Regional Aquaculture Association (BBRAA)
Kodiak Regional Aquaculture Association (KRAA)
Chignik Regional Aquaculture Association (CRAA)

Regional Planning Teams

Three representatives from each regional aquaculture association are appointed by their respective boards of directors to serve on a regional planning team (RPT) along with three ADF&G representatives--two from FRED and one from the Division of Commercial Fisheries. These teams are responsible for developing regional comprehensive salmon plans for both FRED and PNP hatchery production. From FY 77 to FY 86, the legislature provided funds for planning teams via grants and contracts administered through the ADF&G commissioner's office. With the exception of an initial start-up planning grant available to all regional aquaculture associations from DCED, no funds for planning have been provided to regional associations since FY 86.

Private Non-Profit Hatchery Funding

Funding for PNP hatcheries is primarily through state loans, the salmon enhancement tax, and cost recovery sales of fish. To a lesser extent, the state has provided grants to some facilities and fishing organizations; these have totalled approximately \$12.3 million.

Since 1977, a significant portion of the funding necessary for the implementation of salmon rehabilitation and enhancement activities by PNP corporations has been provided through the *Fisheries Enhancement Revolving Loan Fund* administered by the Alaska Department of Commerce and Economic Development (DCED), Division of Investments (AS 16.10.500-620). The loan program has gone through several modifications by the legislature, the most recent occurring in 1987. The maximum loan amount available for an individual project is \$10 million at approximately 9.5 percent interest, with a payback period of up to 30 years.

According to state statute (AS 16.10.525), payments and accrual of interest on these loans *must* be deferred for 6 to 10 years. Loans for non-regional aquaculture association projects have these same terms with the exception that the loan maximum is limited to \$1 million. Loans are available for the purpose of planning, construction, and operation of salmon rehabilitation and enhancement projects, primarily salmon hatcheries. These loans are secured through collateral that may include returning hatchery fish and enhancement assessment of commercial fishermen.

The *Salmon Enhancement Tax* (AS 43.76.010-.015) is charged to limited entry permit holders who are members of qualified regional aquaculture associations. State law allows the associations to set enhancement tax rates at either 1 to 3 percent of the ex-vessel value of the salmon catch, subject to the vote of the membership. The Cook Inlet and Northern and Southern Southeast Regional Association assessment rates (2, 3, and 3 percent, respectively) have been in place since 1981. The Prince William Sound assessment (2 percent) began in 1985 and the Kodiak assessment became effective in 1988. Buyers of salmon are required to collect the tax and remit the revenue to the Alaska Department of Revenue. This is a pass-through program, since the legislature appropriates Salmon Enhancement Tax revenues to the regional associations from whose members the tax was collected.

Cumulative state loans secured by corporations for capital construction and operations, cumulative enhancement funds returned to the regional aquaculture associations, and revenue generated by corporate sales of returning hatchery fish are presented in Table 2.

Through November, 1991, \$71.0 million has been borrowed by PNP corporations. Approximately \$67.7 million (95 percent) of the \$71.0 million principal balance is currently outstanding. Including state appropriations (\$12.3 million), approximately \$83.3 million has been provided in state loans and grants to PNPs. Another \$46.2 million has been generated through enhancement tax assessments. To date, PNP operators have sold approximately \$70.9 million worth of cost recovery fish to help pay for hatchery operations. The amount and percentage of funding by category is shown below.

\$71.0 million	35 percent	State Loans
\$12.3 million	7 percent	General Fund Grants
\$46.2 million	23 percent	Enhancement Tax Assessments
\$70.9 million	35 percent	Cost Recovery Sales of Fish
\$200.4 million		Total

As can be seen, the private sector has provided over 58 percent of the direct funding for PNP operation and construction through self-imposed taxes and cost recovery sales of fish.

OPTIONS FOR POSSIBLE CONSIDERATION:

- Requiring a more extensive public benefit-cost analysis before providing enhancement loans. This means that a project or facility expansion would not only have to be financially feasible--capable of paying back loans--but also provide net benefits to the public.
- Eliminating the statutory loan repayment deferment requirement on operating loans.
- Development of a mechanism for placing moratoriums on state enhancement loans for increased fish production. Consideration of a moratorium on loans until results of the Legislative Enhancement Program Review economic studies are complete.
- Implementing a requirement for more complete analysis of transfers of the operation of state hatchery facilities that includes factors such as fisheries management, increased need for cost recovery, and the impact on traditional common property fisheries.
- Analysis of the enhancement tax program to determine 1) whether costs are distributed in proportion to benefits, and 2) the impact of a mechanism to allow specific gear groups to opt out of the program or pay in proportion to the enhancement benefits they receive.

- Analysis of increasing the salmon enhancement tax so fishermen who benefit from the program will pay for more of the costs.
- In light of declining state revenues and lower fish prices, development of an auditing mechanism to ensure that annual PNP operating costs, paid by loans, enhancement tax receipts and cost recovery, are "reasonable."
- Development of a requirement that funds provided in treaty agreements for enhancement be used for fish production to the maximum extent possible. In addition, a requirement for a comprehensive feasibility analysis of using enhancement as part of treaty agreements could be considered.